

C0. Introdução

C0.1

(C0.1) Faça uma descrição e uma introdução geral da organização.

JBS is the largest animal protein producer and second largest food company in the world (the largest food company in the world in terms of revenue). Because of its global production platform diversified by geographic location and protein types, the Company has greater access to raw materials. Working to process animal protein and value-added products in the beef, pork, lamb and poultry segments, the Company also operates related businesses, such as leather, biodiesel, personal care and cleaning, solid waste management solutions, and metal packaging.

With locations in more than 20 countries and over 500 production units and commercial offices on five continents (the Americas, Asia, Europe, Africa and Oceania), JBS serves around 275,000 customers, in over 190 countries, ranging from supermarket chains to small retailers, wholesale clubs and food service companies.

With around 250,000 team members, the same sustainability (economic, social and environmental), innovation, quality and food safety guidelines are followed in every region, adopting best practices based on the Company's mission and values and, focusing on operational excellence, as well as the establishment of better relationships with partners, customers, employees and society, the satisfaction of its shareholders and the commitment to social and environmental responsibility issues. For example: in March 2021, JBS announced a commitment to achieve net zero greenhouse gas emissions by 2040, reducing its direct and indirect emissions (scopes 1, 2 and 3) and offsetting all residual emissions. In addition, US\$3 billion were issued in Sustainability Linked Bonds (SLB) at JBS S.A. and PPC, linked to KPIs of 30% reduction in greenhouse gas emissions from scopes 1 and 2 by 2030, in addition to R\$ 1 billion in bonds linked to sustainability in Brazil.

The Net Zero 2040 commitment was formally accepted by the Science-Based Targets initiative (SBTi), which establishes and promotes best practices in defining science-based targets. JBS will provide a detailed roadmap through 2023 that enables targets consistent with the criteria established by the SBTi to limit global temperature rise to 1.5°C compared to pre-industrial levels. Internally, the Company structured a working group (WG) with the participation of focal points from all businesses (Brazil, USA, Canada, Mexico, Europe, Australia/New Zealand) to identify solutions that reduce greenhouse gas emissions and can generate value. The group holds periodic meetings to exchange experiences and search for common projects. In Brazil, six other WGs were also created to identify and analyze proposals for Brazilian operations. They are: WG Agro, WG Origination, WG Engineering & Energy, WG Environment, WG R&D, Innovation and Circular Economy, and WG Logistics. The coordination and consolidation of all these initiatives is the responsibility of a new function created within the Company, that of PMO Global, reporting directly to the Global CEO of JBS.

To work on the construction of this roadmap, JBS has the support of two nationally and internationally recognized consultancies for their work on sustainability, which are collaborating with the Company's internal areas to identify project opportunities, define clear KPIs and build science-based goals and action plans.

It is also worth noting that in April 2021, JBS started the operations of the Plataforma Pecuária Transparente ("Transparent Livestock Platform"), which, through blockchain technology, extends socio-environmental monitoring to the suppliers of its livestock suppliers. By the end of 2025, 100% of JBS' cattle suppliers will be part of the program. JBS is advancing in the assistance and inclusion of producers who seek to adapt the socio-environmental situation of their properties. The company has already 15 green offices offering environmental, legal and technical advice.

JBS has a widely diversified product portfolio, from fresh and frozen meats to ready to-eat (prepared) dishes, with leading brands that are recognized for excellence and innovation in-market, such as Friboi, Just Bare, Pilgrim's, Primo, Seara and Swift. JBS also launched an entire line of plant-based products in Brazil called Incrive! and the Ozo brand in US. In Australia, under PRIMO brand, launched a flexitarian sausage.

JBS has the following structure: 1. JBS Brasil, which includes Friboi, Swift, JBS Couros and Novos Negócios; 2. Seara; 3. JBS USA Beef (JBS USA Beef, JBS Canada, JBS USA Retail Ready, JBS USA Carriers and JBS Australia); 4. JBS USA Pork (JBS USA Pork, JBS USA Live Pork, Swift Prepared Foods and JBS USA Retail Ready); 5. PPC (Pilgrim's); and 6. Rigamonti.

In 2021, JBS's net revenue was R\$ 350,7 billion.

More information can be found in the official JBS website (<https://jbs.com.br/en/>) and in the JBS 2021 Annual and Sustainability Report (<https://jbs.com.br/wp-content/uploads/2022/07/-relatorio-anual-e-de-sustentabilidade-2021.pdf>).

C0.2

(C0.2) Indique a data de início e de fim do ano para o qual os dados estão sendo reportados.

	Data de início	Data de fim	Indique se estão sendo fornecidos dados de emissões de anos de reporte passados	Selecione o número de anos de reporte passados cujos dados de emissões estão sendo fornecidos
Ano de reporte	janeiro 1 2021	dezembro 31 2021	Não	<Not Applicable>

C0.3

(C0.3) Selecione os países/áreas onde a empresa opera.

Argentina
Austrália
Brasil
Canadá
França
Alemanha
Itália
México
Holanda
Nova Zelândia
Porto Rico
Reino Unido da Grã-Bretanha e Irlanda do Norte
Estados Unidos da América
Uruguai
Vietnã

C0.4

(C0.4) Selecione a moeda usada para todas as informações financeiras divulgadas na resposta.

BRL

C0.5

(C0.5) Selecione a opção que descreve os limites de reporte para os quais os impactos climáticos da organização estão sendo reportados. Observe que esta opção deve estar alinhada com o método de consolidação escolhido para o inventário de GEEs.

Controle operacional

C-AC0.6/C-FB0.6/C-PF0.6

(C-AC0.6/C-FB0.6/C-PF0.6) As emissões de atividades agrícolas/florestais, de processamento/fabricação e de distribuição ou as emissões do consumo dos produtos da organização – seja nas operações diretas ou em outras partes da cadeia de valor – são relevantes para o reporte atual de mudanças climáticas ao CDP?

	Relevância
Agricultura/Florestas	Em terras próprias e em outro ponto da cadeia de valor [apenas Agricultura/Florestas]
Processamento/Fabricação	Apenas operações diretas [Apenas Processamento/fabricação/distribuição]
Distribuição	Operações diretas e em outros pontos da cadeia de valor [apenas Processamento/fabricação/distribuição]
Consumo	Não

C-AC0.6g/C-FB0.6g/C-PF0.6g

(C-AC0.6g/C-FB0.6g/C-PF0.6g) Por que as emissões do consumo dos produtos não são relevantes para a seu atual reporte de mudanças climáticas ao CDP?

Linha 1

Motivo principal

Avaliado, mas considerado de pouca importância

Explique

The majority of JBS products are food consumed by humans and in a wide variety of ways and locations.

We serve over 275 thousand customers in more than 180 countries, managing a customer portfolio that includes retailers from major regional chains to small scale retailers, as well as wholesale clubs and food service companies (restaurants, hotels, food service distributors and supplementary processing companies). The potential GHG emissions from the consumption of JBS products would be due to energy consumption (electric energy or fuel) to cook food and refrigeration. However, these GHG emissions estimation would present a significant uncertainty. Furthermore, these emissions can be considered low when compared to the entire value chain, such as agriculture and industrial process, for example.

In 2019, JBS contributed with Getulio Vargas Foundation's Sustainability Study Center's (FGVces) research on Brazilian beef carbon footprint. The study included the following production chain processes: input transportation and production (animal feed, fertilizers and correctives), farming activities (breeding, backgrounding and fattening), live cattle shipping, production units, shipping to Brazilian ports and maritime transportation to the Rotterdam port, in the Netherlands. The research concluded that about half of the cattle emission occurs in the reproductive phase, before the cattle arrives at the operational area.

In addition, during the 8th International Conference on Lifecycle Management (LCM 2017) in Luxemburg, JBS presented a leading study regarding the Company's carbon footprint across its beef (Picanha Maturatta Friboi) and chicken (Seara DaGranja). The study was carried out in partnership with FGVces as part of the Applied Lifecycle (CiViA) initiative, and it was used as a benchmark for the Lifecycle Assessment (LCA) methodology.

The LCA technique analyses industrial performance (for goods and services) based on natural resource usage across various stages of the value chain: from raw material production to product disposal, including processing, distribution and consumption. Using this information, the LCA may identify environmental impacts from these processes and support strategic decisions to minimize them.

C-AC0.7/C-FB0.7/C-PF0.7

(C-AC0.7/C-FB0.7/C-PF0.7) Quais são as <i>commodities</i> agrícolas produzidas e/ou obtidas pela organização mais importantes para seus negócios, no que diz respeito às receitas? Selecione no máximo cinco.

<i>Commodity </i> agrícola

Produtos da pecuária

Porcentagem da receita dependente dessa <i>commodity </i> agrícola

40-60%

Produzida ou obtida

Produzida

Explique

JBS has 35 beef processing units and 9 feedlots in Brazil as well as 18 beef processing units and 6 feedlots in the USA, Canada and Australia. To calculate this figure, we have considered all our cattle products.

<i>Commodity </i> agrícola

Outro, especifique (Poultry products)

Porcentagem da receita dependente dessa <i>commodity </i> agrícola

20-40%

Produzida ou obtida

Produzida

Explique

JBS has 30 poultry processing units in Brazil and 39 in the USA, Mexico and Europe. To calculate this figure, we have considered all our poultry products.

<i>Commodity </i> agrícola

Outro, especifique (Pork products)

Porcentagem da receita dependente dessa <i>commodity </i> agrícola

10-20%

Produzida ou obtida

Produzida

Explique

JBS has 8 pork processing units in Brazil and 8 in the USA. To calculate this figure, we have considered all our pork products.

C0.8

(C0.8) A organização tem um código ISIN ou outro identificador único (por ex., Ticker, CUSIP etc.)?

Indique se é possível apresentar um identificador único para a organização	Forneça o identificador único
Sim, um código ISIN	BRJBSACNOR8
Sim, um código ISIN	US4661101034
Sim, um número CUSIP	466110103
Sim, um símbolo no Ticker	JBSS3
Sim, um símbolo no Ticker	JBSAY
Sim, um código SEDOL	B3K5JC0 US

C1. Governança

C1.1

(C1.1) Existe supervisão pelo Conselho sobre as questões climáticas na organização?

Sim

C1.1a

(C1.1a) Identifique o(s) cargo(s) do(s) indivíduo(s) do conselho responsável(is) pelas questões relacionadas ao clima (não inclua os nomes).

Cargo do(s) indivíduo(s)	Explique
Comitê do conselho	<p>In JBS' Bylaws, it is defined that the Board of Directors is responsible for, in addition to other attributions conferred on it by law or by the Bylaws themselves: I. establish the general orientation of the Company's business, considering the safety of people, the development of society and respect for the environment.</p> <p>This commitment to sustainability provided for in the Bylaws permeates all Business Unites and areas of the Company, in all countries where it operates and conducts its business. Therefore, the Company maintains an important governance authority for this topic through the JBS Social and Environmental Responsibility Committee, led by the Chairman of the Board of Directors.</p> <p>The Committee operates on a permanent basis and is composed of a minimum of 3 and a maximum of 5 members, elected by the Board of Directors. The Committee currently consists of 5 members and acts independently from the company's executive board.</p> <p>The Social and Environmental Responsibility Committee has the objective of (i) advising the Board of Directors in the fulfillment of its legal attributions in relation to the sustainability of the Company's business such mapping of risks and opportunities related on climate issues, identification and treatment of critical issues that may result in risks or impacts on the business, and evaluation of proposed investments in sustainability; and (ii) discuss and recommend that the Company adopt policies and measures related to sustainability and social and environmental responsibility.</p> <p>Examples of climate-related decisions: (i) the committee guided the discussions and supported the decision to JBS of achieving net zero greenhouse gas emissions by 2040, reducing its direct and indirect emissions (scopes 1, 2 and 3) and offsetting all residual emissions. The company issued US\$ 3 billion in Sustainability Linked Bonds (SLB) at JBS S.A. and PPC, linked to KPIs of 30% reduction in greenhouse gas emissions from scopes 1 and 2 by 2030. In addition to BRL 1.15 billion in bonds linked to the Plataforma Pecuária Transparente goal of ending illegal deforestation in the supply chain by 2025.</p>

C1.1b

(C1.1b) Dê mais detalhes sobre a supervisão das questões climáticas por parte do conselho.

Frequência com a qual as questões climáticas são um item da pauta programada	Mecanismos de governança nos quais as questões climáticas estão integradas	Escopo da supervisão por parte do conselho	Explique
Programado – todas as reuniões	Análise e orientação de estratégia Análise e orientação dos principais planos de ação Análise e orientação de políticas de gestão de riscos Análise e orientação de orçamentos anuais Análise e orientação de planos de negócios Definição de objetivos de desempenho Monitoramento da implementação e do desempenho dos objetivos Monitoramento e supervisão do progresso em relação aos objetivos e metas para tratar questões climáticas	<Not Applicable>	As a priority strictly related to JBS's core operations, climate-related issues are discussed in all meetings of JBS Social and Environmental Responsibility Committee, which reports directly to the Board of Directors - and since 2019 has also the Board Chairman as member. Discussions on this subject comprises the assessment and review of the related strategy elements; the undergoing action plan and its related budget; the assessment of every business plan, whether it is considering climate-related issues, setting underlying performance objectives, monitoring its implementation and monitoring its performance through following the results of the emissions reductions projects and KPIs of the related strategic drivers, for example, correcting any needed routing paths. In addition, the Socio-environmental Responsibility Committee has the following attributions: to advise the Board of Directors on issues of sustainability and socio-environmental responsibility related to the Company's business; make recommendations to the Board of Directors on sustainability objectives and monitor the implementation of policies, strategies, actions and projects related to the sustainable development of the Company's business, including social and environmental management and communication; evaluate the reports issued by regulatory bodies on the Company, in what may impact its sustainable development; prepare a summary annual report containing the description of the Committee's activities, which must be sent to the Board of Directors; contribute with guidelines for the formulation of a sustainability strategy and socio-environmental responsibility, in line with the Company's mission and values, such as factors and impacts in the social and environmental sphere.

C1.1d

(C1.1d) A organização tem pelo menos um membro do conselho com competências para questões climáticas?

	O(s) membro(s) do conselho tem(têm) competências para questões climáticas	Critérios utilizados para avaliar as competências do(s) membro(s) do conselho para questões climáticas	Razão principal para que não haja competências por parte do conselho para questões climáticas	Explique por que a organização não tem pelo menos um membro do conselho com competências para questões climáticas, e quais são os eventuais planos para abordar as competências por parte do conselho no futuro
Linha 1	Sim	JBS has a member of the Board of Directors with formal experience in ESG (Environmental, Social and Governance) matters. Aware of the challenge that climate change represents for the Company, this member took the Sustainable Capitalism and ESG Online course at the University of California, Berkeley, in addition to having studied, in previous years, on governance at Columbia and Johns Hopkins universities, both in United States. The assessment of competence in climate change takes place on a daily basis, based on the contributions and reflections proposed on ESG aspects at the Board meetings. Currently, formal criteria for performance analysis are not yet used.	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Indique o(s) comitê(s) ou o(s) cargo(s) de gerência de nível mais alto com responsabilidade pelas questões climáticas.

Nome do(s) cargo(s) e/ou comitê(s)	Linha de reporte	Responsabilidade	Abrangência da responsabilidade	Frequência de reporte das questões climáticas para o conselho
Diretor de Sustentabilidade (CSO)	<Not Applicable>	Tanto avaliação quanto gestão de riscos e oportunidades climáticos	<Not Applicable>	Trimestralmente

C1.2a

(C1.2a) Descreva em que ponto da estrutura organizacional encontra(m)-se este(s) cargo(s) e/ou comitê(s), quais são suas responsabilidades associadas e como são monitoradas as questões relacionadas ao clima (não inclua os nomes dos indivíduos).

At JBS, the defined organizational structure aims to build a process of continuous improvement and increase business performance in the short and long term, in addition to identifying risks and opportunities related to climate change. Therefore, the Company maintains an important governance authority for this topic through the JBS Social and Environmental Responsibility Committee, which is responsible for discussing strategic issues at the global level.

The Committee main responsibility is to advise the Board of Directors in relation to sustainability risks and opportunities, including climate issues. Accordingly, the committee is responsible for connecting all topics related to the Company's business in a global perspective, including: identification, addressing and treatment of critical issues that result in risks or impacts on business; monitoring and implementation of policies, strategies and specific initiatives; and evaluation of proposed sustainability investments.

The information and insights that involves the Company result and performance regarding climate issues are provided by CSO to the Social and Environmental Responsibility Committee. In general terms, the CSO's responsibility is both assessing and managing climate risks and opportunities - sustainability strategy to support risk management, reduce the Company's environmental footprint and manage relationships with society and stakeholder engagement.

At the corporate level, the company has two global managers – one in Brazil and one in the United States – responsible for managing and communicating the topic, engaging the Business areas and the entire value chain in sustainability management. The Brazilian department tracks the domestic operations and their ramifications in other countries: Argentina, Uruguay, Mexico, USA, Germany, Italy and Vietnam, while the team headquartered in the USA is focused on the national market, as well as on Canada, Australia, New Zealand, Mexico, Puerto Rico and Europe. These tasks are performed through the sustainability corporate team and for each sustainability / environmental specific professionals and manager / supervisor allocated in each production plant (complying with the Environmental Policy and engaging with the suppliers, for example). These professionals are responsible for operationally implementing and monitoring the action plans with the tasks defined by the Social and Environmental Responsibility Committee. So, the defined structure for managing climate-related issues is: i) Social and Environmental Responsibility Committee; ii) CSO; and iii) Sustainability/environmental professional and plant manager/supervisor of each plant.

Besides, the Company structured a working group (WG) with the participation of focal points from all businesses (Brazil, USA, Canada, Mexico, Europe, Australia/New Zealand) to identify solutions that reduce greenhouse gas emissions and can generate value. The group holds periodic meetings to exchange experiences and search for common projects. In Brazil, six other WGs were also created to identify and analyze proposals for Brazilian operations. They are: WG Agro, WG Origination, WG Engineering & Energy, WG Environment, WG R&D, Innovation and Circular Economy, and WG Logistics. The coordination and consolidation of all these initiatives is the responsibility of a new function created within the Company, that of PMO Global, reporting directly to the Global CEO of JBS.

C1.3

(C1.3) Há incentivos para a gestão de questões relacionadas ao clima, incluindo o cumprimento de metas?

	Dar incentivos pela gestão das questões climáticas	Comentários
Linha 1	Sim	JBS encourages their Management group to address climate-change issues with positive incentives rewarding performance monetarily. In line with our journey towards Net Zero, a variable compensation policy linked to climate goals is being designed for the company's top executives. The policy will be published once the SBTi targets are validated.

C1.3a

(C1.3a) Dê mais detalhes sobre os incentivos oferecidos pela gestão das questões climáticas (não inclua os nomes dos indivíduos).

Com direito a incentivo	Tipo de incentivo	Atividade incentivada	Comentários
Diretor Operacional (COO)	Recompensa monetária	Projeto de redução de emissões Meta de redução de emissões Projeto de redução de energia Meta de redução de energia Projeto de eficiência Meta de eficiência	<p>The eco-efficiency and emissions reduction efforts (projects and targets) at JBS are carried out in the global level and includes all business units (beef, leather, poultry, etc.).</p> <p>Based on ISO 14001, operational units are underpinned by the implementation of the environmental management system and by the action plans from the sustainability assessment strategy, which contains targets for water consumption, wastewater treatment, environmental compliance, by-product recovery in wastewater treatment plant, energy efficiency and solid waste (indicators related to production).</p> <p>The operational unit's projects are essentially linked to targets related to JBS's program of annual bonus, resulting in monetary rewards for the COOs, which includes energy, facility, and environmental/sustainability targets.</p>
Todos os funcionários	Recompensa não-monetária	Projeto de redução de emissões	<p>JBS understands that employee engagement is fundamental to achieving the NetZero commitment and, therefore, all employees have been strongly engaged in this cause. Internally, the Company structured a working group (WG) with the participation of focal points from all businesses (Brazil, USA, Canada, Mexico, Europe, Australia/New Zealand) to identify solutions that reduce greenhouse gas emissions and can generate value.</p> <p>The group holds periodic meetings to exchange experiences and search for common projects. In Brazil, six other WGs were also created to identify and analyze proposals for Brazilian operations. They are: GT Agro, GT Origination, GT Engineering & Energy, GT Environment, GT R&D, Innovation and Circular Economy and GT Logistics.</p> <p>The coordination and consolidation of all these initiatives is the responsibility of a new function created within the Company, that of Global PMO for Net Zero, reporting directly to JBS' Global CEO. To reinforce JBS' commitment to the topic, a variable compensation policy linked to climate goals is being designed for senior executives.</p>

C2. Riscos e oportunidades

C2.1

(C2.1) A organização dispõe de um processo para identificar, avaliar e responder aos riscos e oportunidades climáticos?

Sim

C2.1a

(C2.1a) Como a organização define "horizontes temporais de curto, médio e longo prazo"?

	De (anos)	A (anos)	Comentários
Curto prazo	0	3	Time horizon defined by JBS Social and Environmental Responsibility Committee.
Médio prazo	3	10	Time horizon defined by JBS Social and Environmental Responsibility Committee.
Longo prazo	10	20	Time horizon defined by JBS Social and Environmental Responsibility Committee.

C2.1b

(C2.1b) Como a organização define um impacto financeiro ou estratégico "significativo" nos seus negócios?

JBS defines its financial and strategic impact at the corporate level. The approach to define the impact is performed by mapping the Company's risks, which includes operational, financial and strategic effects and the effects within the operational plants and / or business. Regarding the climate change scenarios, substantive impact are those that can have adverse effects the operational results, financial and liquidity state of the Company and intervene the operations through energy failure, fuel and production shortage, damage or losses within the production or facilities, interruption of means of transportation, among others that may affect the results of the Company.

These assumptions are defined together with the Risk Control department and approved by the Board of Directors. The quantitative assessment is analysed through the materiality of the risk impact (low, medium, high, critical) based in financial KPI's. The qualitative analysis considers regulatory, image and reputation risks with the Company's stakeholders and shareholders. The KPIs are defined and monitored through the Company's. For example: in 2021, more than R\$12,600,000.00 of financial losses were recorded in 9 of our units located in Brazil due to drought problems. To contain the impacts of water stress and the decrease in water flows from the units' wells, it was necessary to transport water from other nearby units and buy water from distribution companies to ensure that production was not impacted. In 2020, we recorded damages that resulted in a financial loss of more than R\$330,000 at one of our Seara facilities, located in Santa Catarina, due to a rare weather event, a cyclone.

C2.2

(C2.2) Descreva o(s) processo(s) para a identificação, a avaliação e a resposta aos riscos e às oportunidades climáticos.

Etapa(s) da cadeia de valor abrangida(s)

Operações diretas

<i>Upstream</i>

<i>Downstream</i>

Processo de gestão de riscos

Integrado no processo de gestão de riscos multidisciplinar da empresa como um todo

Frequência da avaliação

Mais de uma vez por ano

Horizonte(s) temporal(is) abrangido(s)

Curto prazo

Médio prazo

Longo prazo

Descrição do processo

The processes of risk and opportunity identification are under the responsibility of the Sustainability Direction, which reports to the Social and Environmental Responsibility Committee Board.

The approach to evaluate the climate change risks and opportunities at the Company (strategic) level and at the operational (asset) level, follows a methodology issued by the Social and Environmental Responsibility Committee Board.

It includes mapping and description of risks and opportunities, performed by the technical team; analysis and prioritization of mapped risks and opportunities; evaluation and study to transform the risks into opportunities. The Social and Environmental Responsibility Committee Board meets every quarter, where major advances, new opportunities and/or risks are identified and evaluated.

The guidelines and action plans developed are forwarded to the technical team, who will proceed with the necessary actions. In the asset level, each manager is responsible for monitoring the environmental legislation of their region / country and establishes measures for compliance. Climate change risks and opportunities assessment are directly linked with JBS operations (value chain) performance as climate change affects water availability, which consequently impacts grain (commodities), energy availability, production levels and so on.

We monitor the environmental impacts from our direct (industrial, logistics and shipping) operations and taking steps to minimize the impact of our own and our value chain operations. Monitoring involves the elaboration of a global inventory of direct and indirect GHG emissions. JBS also monitors indicators representing the volume of water and electricity used by its operations in order to optimize production processes and gradually reduce consumption.

To reduce the impact from JBS operations and create opportunities, the Company has an annual plan to invest in environmental improvements that focuses on use of natural resources, water and waste recycling and other issues.

Through the risk identification (both in Company and asset level), any social and environmental factors that have been identified as operational risks can also represent business opportunities, helping JBS to improve efficiency and productivity and reduce costs, such as the cases of JBS Novos Negócios (JBS Ambiental and JBS Fertilizantes) and Biolins.

The methodology issued by the Social and Environmental Responsibility Committee Board to evaluate and prioritize the risks and opportunities within JBS (Company and asset level) in relation to climate change follows the main steps described below: (a) Identification/ description of risks and opportunities, which allow the technical team to perform the mapping process; (b) Analysis of the mapped Risks and Opportunities and their prioritization. This step is based on business impact level and likelihood of occurrence; (c) The impacts of the risks and opportunities on business are classified and categorized under three different scenarios (short, medium and long term), as well as considered its likelihood of occurrence. In medium and long-term scenarios, only the risks or opportunities classified as high business impact and high probability of occurrence are object of attention on the Social and Environmental Responsibility Committee Board; (d) Study of the risks in order to forecast consequences, prevent them from occurring and transform them into opportunities; Moreover, the investments decisions are also based on legal requirements, payback and environmental benefits. The units' size is also taken into consideration, due to its proportional potential impact on the environment.

As physical risk/opportunity, in Friboi and Seara, this assessment has determined that the plants need to have targets related to wastewater amount and parameters, energy efficiency, etc., controlled through a scorecard in order to mitigate the related-climate change risks. Climate change could have a negative impact on the Company's businesses. Resources like water, electricity and animal feed (which is dependent on farming) are critical for production of raw materials (cattle, poultry, pork and lamb). In addition, in a partnership with a specialized consultancy, the company concluded in 2021 a climate scenario assessment study that identified the impacts reported by the units in Brazil related to climate events. The reported impacts were related to physical risks, such as: direct operations - water shortages (production was affected due to the lack of water access), floods and gales; and for supply chain (upstream and downstream) - water scarcity and thermal stress. Through the results achieved, the Company starts to develop a mitigation plan in order to avoid the physical risks identified.

In relation to transitional risks, JBS brought forward by five years our goal of zero illegal deforestation across our entire cattle supply chain for our operation outside the Amazon, which are the Cerrado, Pantanal, Atlantic Forest and Caatinga biomes from 2030 to 2025. The rapid advancement of the Transparent Livestock Platform has allowed the date to be brought forward. Using blockchain technology, JBS will increase the traceability of its cattle supply chain by 2025, identifying upstream links and imposing sustainability criteria by analyzing its own suppliers' animal suppliers in each biome where it operates. Furthermore, JBS is advancing in the assistance and inclusion of producers who seek to adjust the social and environmental situation of their properties. We already have 15 Green Offices working in offering environmental, legal and technical consulting.

JBS maintains a global risk management structure, with its own board and direct access to high administration through the Financial Committee and Risk Management. The focus is to follow the variables and the factors to which JBS is exposed in financial – market, credit and liquidity – as well non financial issues, with focus in socioenvironmental topics. Climate Change, for example, is one of the risks monitored.

C2.2a

(C2.2a) Quais tipos de riscos são levados em conta nas avaliações de riscos climáticos da organização?

	Relevância e inclusão	Explicação
Regulamentação atual	Relevante, sempre incluído	<p>We are subject to strict environmental legislations due to the nature of our business as a priority issue strictly related to our core operations and value chain, risks regarding current regulation are discussed in JBS's Sustainability Committee Board meetings and are a concern in other spheres of influence within the company. For example, deforestation is a very sensitive issue which JBS has strictly to comply with. If the company sources cattle from beef processors who bought it from farm located in illegal deforestation areas from Amazon Biome the Company may be notified by Brazilian Institute for the Environment and Renewable Natural Resources (Ibama) that could result in fines that can reach between 50 to 50 million BRL and other sanctions imposed by government authorities. This risk is strictly monitored by JBS.</p> <p>The Company is committed to purchase only cattle products from sources not included in the list of areas embargoed by Ibama. The Company's cattle procurement operations and its entire supplier monitoring system are audited annually by independent auditors, with results published to the Company's website. JBS makes efforts to enhance industry standards, through open dialog and by engaging stakeholders in order to improve sustainability across the industry's entire value chain.</p> <p>The Company is a founding member of the Brazilian Roundtable on Sustainable Livestock (BRSL) and the Global Roundtable for Sustainable Beef (GRSB) and a member of the Tropical Forest Alliance (TFA). The Company is also a member of the Brazilian Coalition on Climate, Forests and Agriculture, which works collaboratively on issues connected to climate change. It is also a supporter of the "Be Legal in the Amazon" initiative, led by the Brazilian Agribusiness Association (ABAG), the Brazilian Beef Exporters Association (ABIEC) and other institutions who work to combat illegal occupation of public lands and deforestation in the Amazon. In partnership with the Federal Prosecution Office of Brazil and the Institute for Forest and Agricultural Management and Certification (Imaflo), JBS has made important contributions to building industry strategies for responsible cattle procurement in the Amazon, called "Boi na Linha" (which establishes criteria for purchasing raw material for the Company's operations in the region).</p>
Regulamentação emergente	Relevante, sempre incluído	<p>JBS is subject to requirements of the National Policy of Climate Change in Brazil and related legislations in the countries in which we operate, as well to the national NDCs requirements, which can include carbon taxes. For example, in Brazil there are states where JBS operates, that has already established reporting requirements for its GHG emissions, such as São Paulo, Rio de Janeiro and Minas Gerais. Moreover, in some cases GHG reporting are conditioned to environmental licensing. In São Paulo state, the environmental agency (CETESB) requires (directive 035/2021/P) the reporting of the Inventory of Greenhouse Gas Emissions for production units that exceed 20 thousand tCO2e in scope 1.</p> <p>Also, JBS considers the occurrence of Carbon Taxes very likely that the Company will have to face in the medium term. We have been constantly monitoring Carbon Taxes legislations in countries where we operate, in order to anticipate the related rules and to prepare the management of this issue.</p> <p>The Securities and Exchange Commission ("CVM", in Portuguese) has altered the rules of the Reference Form in 2022, starting to require disclosure of information on ESG aspects of the business. The change will require more detail in these aspects, with emphasis on environmental and social risks, including climate risks.</p>
Tecnologia	Relevante, sempre incluído	<p>Climate change issues are embedded within JBS supply chain and within back office activities. For example, energy, fuel, units and sites monitoring, and control are supported by the use of technology.</p> <p>Any interruption in our system may affect the operations and financial results. The use of technology is also employed within JBS process in order to comply with applicable environmental and human rights legislation. For example, most of the cattle that the company processes are raised by its suppliers. If the Company is unable to ensure that livestock suppliers are in compliance with all applicable environmental and human rights laws and regulations, we may be subject to fines and other penalties that could adversely affect our image, reputation, business, financial condition and operating results.</p> <p>In order to mitigate the risk JBS developed a system on the cattle purchase, the JBS Geo-Monitoring System assesses almost 80,000 farms daily using advanced satellite imaging and supplier farm geo-referencing data to cover more than 850,000 km² across the Amazon, Cerrado, Pampas, Pantanal, Mata Atlântica e Caatinga biomes in Brazil. Any farm involved in illegal deforestation, invasion of protected areas such as indigenous lands or environmental conservation areas, or that has areas embargoed by IBAMA (the Brazilian Environmental Agency) is automatically blocked from our supply chain.</p> <p>In addition, all Company's activities are based on a Raw Material Responsible Procurement Policy, which establishes social and environmental criteria for selecting cattle supplier. All practices and policies related to compliance are available in the Code of Conduct and Ethics (https://jbs.com.br/en/compliance-en/codes-and-policies/codes-of-conduct/) and the Company also has a Business Associate Code of Conduct (jbs.com.br/en/compliance-en/codes-and-policies/codes-of-conduct/). Third parties carrying out any kind of transaction with JBS, such as customers and suppliers, must follow this Code.</p>
Legal	Relevante, sempre incluído	<p>Legal risks are very relevant and assessed in meetings across all business units in order to avoid all possible climate-related litigation claims. Since 2017, JBS has maintained a global board that leads the Compliance issue independently, reporting directly to the Board of Directors. The company monitors the maturity of the processes and assesses the efficiency of the actions taken year after year, in all regions where it operates. The Company is subject to laws and regulations related to climate change and environmental issues, and compliance with related regulations can be difficult and costly. Stakeholders in the countries in which the Company operates, such as government agencies, legislators and regulators, shareholders and non-governmental organizations, as well as companies operating in many sectors, are considering ways to reduce GHG emissions. The Company may incur an increase in energy costs, environmental costs and other investments to comply with existing or new GHG emission restrictions. The Company may also incur additional costs related to defence of lawsuits and other legal proceedings related to climate change and the alleged impact of its activities on climate change. In addition, increased attention to environmental impact and climate change related to beef production in particular, may result in legislative or regulatory actions aimed at reducing GHG emissions from livestock, which can materially increase the cost of beef production. Most of the cattle that the company processes are raised by its suppliers and if the Company is unable to ensure that livestock suppliers are in compliance with all applicable environmental and human rights laws and regulations, we may be subject to fines and other penalties that could adversely affect our image, reputation, business, financial condition and operating results. In order to mitigate the risk JBS pledge commitments and all Company's activities are based on a Raw Material Responsible Procurement Policy (social and environmental criteria for selecting cattle supplier). In the most recent independent audit of the system, it was found that 100% of direct cattle purchases assessed by the auditors met the company's social-environmental criteria. The results of all independent audits are available on: https://jbs.com.br/en/sustainability/product-integrity/guarantee-of-origin/. In total JBS proactively blocked more than 14,000 supplier farms for non-compliance with policies and standards.</p>
Mercado	Relevante, sempre incluído	<p>Changes in market, mainly in commodities products supplying, is very risky in terms of availability and prices fluctuation could be a damage to our business due to this variability. In Brazil, energy tariffs present a variability due to its availability. Since the most part of the energy supply in Brazil is from hydro sources it depends on the levels of the reservoir (rains). In case of not enough rain, it is necessary to turn on the thermal power units, which is more expensive. For this reason, the Brazilian national energy agency triggers the "tariff flag" mechanism when there is lack of energy provided from hydroelectric and other renewable sources, which results in an increase in the energy tariff monthly, and consequently might affect the Company's costs of goods sale. In another example, the profitability of the poultry industry is significantly affected by commodity prices for food ingredients for chickens, such as corn and soybeans, which are determined by supply and demand factors. As a result, gains in the poultry industry are subject to cyclical fluctuations, dependent on the costs of their inputs.</p> <p>The production of food ingredients is positively or negatively affected, mainly by the global level of stocks and demand for food ingredients, by agricultural policies in the United States, Brazil etc., and by climate patterns around the world. Weather conditions often change agricultural conditions in unpredictable ways. A significant change in weather patterns could affect the supply of food ingredients, as well as the ability of both industry PPC and Seara to obtain food ingredients, to raise chickens or to deliver products.</p> <p>Historically, grain prices have remained relatively regular, with occasional peaks resulting from externalities. These externalities were often the result of poor weather conditions, such as drought or excessive rainfall, which lead to poor agricultural productivity, and increased demand for ethanol and proteins. The cost of corn and soybean, the main food ingredients of PPC and Seara, remained at their highest historical levels during the years 2016 and 2018 and have remained volatile since then. There is no guarantee that prices for corn or soybean will not rise again due to the growing demand for these products worldwide and the alternative uses of these products, as for ethanol production or biodiesel. The high prices of food ingredients may continue to have a substantial adverse effect on the Company's operating results.</p>
Reputação	Relevante, sempre incluído	<p>All risks that may expose the companies' brand in a negative way are evaluated by the company and monitored through commitments, internal policies, stakeholder engagement and environmental initiatives. For example, Friboi, the JBS beef business unit, has signed an agreement with Araguaia League (Liga do Araguaia) to promote and increase sustainable livestock farming and assist producers in the Médio Vale do Araguaia region, in the state of Mato Grosso. As part of the Rebanho Araguaia project, the League can organize cattle breeders while Friboi provides the financial support to hire management consultants and increase pasture usage, not only to increase productivity, but also to help protect the local biome. In the 20/21 harvest, the initiative brought together 12 farms and more than 57 thousand head of cattle, distributed over more than 56 thousand hectares. Currently, in the 21/22 harvest, the proposal includes 14 farms and more than 51 thousand head of cattle on 42 thousand hectares in the first quarter alone. This partnership will enhance sustainable meat production in the Cerrado region and meet the demands of important players who increasingly want to buy sustainable products. The company also applies internal process to avoid sourcing livestock from suppliers listed in Ibama list, for example. The efforts through this initiatives and internal process seeks to ensure compliance and stakeholder engagement, aligned with the company's strategy and mitigating reputation risks.</p>
Físico agudo	Relevante, sempre incluído	<p>It is very risky to our business since its effects already caused damaged to us. In a partnership with a specialized consultancy, JBS concluded in 2021 a climate scenario assessment study that identified the impacts reported by the units related to climate events. The reported impacts were: direct operations - lack of water (production was affected by lack of access to water), floods and windstorms; and for the supply chain - water scarcity and heat stress. The water scarcity also had negatively influenced the availability of energy to our production units and caused the raise of electrical energy tariffs. In addition, if heat waves and droughts occur more frequently and with greater intensity in the locations where the Company operates, the Company may incur additional expenses to maintain its products and raw materials in appropriate conditions or to move them to other locations.</p>

	Relevância e inclusão	Explique
Físico crônico	Relevante, sempre incluído	It is very risky to our business since its effects already caused damaged to us. In a partnership with a specialized consultancy, JBS concluded in 2021 a climate scenario assessment study that identified the impacts reported by the units related to climate events. The reported impacts were: direct operations - lack of water (production was affected by lack of access to water), floods and windstorms; and for the supply chain - water scarcity and heat stress. The water scarcity also had negatively influenced the availability of energy to our production units and caused the raise of electrical energy tariffs.

C2.3

(C2.3) Foi identificado algum risco climático inerente com potencial para causar um impacto financeiro ou estratégico significativo nos negócios?

Sim

C2.3a

(C2.3a) Dê detalhes dos riscos identificados com potencial para causar um impacto financeiro ou estratégico significativo para os negócios.

Identificador

Risco 1

Em que ponto da cadeia de valor ocorre o fator de risco?

Operações diretas

Tipo de risco e Principal fator de risco climático

Regulamentação atual	Outro, especifique (Exposure to litigation)
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Principal impacto financeiro em potencial

Maiores custos indiretos (operacionais)

Tipo de risco climático mapeado conforme a classificação de risco tradicional do setor de serviços financeiros

<Not Applicable>

Descrição específica da empresa

JBS is exposed to risks that affect its operations and ability to operate in the international market. Climate change can induce changes in customer preferences for products/services. As the topic of climate change becomes a concern to consumers all over the world, the Company is aware of its responsibility, since it is a sensitive business for climate change like cattle raising and general agroindustry. JBS is working to create tools and control mechanisms that allows it to mitigate its exposure to reputational and image risks regarding the effect of its activities in climate change. The image risks that could affect JBS is related to food security, cattle raising and its wide supply chain, which may cause deforestation to create new pastures. Deforestation is a very sensitive issue not just in Brazil, but also with huge range throughout the world, mainly within the Amazon Biome. In Brazil, the company has 35 beef processing units, 21 of which are buyers of cattle from farms located within the Amazon Biome and which represented an average of 72,921 purchase orders in 2019, according to our last auditing report (2020). Sourcing cattle from suppliers listed in Ibama list, MTE lists, indigenous areas and/or protect areas may lead to legal process and penalties against the company and to appearance to the media.

Horizonte temporal

Curto prazo

Probabilidade

Provável

Magnitude do impacto

Alta

É possível indicar um valor para o potencial impacto financeiro?

Sim, uma faixa estimada

Valor do potencial impacto financeiro (moeda)

<Not Applicable>

Valor do potencial impacto financeiro – mínimo (moeda)

50

Valor do potencial impacto financeiro – máximo (moeda)

50000000

Explicação do valor do impacto financeiro

The impact figure was estimated according to the Brazilian Federal law Nº 9.605 from february 12th, 1998 for environmental crimes, which states that the payment of fines for environmental violations can vary between 50 to 50,000,000 BRL. As an example of the financial impact, if the company sources cattle from beef processors who bought it from farm located in illegal deforestation areas from Amazon Biome the Company may be notified by Brazilian Institute for the Environment and Renewable Natural Resources (Ibama) that could result in fines that can reach between 50 to 50 million BRL and other sanctions imposed by government authorities. In an internal assessment made by the company we also consider financial impact figure an estimative for the reputational impact.

Custo da resposta ao risco

4500000

Descrição da resposta e explicação do cálculo do custo

In order to mitigate the risk JBS pledge commitments and all Company's activities are based on a Raw Material Responsible Procurement Policy, which establishes social and environmental criteria for selecting cattle supplier. The policy assumes that all supplier must be compliant and there is no sourcing from supplier involved in the deforestation of native forests, invasion of public lands such as indigenous lands or environmental conservation units, rural violence and agrarian conflicts, or the use of compulsory and child labor. In addition, all practices and policies related to compliance are available in the Code of Conduct and Ethics (<https://jbs.com.br/en/compliance-en/codes-and-policies/codes-of-conduct/>) and Company also has a Business Associate Code of Conduct (<https://jbs.com.br/en/compliance-en/codes-and-policies/codes-of-conduct/>). Third parties carrying out any kind of transaction with JBS, such as customers and suppliers, must follow this Code. In 2021, 4.5 million were invested in this

topic.

Comentários

As part of its commitment to transparency, the Company's cattle procurement operations and its entire supplier monitoring system are audited annually by independent auditors, with results published to the Company's website. In 2021, Control Union Certifications, an international reference in social and environmental auditing and certifications, confirmed that 100% of cattle acquisitions made by the Company in the Amazon Biome were socially and environmentally compliant.

JBS makes efforts to enhance industry standards, through open dialog and by engaging stakeholders in order to improve sustainability across the industry's entire value chain. The Company is a founding member of the Brazilian Roundtable on Sustainable Livestock (BRSL) and the Global Roundtable for Sustainable Beef (GRSB) and a member of the Tropical Forest Alliance (TFA), an initiative connected to the World Economic Forum, fostering and promoting actions aimed at ending deforestation in the world. The Company is also a member of the Brazilian Coalition on Climate, Forests and Agriculture, which works collaboratively on issues connected to climate change.

It is also a supporter of the "Be Legal in the Amazon" initiative, led by the Brazilian Agribusiness Association (ABAG), the Brazilian Beef Exporters Association (ABIEC) and other institutions who work to combat illegal occupation of public lands and deforestation in the Amazon. In partnership with the Federal Prosecution Office of Brazil and the Institute for Forest and Agricultural Management and Certification (Imaflora), JBS has made important contributions to building industry strategies for responsible cattle procurement in the Amazon, called Boi na Linha (<https://www.boinalinha.org/>), which establishes criteria for purchasing raw material for the Company's operations in the region.

JBS has been helping producers in the environmental regularization of their properties through 15 Green Offices, located in various regions of the country. The company anticipated from 2030 to 2025 its goal of zero illegal deforestation for its supply chain, including its indirect suppliers in the Cerrado, Pantanal, Atlantic Forest and Caatinga, the same commitment already established for the Amazon. It was possible by the rapid advancement of the Transparent Livestock Platform. Using blockchain technology, it ensures that everyone is complying with the Company's Responsible Purchasing Policy.

Identificador

Risco 2

Em que ponto da cadeia de valor ocorre o fator de risco?

Operações diretas

Tipo de risco e Principal fator de risco climático

Mercado	Outro, especifique (Rise in risk-based pricing of energy taxation)
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Principal impacto financeiro em potencial

Maiores custos indiretos (operacionais)

Tipo de risco climático mapeado conforme a classificação de risco tradicional do setor de serviços financeiros

<Not Applicable>

Descrição específica da empresa

In 2021, JBS Global consumed 73,633,645 GJ or 20,453,790.28 MWh, of which 2,376,563.03 was consumed in JBS Brazil. The composition of energy costs depends on strongly on the public policies adopted for the electricity sector and includes variables such as social, environmental, tax, fossil fuel policies and also by microeconomic aspects like "tariff flag" mechanism, which determine the energy tariff monthly. Energy related to regulations, including fossil fuel and electricity costs variations, might affect the Company's costs of goods sale (COGS), since they are used throughout the operational chain from production until transportation of products and might affect the companies cashflow health.

Horizonte temporal

Curto prazo

Probabilidade

Provável

Magnitude do impacto

Média

É possível indicar um valor para o potencial impacto financeiro?

Sim, uma estimativa de valor único

Valor do potencial impacto financeiro (moeda)

488050983.01

Valor do potencial impacto financeiro – mínimo (moeda)

<Not Applicable>

Valor do potencial impacto financeiro – máximo (moeda)

<Not Applicable>

Explicação do valor do impacto financeiro

Brazilian units are experiencing an increase on electricity bills (also known as "tariff flags" - green/yellow/red). The "tariff flags" yellow and red occur in those months which the national energy agency considers that it was necessary an increase in feeding the Brazilian national grid with energy produced from fossil sources. This happens due to restrictions of energy from renewable sources, most of them produced from hydropower sources. This latter sources of energy eventually presents some constraints due to droughts / lack of rain, which could be a current effect of climate change, damaging the natural flow of the rains around the country. The financial impact was calculated from the price of the energy tariff: BRL/MWh 205.36. In 2021, JBS Brazil consumed 2,376,563.026 MWh of electricity. Considering the acquisitions of its total supply of energy from the national grid an average energy tariff of BRL/MWh 205.36, the energy costs for JBS Brazil would be estimated in BRL 488,050,983.01.

Custo da resposta ao risco

33390290

Descrição da resposta e explicação do cálculo do custo

The main strategy for managing energy at JBS Brasil is to invest in self-production, while also bringing down consumption and improving energy efficiency. The company prioritizes the energy acquired from clean sources (free Market) and Biolins, which is our cogeneration unit, located in the Lins Industrial Park, in the hinterland of São Paulo, generates thermoelectric energy and steam from biomass (sugarcane bagasse, eucalyptus chips and various biomass residues), with a generation capacity of around 45 megawatts of energy per hour. About 33% of the electricity generated supplies the plants of Friboi, JBS Couros and JBS Novos Negócios in the industrial complex where it is located. The remainder is distributed to JBS units and also sold to the domestic market. In 2020, the Company leased a photovoltaic plant to serve nine Swift stores which expanded to 50 stores in 2021. The plan is to reach 100% of the stores by 2025. The cost of response was based over the investment made by JBS

Brazil in 2020 for projects implementation for energy resource to prevent future cost and mitigate the risk of costs of goods sale (COGS) and cashflow availability. Part of JBS decarbonization plan is achieving 60% of renewable energy by 2030 and 100% by 2040. Also, production units of JBS throughout the world develops energy efficiency projects, promoting current and long run benefits, also supporting Company mitigate energy/fuel taxation effects in the operational costs.

Comentários

Identificador

Risco 3

Em que ponto da cadeia de valor ocorre o fator de risco?

Operações diretas

Tipo de risco e Principal fator de risco climático

Regulamentação emergente	Mecanismos de precificação do carbono
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Principal impacto financeiro em potencial

Maiores custos indiretos (operacionais)

Tipo de risco climático mapeado conforme a classificação de risco tradicional do setor de serviços financeiros

<Not Applicable>

Descrição específica da empresa

JBS is a global company and has operational facilities in 20 different countries, thus the Company's businesses are subject to government policies and extensive regulation that affect the beef, pork and poultry industries. There is a growing political and scientific consensus that greenhouse gas emissions and the climate issue has been strengthened due to the National Policies on Climate Change and NDCs in countries which we operate. Thus, JBS considers carbon taxes a very likely occurrence that the Company will have to deal in a medium-term horizon. We have been constantly monitoring carbon taxes legislations in countries where we operate, in order to anticipate the related rules and to prepare the management of this issue. The transition to a greenhouse gas tax charging scenario would increase JBS's costs.

Horizonte temporal

Médio prazo

Probabilidade

Provável

Magnitude do impacto

Alta

É possível indicar um valor para o potencial impacto financeiro?

Sim, uma estimativa de valor único

Valor do potencial impacto financeiro (moeda)

1593200444.21

Valor do potencial impacto financeiro – mínimo (moeda)

<Not Applicable>

Valor do potencial impacto financeiro – máximo (moeda)

<Not Applicable>

Explicação do valor do impacto financeiro

JBS must anticipate additional costs as a result of additional investments that will bear to comply with new regulations and the price of carbon, which may need to pay as a result of its level of carbon emissions. The estimated financial impact of this risk was based on the Dynamic Integrated model of Climate and the Economy (DICE). DICE is an Integrated Assessment Model that integrates in the neoclassical economics, carbon cycle, climate science, and estimated impacts allowing the weighing of subjectively guessed costs and subjectively guessed benefits of taking steps to slow climate change. DICE model suggested a mean 2020 tax rate of \$47 per metric ton of carbon dioxide. Thus, the value of potential figure impact was estimated by the carbon price considering Scopes 1 and 2 of JBS (globally) in 2021, and then the exchange rate from USD to BRL: Scope 1: 4,675,368.20 tCO₂e; Scope 2: 1,399,521.01 tCO₂e; Scope 1 + Scope 2: 6,074,889.21 tCO₂e; Exchange rate (31/12/2021): 47 USD x 5.58 BRL / 1 USD = 262.26 BRL per tonne of CO₂; so: 6,074,889.21 t CO₂e x 262.26 BRL per tonne of CO₂ = 1,593,200,444.21 BRL. In that way, the figure impact was estimated in an conservative approach in order to be intended to be sufficiently broad to capture most scenarios efforts, yet generic enough that it can be tailored for regional considerations or unexpected roadblocks.

Custo da resposta ao risco

580000000

Descrição da resposta e explicação do cálculo do custo

The cost of responding to the risk considers the financial amount that JBS will invest in the next 10 years in its decarbonization strategy, which is USD 1 billion, divided by 10 years to know the annual investment (USD 100 million, considering the exchange rate in 31/12/2021 - BRL 5.58 = BRL 558 million).

The announced investment was based on the environmental engagements investments made in the last year, for instance, it was invested BRL 494.2 million in environmental management at JBS operations worldwide in 2020. Every JBS unit throughout the world has GHG emission reduction projects, which is, indeed, not only an efficiency measure, but also an efficient manner to anticipate eventual penalties related to Carbon Taxes.

For instance, in Brazil one of JBS's highest GHG emission source is the wastewater treatment systems. So BRL 94.4 million were invested to improve on-site effluent treatment plants in the country. In Confresa, a Friboi's unit, there was a 20% reduction in wastewater GHG emissions intensity from 2019 to 2020 due to a equipment that was installed that reduces the organic material in the wastewater through blood separation and it was invested BRL 2 million in this project in the last year.

Up to this moment, we had identified Carbon Taxes in countries where we have units such as Mexico, UK, France and Argentina, but not strictly related to our core businesses so far.

Furthermore, to mitigate the risk described, JBS manages its GHG emissions elaborating its annually GHG inventory with external auditing; monitors environmental legislation, such as federal and state policies on Climate Change; participates in groups and associations for discussing GHG-emissions-related affairs and set GHG emissions reduction target: 30% reduction in its Scopes 1 and 2 GHG emissions by 2030, based on JBS 2019 figures. Also, JBS is working on its Net Zero by 2040 commitment, which contains intermediate targets by 2023, 2025 and 2030.

Comentários

Costs related to the processes identification of carbon taxes are related to each country, specifically. For example, in Brazil this activity is in charge of the Sustainability Department. JBS units' GHG reduction emissions projects development is one of the manners of the company mitigate this risk. For example, in May 2020, Brooks, AB,

beef plant commenced construction on a new 30 million-gallon anaerobic wastewater lagoon, equipped with a cover and biogas collection and handling system. Prior to this project, Brooks' previous lagoon was uncovered and would emit more than 200,000 tonnes of CO₂e in methane per year, which the facility would have to pay for according to Canadian regulations. With this new lagoon, the facility will be able to reclaim the gas produced during the anaerobic stage of its wastewater treatment process and flare it – cutting the lagoon's emissions by approximately 90 percent.

Identificador

Risco 4

Em que ponto da cadeia de valor ocorre o fator de risco?

Operações diretas

Tipo de risco e Principal fator de risco climático

Físico crônico	Alterações nos padrões e nos tipos de precipitações (chuva, granizo, neve/gelo)
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Principal impacto financeiro em potencial

Menores rendimentos devido à redução na capacidade de produção

Tipo de risco climático mapeado conforme a classificação de risco tradicional do setor de serviços financeiros

<Not Applicable>

Descrição específica da empresa

The physical risks identified by JBS are both local and global, and are divided by physical assets, supply chain and business structure. Some JBS Brazil and USA facilities are located in water-stressed areas. The water scarcity, due to the lack of a steady rainy season attributed to, among others, climate change, is a phenomenon that the Company faced in the recent years, mainly in Brazil, negatively influencing our business.

Specifically for Brazil, it was developed a study of climate scenario assessment which had identified the impacts reported by the units related to climate events. The reported impacts were: direct operations - water shortages (production was affected due to the lack of water access), floods and gales; and for supply chain - Water scarcity and thermal stress.

The water scarcity also had negatively influenced the availability of energy to our production units and caused the raise of electrical energy tariffs.

We recognize that water scarcity is a major global issue and is critical to securing a consistent, high-quality global food supply.

Horizonte temporal

Curto prazo

Probabilidade

Muito provável

Magnitude do impacto

Alta

É possível indicar um valor para o potencial impacto financeiro?

Sim, uma estimativa de valor único

Valor do potencial impacto financeiro (moeda)

1392814.25

Valor do potencial impacto financeiro – mínimo (moeda)

<Not Applicable>

Valor do potencial impacto financeiro – máximo (moeda)

<Not Applicable>

Explicação do valor do impacto financeiro

The climate scenario assessment study for JBS Brazil estimated a range for financial impact:

- There are 8 JBS units (5 Friboi and 3 JBS Couros) that may remain without rain for a period of about 2 consecutive months, which may cause a lack of operating water in the units where water recharge occurs through local rainfall. To assess the financial impact, it was considered that during these events of water scarcity (2 months per year), 30% of the volume of water consumed by these units (237,625m³) has to come from alternative sources of abstraction, which leads to an increase in water operating costs of up to BRL 5.00 / m³. Estimated average financial impact: BRL 1,188,123.25 / per year.

- There is 1 Seara unit that can remain for a period of more than a month without rain (40 days), which can cause a lack of water for operation in units where water recharge occurs through local rainfall. To assess the financial impact, it was considered that during these events of water scarcity, 30% of the volume of water consumed by these units (40,938m³) has to come from alternative sources of abstraction, which leads to an increase in operating costs of up to BRL 5.00 / m³.

Estimated financial average impact: BRL 204,691.00 / per year. The estimated total potential financial impact figure is BRL 1,392,814.25 / year.

Custo da resposta ao risco

16000000

Descrição da resposta e explicação do cálculo do custo

In order to mitigate the risk for water scarcity JBS allocated BRL 160,000,000.00 in the management and projects of water and wastewater in JBS operations around the world. Each of our production and further processing facilities has a tailored wastewater treatment program that meets its individual discharge permit requirements. These site-specific initiatives have helped reduce our total discharged water volume and addressed noncompliance issues.

Regarding electrical energy in Brazil, JBS prioritizes the energy acquired from clean sources (free Market) and Biolins, which is our cogeneration unit, located in the Lins Industrial Park, in the hinterland of São Paulo, generates thermoelectric energy and steam from biomass (sugarcane bagasse, eucalyptus chips and various biomass residues), with a generation capacity of around 45 megawatts of energy per hour. About 33% of the electricity generated supplies the plants of Friboi, JBS Couros and JBS Novos Negócios in the industrial complex where it is located.

In 2020, the Company leased a photovoltaic plant to serve nine Swift stores which expanded to 50 stores in 2021. The plan is to reach 100% of the stores by 2025.

Comentários

JBS allocated BRL 160,000,000.00 in the management of water and wastewater in JBS operations around the world in 2020.

C2.4

(C2.4) Foi identificada alguma oportunidade relacionada ao clima com potencial para causar um impacto financeiro ou estratégico significativo nos negócios?

Sim

C2.4a

(C2.4a) Dê detalhes sobre as oportunidades identificadas com potencial para causar um impacto financeiro ou estratégico significativo para os negócios.

Identificador

Opp1

Em que ponto da cadeia de valor ocorre a oportunidade?

Operações diretas

Tipo de oportunidade

Fonte de energia

Principal fator de oportunidade climática

Uso de fontes de energia com menor índice de emissões

Principal impacto financeiro em potencial

Aumento de receita resultante de uma maior demanda por produtos e serviços

Descrição específica da empresa

Biolins, JBS's cogeneration unit, located in the Lins Industrial Park, in the hinterland of São Paulo, generates thermoelectric energy and steam from biomass (sugarcane bagasse, eucalyptus chips and various biomass residues), with a generation capacity of around 45 megawatts of energy per hour, enough to supply a city with a population of 300,000. Biolins supplies 100% electrical energy and steam for the factories of Friboi, JBS Leather and JBS Novos Negócios own Lins industrial park. Alone, the power plant generates the equivalent of 25% of the total energy electrical used by all units of JBS in Brazil. The remainder is sold to domestic market. There is an opportunity to sell renewable energy certification (IRECs - International REC Standard) to companies which aim to compensate their Scope 2 CO2e emissions, considering 67% of its energy production sold to the domestic market. Also, with RE 100, which is an important global corporate renewable energy initiative, the demand for IRECs and other instruments that prove renewable energy usage for industries and other players will increase, JBS itself has committed to use 60% of renewable electricity by 2030 and 100% by 2040.

Horizonte temporal

Curto prazo

Probabilidade

Virtualmente certo

Magnitude do impacto

Média

É possível indicar um valor para o potencial impacto financeiro?

Sim, uma estimativa de valor único

Valor do potencial impacto financeiro (moeda)

47749280.4

Valor do potencial impacto financeiro – mínimo (moeda)

<Not Applicable>

Valor do potencial impacto financeiro – máximo (moeda)

<Not Applicable>

Explicação do valor do impacto financeiro

Considering that Biolins sold to the domestic market (national grid) in 2021, 232,515 MWh, the estimated revenue was BRL 47,749,280.4 (average energy tariff of BRL/MWh 205,36 in 2021). If this amount of energy could be sold directly to companies and issued IRECs, the average energy tariff should be around BRL/MWh 205,36.

Custos para concretizar a oportunidade

5400000

Estratégia para concretizar a oportunidade e explicação do cálculo dos custos

Biolins is an example of opportunity identified with the potential to have a substantive financial or strategic impact on JBS business, since it is a diversification of JBS core business, supplying renewable energy to other JBS plants and near companies, reducing JBS exposure to GHG emissions and another source of revenue through demand for lower emissions source of energy. Biolins CAPEX in 2020 was BRL 5,4 millions.

Comentários

With RE 100, which is an important global corporate renewable energy initiative, the demand for IRECs and other instruments that prove renewable energy usage for industries and other players will increase, JBS itself has committed to use 60% of renewable electricity by 2030 and 100% by 2040.

Identificador

Opp2

Em que ponto da cadeia de valor ocorre a oportunidade?

Operações diretas

Tipo de oportunidade

Produtos e serviços

Principal fator de oportunidade climática

Desenvolvimento e/ou expansão de bens e serviços com baixos índices de emissões

Principal impacto financeiro em potencial

Aumento de receita resultante de uma maior demanda por produtos e serviços

Descrição específica da empresa

In 2008, the Brazilian government, through the National Program of Biodiesel Production and Use (PNPB) forced the mix of pure biodiesel (B100) in diesel oil used in the country in order to reduce GHG emissions. Between January and June 2008, the blend of biodiesel in diesel oil was 2% (B2) and in 2015 the blend was 7% (National Petroleum Agency). From 2014 to 2015, the blend percentage increased 1.3% (from 5.67% to 7%). In 2015, the Brazilian Government also sanctioned the law nº 3834/2015, which established a timetable for increasing the mandatory blending of biodiesel to diesel.

The regulatory framework establishes that, in 12 months, the mixture should be 8%, increasing to 10% in 3 years. In 2017, this mixture was 7.8%. In 2019, the mixture increased to 10.3%. In 2020 the mixture increased to 11.33%, reaching 13% in April 2021, but decreasing to 10% by the end of the year. The regulation increases the demand for this biofuel in Brazil, consequently increasing the demand for the Biodiesel produced and sold by JBS Biodiesel.

JBS Biodiesel, is a division of JBS Novos Negócios, and operates in two factories, located in Campo Verde (MT) and Lins (SP). It is the world's largest verticalized producer of biodiesel made from beef tallow and the first company qualified to sell credits obtained through Renovabio, a Brazilian government program aimed at reducing emissions based on the obligations undertaken in the Paris Agreement. The Company uses waste as raw material, such as recycled used cooking oil and beef tallow. Another facility has been constructed in 2020 in Mafra (SC) in order to expand biodiesel production.

Horizonte temporal

Curto prazo

Probabilidade

Virtualmente certo

Magnitude do impacto

Alta

É possível indicar um valor para o potencial impacto financeiro?

Sim, uma estimativa de valor único

Valor do potencial impacto financeiro (moeda)

1339707600

Valor do potencial impacto financeiro – mínimo (moeda)

<Not Applicable>

Valor do potencial impacto financeiro – máximo (moeda)

<Not Applicable>

Explicação do valor do impacto financeiro

In July 2020, JBS started the new biodiesel facility construction in Mafra (SC) through Seara Alimentos. It will be operated by JBS Biodiesel and will have a total area of 76 thousand square meters, with a production capacity of around 900,000 liters of biodiesel per day. The financial impact is based on this production capacity. Multiplying this number for 252 production days a year and for the price of biodiesel, which is, on average, 5,907 BRL/liter (according to the 82° auction in October 2021), we have the financial impact for this opportunity around BRL 1,339,707,600.

Custos para concretizar a oportunidade

180000000

Estratégia para concretizar a oportunidade e explicação do cálculo dos custos

The cost of this opportunity is based on the Seara Alimentos investment in the constructions of the new biodiesel plant, located in the municipality of Mafra (SC). The plant will be operated by JBS Biodiesel, a division of JBS Novos Negócios, with an investment of BRL 180 million. The JBS Biodiesel plant will have a total area of 76 thousand square meters, with a production capacity of around 1 million liters of biodiesel per day. The project finished in 2021 and the company's biodiesel production uses, for the most part, animal fats from the JBS production chain. By correctly disposing of these residues and transforming them into biofuel, the company adds value to this by product and promotes sustainability in its operation. The municipality of Mafra is located in a strategic region for the national biofuel sector. In addition to having efficient loading and unloading logistics by rail and road, it is 120 kilometers away from Araucária (PR), where the Presidente Getúlio Vargas Refinery (Repar) is located, one of the main mixing and distribution units of diesel in the country.

Comentários

JBS Novos Negócios develops operations dedicated to transforming coproducts and animal protein processing waste into high value-added products, such as biodiesel, collagen, casings for deli meats, animal feed, pharmaceutical inputs, hygiene and cleaning materials and more, sold in the Brazilian market and exported to over two dozen countries. It also includes companies providing strategic services to JBS, in the metal packaging, trading, transport, recycling and waste management segments.

The rationale governing JBS Novos Negócios is to allow a closed cycle to be formed, where waste from one particular operation serves as the raw material for another, in a movement of innovation, efficiency and sustainable practices, promoting a circular economy. JBS Biodiesel, is a division of JBS Novos Negócios, and operates in two factories, located in Campo Verde (MT) and Lins (SP). It is the world's largest verticalized producer of biodiesel made from beef tallow and the first company qualified to sell credits obtained through Renovabio, a Brazilian government program aimed at reducing emissions based on the obligations undertaken in the Paris Agreement.

The Company uses waste as raw material, such as recycled used cooking oil. The Lins (SP) and Campo Verde (MT) units will also receive investments, aimed at improving the industrial park and increasing production. JBS has invested BRL 180 million on the construction of its new biodiesel plant, located in the municipality of Mafra, in Santa Catarina.

Identificador

Opp3

Em que ponto da cadeia de valor ocorre a oportunidade?

Operações diretas

Tipo de oportunidade

Mercados

Principal fator de oportunidade climática

Outro, especifique (Carbon market)

Principal impacto financeiro em potencial

Aumento de receita por meio do acesso a mercados novos e emergentes

Descrição específica da empresa

In 2019, aimed at lowering emissions JBS Biodiesel was authorized to take part in a new Brazilian policy to reduce greenhouse gas emissions, with the authorization of the country's National Agency of Petroleum, Natural Gas and Biofuels (ANP). This means that the Company now is authorized to issue Decarbonization Credits (CBio), as established by the RenovaBio program, which are obtained from production of biodiesel, the main raw material of which is bovine tallow. The Company sold Cbios from 2020. In October 2019, Lins (SP) was the first plant certified, followed by Campo Verde (MT), in February 2020. Biodiesel produced by these units prevents around 80 grams of carbon dioxide-equivalent per megajoule of energy generated by vehicles, when compared to the same energy generated from diesel use. For every 370 liters of biodiesel produced at its two plants, JBS will be able to issue 1 CBio, the equivalent of preventing one metric ton of carbon dioxide. In 2021, it was generated 518,124 CBios. Considering the new biodiesel plant in Mafra, which can produce on average 1 million liters a day, JBS can generate more than 1 million CBios annually.

Horizonte temporal

Médio prazo

Probabilidade

Virtualmente certo

Magnitude do impacto

Média-alta

É possível indicar um valor para o potencial impacto financeiro?

Sim, uma estimativa de valor único

Valor do potencial impacto financeiro (moeda)

95000000

Valor do potencial impacto financeiro – mínimo (moeda)

<Not Applicable>

Valor do potencial impacto financeiro – máximo (moeda)

<Not Applicable>

Explicação do valor do impacto financeiro

For the estimation of the figure impact the following premises were adopted: for every 370 liters of biodiesel produced at its two plants, JBS will be able to issue 1 CBio, the equivalent of preventing one metric ton of carbon dioxide. Considering that JBS Biodiesel maintains the same amount of production and also considering the new plant in Mafra, the production capacity can be around 719 million a year, the Company will be able to issue around 1.9 million of CBios per year. The first Cbios negotiated were sold for BRL 50.00 each, totalling BRL 95,000,000.

Custos para concretizar a oportunidade

450000

Estratégia para concretizar a oportunidade e explicação do cálculo dos custos

Considering that the cost of certification for RenovaBio Program, according to experts, is approximately 0.5% of annual revenue (BRL 90 million), the cost of the opportunity in this case would be approximately BRL 450,000.

Comentários

JBS Biodiesel became the first biodiesel company authorized to take part in a new Brazilian policy to reduce greenhouse gas emissions, with the authorization of the country's National Agency of Petroleum, Natural Gas and Biofuels (ANP). Through this certification, the Company is now qualified to issue decarbonization credits, called CBios, within the RenovaBio program for the biodiesel it produces, the raw material of which is beef tallow.

Identificador

Opp4

Em que ponto da cadeia de valor ocorre a oportunidade?

Operações diretas

Tipo de oportunidade

Eficiência de recursos

Principal fator de oportunidade climática

Uso de reciclagem

Principal impacto financeiro em potencial

Aumento de receita resultante de uma maior demanda por produtos e serviços

Descrição específica da empresa

In July 2020, JBS Novos Negócios started construction of the fertilizer plant in Guaíçara. JBS will become the first food company in Brazil to use organic waste for fertilizer production. Waste will be collected from 26 factories. This reinforces JBS's commitment to optimize the use of resources in processes, placing the circular economy and innovation as company premises.

Horizonte temporal

Curto prazo

Probabilidade

Virtualmente certo

Magnitude do impacto

Média-alta

É possível indicar um valor para o potencial impacto financeiro?

Sim, uma estimativa de valor único

Valor do potencial impacto financeiro (moeda)

19500000

Valor do potencial impacto financeiro – mínimo (moeda)

<Not Applicable>

Valor do potencial impacto financeiro – máximo (moeda)

<Not Applicable>

Explicação do valor do impacto financeiro

The fertilizer production is estimated in 150,000 tonnes per year. Considering that is no longer necessary sending organic waste to landfills (cost of 130 BRL/tonne), it

means a potential financial impact of BRL 19,500,000.

Custos para concretizar a oportunidade

134000000

Estratégia para concretizar a oportunidade e explicação do cálculo dos custos

The cost calculation was base in the amount of BLR 134 million JBS invested to build the new fertilizer factory in Guaiçara (SP).

Comentários

In Brazil, JBS Novos Negócios, JBS maintains businesses related to the food sector. There are 11 business units that mostly use what would be a co-product of food production for the manufacture of other products - among biodiesel, collagen, pharmaceutical ingredients, items for personal hygiene and cleaning, ingredients for animal nutrition and natural wraps, contributing to more sustainable production methods across the Company. JBS Novos Negócios also offers services and products complementary to the Company's value chain, such as metal packaging, trading, environmental solutions and transport services. JBS Novos Negócios invested 134 million (BRL) to build the new fertilizer factory.

C3. Estratégia de negócios

C3.1

(C3.1) A estratégia da organização inclui um plano de transição que se alinhe a um mundo de 1,5 °C?

Linha 1

Plano de transição

Sim, temos um plano de transição que se alinha com um mundo de 1,5 °C

Plano de transição publicamente disponível

Sim

Mecanismo pelo qual o <i>feedback </i> dos acionistas sobre o plano de transição é coletado

Não temos um mecanismo de <i>feedback </i> implantado, mas planejamos introduzi-lo nos próximos dois anos

Descrição do mecanismo de <i>feedback </i>

<Not Applicable>

Frequência de coleta do <i>feedback </i>

<Not Applicable>

Anexe eventuais documentos relevantes que deem detalhes sobre o plano de transição (opcional)

<https://jbs.com.br/netzero/en/>

Carta-Compromisso-JBS-Net-Zero-2040.pdf

Explique por que a organização não tem um plano de transição que se alinhe a um mundo de 1,5 °C, e se há eventuais planos para desenvolvê-lo no futuro

<Not Applicable>

Explique por que os riscos e as oportunidades climáticos não exerceram influência na estratégia

<Not Applicable>

C3.2

(C3.1a) A organização usa a análise de cenários climáticos para informar sua estratégia?

	Uso da análise de cenários climáticos para informar a estratégia	Razão principal pela qual a organização não usa a análise de cenários climáticos para informar sua estratégia	Explique por que a organização não usa a análise de cenários climáticos para informar sua estratégia, e se há eventuais planos para usá-la no futuro
Linha 1	Sim, qualitativa e quantitativa	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Forneça detalhes do uso da análise de cenários climáticos pela organização.

Cenário climático		Abrangência da análise de cenários	Alinhamento de temperatura do cenário	Parâmetros, suposições, escolhas analíticas
Cenários climáticos físicos	RCP 4.5	Divisão de negócios	<Not Applicable>	<p>In 2021, JBS concluded, together with a specialized consultancy, the study "Climate Scenarios and Physical Risk Assessment", which analyzed an overview of the potential impact of climate change, in a future period, on the operations of the Company's Business Units and indirect impacts on the supply chain.</p> <p>In relation to direct operations, Friboi units, Seara units, Seara Margarinas units, JBS Couros units, as well as Friboi feedlots and Seara farms are included in the analysis. These operating units were grouped into the Friboi and Seara business divisions. The geographic locations of the 222 operating units of JBS considered in the study were surveyed. As a criterion of relevance of the operational units of JBS Brasil, the total production for the year 2020 was considered.</p> <p>In relation to the JBS supply chain, composed of more than 37 thousand suppliers, the Friboi and Seara divisions were considered.</p> <p>To build the climate scenarios, the climate variables of interest to the company's value chain were selected. The variables were selected based on a survey of the history of climatic events at the units, bibliographic references on the relationship between animal species and climatic variables, and information provided by the JBS team at meetings. The four variables are: Maximum Wind Intensity; Maximum temperature; Maximum precipitation in 5 consecutive days; Consecutive days without rain.</p> <p>The climate diagnosis and prognosis were built for the four climatic variables of interest, for the entire Brazilian territory. Each climate variable had its values presented in the RCP 4.5 and RCP 8.5 scenarios.</p> <p>The RCP 4.5 scenario assumes that measures will be adopted to reduce emissions across the planet, with peak emissions and subsequent stabilization in 2060.</p> <p>Regarding the "Maximum Wind Intensity", for example, the RCP 4.5 scenario represents the climate variable with the highest intensity for most of Brazil, compared to the RCP8.5 scenario.</p> <p>For the construction of the JBS climate scenario and the identification of future climate risks, it was necessary to establish a base period for comparison: the period between 1961-1990 and 2021-2050.</p> <p>Based on the climate scenarios, the regions of greatest climate vulnerability were identified in the JBS value chain. For priority regions (hotspots), the relevance of climate risks to the company's operations was evaluated, valuing the costs of possible impacts and responses to manage and mitigate these risks.</p>
Cenários climáticos físicos	RCP 8.5	Divisão de negócios	<Not Applicable>	<p>In 2021, JBS concluded, together with a specialized consultancy, the study "Climate Scenarios and Physical Risk Assessment", which analyzed an overview of the potential impact of climate change, in a future period, on the operations of the Business Units of the Company. JBS Brasil and indirect impacts on the supply chain.</p> <p>In relation to direct operations, Friboi units, Seara units, Seara Margarinas units, JBS Couros units, as well as Friboi feedlots and Seara farms are included in the analysis. These operating units were grouped into the Friboi and Seara business divisions. The geographic locations of the 222 operating units of JBS considered in the study were surveyed. As a criterion of relevance of the operational units of JBS Brasil, the total production for the year 2020 was considered.</p> <p>Regarding the JBS supply chain, made up of more than 37 thousand suppliers, the Friboi and Seara divisions were considered.</p> <p>To build the climate scenarios, the climate variables of interest to the company's value chain were selected. The variables were selected based on a survey of the history of climatic events at the units, bibliographic references on the relationship between animal species and climatic variables, and information provided by the JBS team at meetings. The four variables are: Maximum Wind Intensity; Maximum temperature; Maximum precipitation in 5 consecutive days; Consecutive days without rain.</p> <p>The climate diagnosis and prognosis were built for the four climatic variables of interest, for the entire Brazilian territory. Each climate variable had its values presented in the RCP 4.5 and RCP 8.5 scenarios.</p> <p>The RCP 8.5 scenario envisages a global context in which greenhouse gas emissions increase until 2100, reaching levels twice as high as the RCP 4.5 scenario.</p> <p>Regarding the "Maximum Temperature", the RCP 8.5 scenario represents the worst scenario for this climate variable, compared to the RCP 4.5, with temperature intensification in most of Brazil.</p> <p>For the construction of the JBS climate scenario and the identification of future climate risks, it was necessary to establish a base period for comparison: periods 1961-1990 and 2021-2050.</p> <p>Based on the climate scenarios, the regions of greatest climate vulnerability were identified in the JBS value chain. For priority regions (hotspots), the relevance of climate risks to the company's operations was evaluated, valuing the costs of possible impacts and responses to manage and mitigate these risks.</p>

C3.2b

(C3.2b) Dê detalhes sobre as questões prioritárias que a organização busca abordar utilizando a análise de cenários climáticos, e faça um resumo dos resultados com relação a estas questões.

Linha 1

Questões prioritárias

JBS's climate scenario analysis covers the characterization of the company's value chain, divided into direct operations and supply chain, the definition of the past climate, based on historical data, and the construction of a future climate scenario, based on scientific data. IPCC (Intergovernmental Panel on Climate Change). Based on the climate scenarios, the regions of greatest climate vulnerability were identified in the JBS value chain. For priority regions (hotspots), the relevance of climate risks to the company's operations was evaluated, valuing the costs of possible impacts and responses to manage and mitigate these risks. An overview of the potential impact of climate change, in a future period, on the production of operational units, as well as indirect impacts on the supply chain, was evaluated. These elements can be used to support decision-making to reduce the company's climate risk.

For JBS' operating units, a survey was carried out on the occurrence of weather events that may have had an impact in any way on the operation. A form called "JBS and Climate Change" was sent to JBS employees responsible for the operational units. The main occurrences recorded were: Flooding, Water Scarcity and Strong Winds. These climate risks were broken down into primary impacts and impacts on operations (eg: Flooding > Loss of water quality at the capturing point > Increased costs for water treatment).

The occurrence of weather events that negatively impact animals supplied in regions of high concentration of supply represents a greater risk, as it can lead to more significant changes in your supply chain. In the same way that it was carried out for the bovine supply chain, we sought to characterize the relevance of poultry suppliers through the processing of production information from the Seara Aves operational units, distributing the total production of each unit to the nearest. Based on the identification of climate risks and impacts reported by the operating units of the two business divisions, the types of events that affect each business division were compared, considering, for example, types of climate events reported by business division and number of events weather reports per year.

Resultados da análise de cenários climáticos com relação às questões prioritárias

Scenario analysis is used by JBS as a planning tool. It helps JBS to understand how your operations may be affected by climate change, identifying potential impacts and opportunities.

The Pantanal region stands out, where there are 6 Friboi operational units (4 in MS and 2 in MT) and about 1,049 bovine suppliers that were classified as critical, as they are in an area with temperatures that may exceed the threshold for animal welfare.

One of Seara's largest swine slaughtering units, in terms of production volume, is also located in a risk area due to the high temperatures projected in MS. In relation to animal production, high temperatures can lead to reduced digestibility of chickens, cattle and swine, abortion of these animals in reproduction, and in extreme cases, death.

Regarding water scarcity events, there is a tendency for an increase in consecutive days without rain in the future, especially in the RCP 4.5 scenario. The region most impacted by this variable is the northeast of Brazil, where a Seara chicken slaughtering unit was identified. High temperatures and longer periods of drought can lead to reduced growth and nutritional quality of pastures and other foods, which can have changes in carbohydrate and nitrogen concentrations.

Regarding the impacts on animal production, high temperatures can lead to reduced digestibility of chickens, cattle and swine, abortion of these animals in reproduction, and in extreme cases, death. Thus, the consumption of feed or grass should be adequate to the quality of the diet, with supplements, introduction of species in the pasture, irrigation, pasture rotation and management of soil fertility. This can significantly impact the cost of production.

Eight climate vulnerability regions were identified in the JBS value chain (4 in direct operations and 4 in the supply chain). The company then began a detailed assessment of these risk areas, analyzing the possible financial impacts on the units and their suppliers.

Based on this assessment, JBS has been refining the planning and prioritization of resource allocation to invest in reducing and mitigating climate risks at the operating units in the most relevant regions. And critical suppliers are also being engaged and receiving incentives to improve sustainable property management practices in order to reduce the risk associated with JBS's operations. The estimated total potential financial impact figure is BRL 1,392,814.25 / year.

JBS is committed: to invest US\$ 1 billion over the next 10 years in emission reduction projects; to achieve, by 2025, a cattle supply chain free from illegal deforestation in the Amazon and others Brazilian biomes, including the suppliers of these suppliers; to convert 100% of the electricity consumed in the entire JBS operation to renewable sources by 2040; to invest US\$ 100 million in R&D, by 2030, to implement solutions to mitigate emissions; to link the variable compensation of senior executives to climate goals.

C3.3

(C3.3) Descreva onde e como os riscos e as oportunidades climáticos exerceram influência na estratégia.

	As oportunidades e os riscos climáticos exerceram influência na estratégia desta área?	Descrição da influência
Produtos e serviços	Sim	<p>Products and services may be impacted due to climate-related risks and opportunities. Risks are mostly related to direct operations - water shortages (production was affected due to the lack of water access), floods and gales; and for supply chain - Water scarcity and thermal stress; availability and costs related to energy and reputational issues (as reported in C2.3a Risks 1, 2 and 4). On the other hand, opportunities are created since JBS has actions to mitigate the identified risks, changing these challenges to market opportunities for its products, once it has a robust management strategy and process related to the effects of climate change. For example, JBS executes an ongoing process to monitor suppliers' farms located in the Legal Amazon region and annually submit the results to third party assurance. Moreover, JBS has an ongoing project in partnership with "Liga Araguaia" to strengthen sustainable beef production in the Cerrado region and to meet demand from major players, who are looking for products differentials. Thus, JBS seized opportunities related to climate change, such as expanding its Biodiesel business (another plant in Mafra-SC), a new fertilizer plant and the development of carbon project projects (Renovabio Program) through its biodiesel plants (all detailed in C2.4a).</p>
Cadeia de fornecimento e/ou cadeia de valor	Sim	<p>The risk of purchasing raw materials from suppliers involved in deforestation of native forests, invasion of protected areas such - as indigenous land or environmental conservation units, use of child or forced labor or products that could pose risks such as exposure to litigation and reputational risks (C3.2a Risk 1). JBS's cattle procurement operations and its entire supplier monitoring system are audited annually by independent auditors.</p> <p>At JBS, the acquisition of raw materials is guided by the principles of responsible purchasing. These precepts of issues such as compliance with each of the country's legislations and as industry benchmark practices. We also have a robust socio-environmental monitoring system capable of verifying how our ambience suppliers' activities comply with our suppliers determined by the policy, in order to guarantee a sustainable supply chain. Daily, more than 80 thousand registered cattle supply farms are located in the Amazon, Cerrado, Pantanal, Atlantic Forest and Pampas biomes. In all, we proactively blocked more than 14,000 supplier farms for failing to comply with our policies and standards. The supplier monitoring system is managed by Friboi's sustainability area and is constantly audited in internal processes (Sustainability, Internal Audit and Compliance) and annually in various external processes by independent auditors. In 2021, BRL 4.5 million was invested in the theme. As the last four audits, carried out by an independent certifier, attest that 100% of the direct purchases of cattle were in compliance with JBS's Responsible Raw Material Purchasing Policy.</p> <p>The Verified Origin Program, created in 2020, uses advanced technology for existing Garantia stores, a process for reading customers and consumers and supermarkets, by reading customers and supermarkets QR Code available on packaging.</p> <p>JBS also launched the Transparent Livestock Platform in April 2021. All JBS beef suppliers must follow the platform by the end of 2025. The target of zero illegal deforestation was anticipated for suppliers of its suppliers in the Cerrado, Pantanal biomes, Atlantic Forest and Caatinga from 2030 to 2025.</p> <p>The company also identified for Brazilian operations, through an analysis of climate scenarios study for its supply chain risks of water scarcity and thermal stress. (C3.2a Risk 4).</p>
Investimento em P&D	Sim	<p>All JBS operations invest in research and development to discover ways to reduce and optimize the use of packaging, especially those that do not come into direct contact with food, thus reducing the amount of waste produced and the associated costs. For example, there are annual targets for reducing packaging waste in Brazil.</p> <p>In Brazil, in 2021, Seara began to support pioneering research conducted by the University of São Paulo (USP), the Food Technology Institute (Ital) and the National Service for Industrial Learning/Integrated Center for Manufacture and Technology (Senai/Cimatec).</p> <p>In 2021, JBS entered one of the most promising and innovative markets in the food industry, that of cultured protein production. To this end, it entered into an agreement for the acquisition of the shareholding control of the Spanish company BioTech Foods, owner of a commercially viable technology in this line. In total, JBS will allocate US\$ 100 million to these initiatives.</p> <p>JBS USA also makes significant investments in technology and innovation, which helps ensure that its products and packaging solutions meet the highest quality standards. Among the highlights on this front is the startup Planterra Foods, which took to the market a vegetable protein used in the OZO-branded product line, also launched by the company. The OZO brand brings a plant-based portfolio with innovative, sustainable, healthy solutions and protein sources fermented by mushrooms, such as hamburgers, sausages and meatballs. In May 2021, Planterra Foods launched the OZO product line in Asia, presenting it at the Sial China Fair – the continent's largest event for innovative food products. The acquisition of Viverra in 2021 also spurred innovation at JBS.</p> <p>As business opportunities, JBS Biodiesel built another unit in 2020 in Mafra (SC) to expand biodiesel production (according to C2.4a – Opp 2). In addition, JBS Novos Negócios built a fertilizer plant in Guaíçara (SP), the first food company in Brazil to use organic waste to produce fertilizers. By using 25% of the organic waste generated by JBS' operations as raw material, the new company guarantees a correct destination and a lower environmental impact for these inputs. This reinforces JBS' commitment to optimizing the use of resources in its processes, placing the circular economy and innovation as the company's premises (as reported in C2.4a – Opp4).</p>
Operações	Sim	<p>JBS operations (plants) are very sensitive to the climate change effects. Through an analysis of climate scenarios study, it was identified the main risks for direct operations in Brazil are water shortages (production was affected due to the lack of water access), floods and gales (as reported in C2.3a Risk 4). On the other hand, the use of more climate-friendly fuels is an opportunity disseminated in the Company (as long as energy efficiency projects), including a business branch totally related to the production of clean energy (as reported in C2.4a - Opp 2). This is very important, since energy supply related to regulations, including fossil fuel and electricity costs variations, might affect the Company's costs of goods sale (COGS) and might affect the companies cashflow health (as reported in C2.3a - Risk 2). In addition, JBS operation are subject to strict environmental legislation due to the nature of our business and, further on, due to emerging legislation, for example, requirements of the National Policy of Climate Change in Brazil and related legislation in the countries in which we operate, as well to the national NDCs requirements, which can include carbon taxes. As a priority issue strictly related to our core operations, risks regarding current regulation are discussed in JBS's Sustainability Committee Board meetings and it is a concern in other spheres of influence within the company (as reported in C2.3a Risk 3). For example, in Brazil</p> <p>there are states where JBS has an operation that has already established reporting requirements for its GHG emissions. Moreover, in some cases GHG reporting are conditioned to environmental licensing. In order to mitigate the risk, every JBS unit throughout the world has GHG emission reduction projects, which is, indeed, besides an efficiency measure, an efficient manner to anticipate eventual penalties related to Carbon Taxes. Up to this moment, we had identified Carbon Taxes, in countries where we have units, in Mexico, UK and France, Argentina, but not strictly related to our core businesses so far. Added to that, JBS executes emission reduction Initiatives and established a commitment to reduce greenhouse gas emissions by 30% in scopes 1 and 2 by 2030 and a Net Zero 2040 commitment.</p>

C3.4

(C3.4) Descreva onde e como os riscos e as oportunidades climáticos exerceram influência no planejamento financeiro.

	Elementos do planejamento financeiro que sofreram influência	Descrição da influência
Linha 1	Custos diretos Custos indiretos Alocação de capital	<p>The physical risks identified by JBS are local and global and are divided by physical assets, supply chain and business structure. Some facilities of JBS Brasil and USA are located in water scarcity areas. Water scarcity, due to the lack of a constant rainy season attributed, among others, to climate change, is a phenomenon that the Company has faced in recent years, mainly in Brazil, negatively influencing our business.</p> <p>Specifically for Brazil, a study was developed to assess climate scenarios that identified the impacts reported by the units related to climate events. The reported impacts were: direct operations - lack of water (production was affected by lack of access to water), floods and windstorms; and for the supply chain - Water scarcity and thermal stress. The total estimated potential financial impact is R\$12,623,168.00.</p> <p>JBS is also exposed to risks that affect its operations and ability to operate in the international market. Climate change can induce changes in customer preferences for products/services. As the issue of climate change becomes a concern of consumers around the world, the Company is aware of its responsibility, as it is a business sensitive to climate change, such as livestock and agribusiness in general.</p> <p>JBS is working to create tools and control mechanisms that allow it to mitigate its exposure to reputational and image risks regarding the effect of its activities on climate change. The image risks that can affect JBS are related to food security, livestock and its wide production chain, which can cause deforestation to create new pastures.</p> <p>Deforestation is a very sensitive issue not only in Brazil, but also with wide coverage throughout the world, especially in the Amazon Biome. Thus, among other options, JBS monitors the carbon tax legislation in the countries where it operates, in order to anticipate the related rules and prepare the management of this issue.</p> <p>The transition to a scenario of collecting taxes on greenhouse gases would increase JBS's costs, estimated in 2020 at around R\$ 1.5 billion. To mitigate these risks and take advantage of related opportunities, JBS made investments:</p> <ul style="list-style-type: none">• All the Company's activities are based on a Responsible Raw Material Purchasing Policy, which establishes socio-environmental criteria for the selection of cattle suppliers. The policy assumes that all suppliers must comply and there is no supply from suppliers involved in clearing native forests, encroachment on public lands such as indigenous lands or environmental conservation units, rural violence and agrarian conflicts, or use of labor. The risk response cost encompasses the company's annual investment to improve its internal processes and monitoring controls. JBS spends R\$ 2 million annually on a supplier monitoring system and control programs that consider third-party costs (geographic monitoring, system preparation, advanced analysis and systems integration), audits, training trips and meetings with employees involved;• To mitigate the risk of water shortages, JBS allocated R\$110,312,974.00 to water and effluent management and projects in JBS's operations in Brazil. Each of our production and further processing facilities has a customized effluent treatment program that meets individual discharge permit requirements. These site-specific initiatives helped reduce our total volume of water discharged and addressed non-compliance issues;• Regarding energy issues, the main strategy is to invest in self-production, in addition to reducing consumption and improving energy efficiency. The company prioritizes energy acquired from clean sources (free market) and Biolins (cogeneration unit) that generates thermoelectric energy and steam from biomass (sugarcane bagasse, eucalyptus chips and various biomass residues), with capacity to generate about 45 megawatts of energy per hour. About 33% of the electricity generated supplies the plants of Friboi, JBS Couros and JBS Novos Negócios in the industrial complex where it is located. The remainder is distributed to JBS units and also sold to the domestic market. In 2020, the Company leased a photovoltaic plant to serve nine Swift stores. By the end of 2021, we had 21 stores with the system operating, plus 15 stores with the modules installed in the commissioning stages and finalizing the concessionaire's release for installation!. The total generation of the systems in 2021 was 151,063.17 kWh and the cost avoided by Swift in 2021 was R\$ 23,695.98;• To expand the production of biodiesel, JBS Biodiesel built a new plant in Mafra (SC), an investment of R\$ 180,000,000.00. Another opportunity was the construction of a fertilizer factory in Guaíçara. JBS will become the first food company in Brazil to use organic waste to produce fertilizers. Waste will be collected from 26 factories. The investment for the construction of this plant was R\$ 91,000,000.00. Finally, the cost of responding to carbon tax risk considers the financial value that JBS will invest US\$1 billion by 2030 in its decarbonization strategy and US\$100 million in R&D to implement solutions to mitigate our GHG emissions.

C3.5

(C3.5) Na contabilidade financeira da organização, são identificados gastos/receitas alinhados com a transição da organização para um mundo de 1,5 °C?

Não, mas planejamos fazê-lo nos próximos dois anos

C4. Metas e desempenho

C4.1

(C4.1) Havia uma meta de emissões ativa no ano de reporte?

Meta de intensidade

C4.1b

(C4.1b) Dê detalhes da(s) meta(s) de intensidade de emissões e do progresso em relação a essa(s) meta(s).

Número de referência da meta

Int 1

Ano em que a meta foi definida

2020

Abrangência da meta

Na empresa como um todo

Escopo(s)

Escopo 1

Escopo 2

Método de contabilização do Escopo 2

Com base na localização

Categoria(s) do Escopo 3

<Not Applicable>

Métrica de intensidade

Outro, especifique (Metric tons CO2e per metric tons of finished product)

Ano-base

2019

Valor de intensidade no ano-base para o Escopo 1 (toneladas métricas de CO2e por unidade de atividade)

0.1897

Valor de intensidade no ano-base para o Escopo 2 (toneladas métricas de CO2e por unidade de atividade)

0.0792

Valor de intensidade no ano-base para o Escopo 3 (toneladas métricas de CO2e por unidade de atividade)

<Not Applicable>

Valor de intensidade no ano-base para todos os Escopos selecionados (toneladas métricas de CO2e por unidade de atividade)

0.2689

% das emissões totais do ano-base de Escopo 1 abrangida por este valor de intensidade de Escopo 1

100

% das emissões totais do ano-base de Escopo 2 abrangida por este valor de intensidade de Escopo 2

100

% das emissões totais do ano-base de Escopo 3 (em todas as categorias do Escopo 3) abrangida por este valor de intensidade de Escopo 3

<Not Applicable>

% das emissões totais do ano-base em todos os Escopos selecionados abrangidos por este valor de intensidade

100

Ano da meta

2030

Meta de redução com relação ao ano-base (%)

30

Valor de intensidade no ano da meta para todos os Escopos selecionados (toneladas métricas de CO2e por unidade de atividade) [calculado automaticamente]

0.18823

Porcentagem de variação prevista nas emissões absolutas de Escopo 1+2

30

Porcentagem de variação prevista nas emissões absolutas de Escopo 3

0

Valor de intensidade no ano de reporte para o Escopo 1 (toneladas métricas de CO2e por unidade de atividade)

0.2334

Valor de intensidade no ano de reporte para o Escopo 2 (toneladas métricas de CO2e por unidade de atividade)

0.0699

Valor de intensidade no ano de reporte para o Escopo 3 (toneladas métricas de CO2e por unidade de atividade)

<Not Applicable>

Valor de intensidade no ano de reporte para todos os Escopos selecionados (toneladas métricas de CO2e por unidade de atividade)

0.3033

% da meta alcançada com relação ao ano-base [calculada automaticamente]

-42.6428659972729

Status da meta no ano de reporte

Em andamento

Esta é uma meta com base científica?

Não, mas prevemos definir uma nos próximos dois anos

Meta desejada

<Not Applicable>

Explique a abrangência da meta e identifique eventuais exclusões

All JBS SA operations (100%), has annount a commitment to reducing greenhouse gas emissions (Scope 1 + 2) by 30% by 2030. The Company also committed to Science Based Target initiative (SBTi) and will submit its target to the initiative within the next 2 years. Also, the Company is committed to Business Ambition 1.5, the highest level of commitment. It is important to mention that JBS has committed to achieve Net Zero GHG Emissions (Scopes 1, 2 and 3) by 2040.

Plano para alcançar a meta e progresso realizado até o fim do ano de reporte

There was no significant evolution in the goal, due to the improvement of the GHG inventory of scopes 1+2. However, JBS will adopt several strategies to get this commitment off the ground, including: Investment of US\$ 1 billion over the next 10 years, including the promotion of third-party projects focused on our operations. These projects will be evaluated by a committee made up of JBS executives, academics and outside experts; the Company also aims to achieve zero deforestation in its global supply chain by 2035; the use of 100% renewable electricity in its units worldwide: JBS will join RE 100, converting all its operations to 100% renewable electricity by 2040; investing \$100 million by 2030 in Research and Development to implement emission mitigation solutions, such as improved regenerative agricultural practices, intensified soil carbon sequestration and supplier farm technologies; and tying the variable compensation of JBS senior executives to climate change targets.

Liste as iniciativas de redução das emissões que mais contribuíram para se atingir essa meta

<Not Applicable>

C4.2

(C4.2) Havia alguma outra meta climática ativa no ano de reporte?

Meta(s) para aumentar o consumo ou a produção de energia de baixo carbono
Meta(s) de zero líquido

C4.2a

(C4.2a) Forneça detalhes da(s) meta(s) para aumentar o consumo ou a produção de energia de baixo carbono.

Número de referência da meta

Low 1

Ano em que a meta foi definida

2020

Abrangência da meta

Na empresa como um todo

Tipo de meta: portador de energia

Eletricidade

Tipo de meta: atividade

Consumo

Tipo de meta: fonte de energia

Somente fonte(s) de energia renovável

Ano-base

2019

Consumo ou produção do vetor de energia selecionado no ano-base (MWh)

1861883.57

Participação percentual das energias renováveis ou de baixo carbono no ano-base

35

Ano da meta

2030

Participação percentual das energias renováveis ou de baixo carbono no ano da meta

60

Participação percentual das energias renováveis ou de baixo carbono no ano de reporte

37

% da meta alcançada com relação ao ano-base [calculada automaticamente]

8

Status da meta no ano de reporte

Em andamento

Esta meta faz parte de uma meta de emissões?

Yes, Int 1.

Esta meta faz parte de uma iniciativa abrangente?

Não, ela não faz parte de uma iniciativa mais abrangente

Explique a abrangência da meta e identifique eventuais exclusões

JBS (100%) has committed to reducing greenhouse gas emissions (Scope 1 + 2) by 30% by 2030. In 2021, the Company has also committed to Science Based Target initiative (SBTi) and will submit its target to the initiative within the next 2 years. Also, the Company is committed to Business Ambition 1.5, the highest level of commitment. It is important to mention that JBS has committed to achieve Net Zero GHG Emissions (Scopes 1, 2 and 3) by 2040. For this reason, the company also set a target to achieve 60% of renewable electricity in 100% of its facilities by 2030 and 100% by 2040. The company also will commit to RE100 within the next 2 years.

Plano para alcançar a meta e progresso realizado até o fim do ano de reporte

An example of this effort in Brazil today is the Biolins cogeneration unit, installed in the Lins industrial park, São Paulo, which generates the equivalent of 25% of the total electricity used by all JBS units in Brazil. The facility produces electricity and steam from biomass (sugarcane bagasse, eucalyptus chips and various biomass residues). In the United Kingdom, Pilgrim's units already operate with 100% renewable electricity. The company is also investing in the construction of solar power plants in Australia and the United States (Texas) to supply its operations. These projects join seven other solar generation systems implemented in the United States (3), Australia (1), and Europe (3).

Liste as ações que mais contribuíram para se alcançar essa meta

<Not Applicable>

C4.2c

(C4.2c) Forneça detalhes da(s) sua(s) meta(s) de zero líquido.

Número de referência da meta

NZ1

Abrangência da meta

Na empresa como um todo

Meta(s) de emissões absoluta(s)/de intensidade relacionadas a esta meta de zero líquido

Abs1

Abs100

Ano da meta para atingir o zero líquido

2040

Esta é uma meta com base científica?

Não, mas prevemos definir uma nos próximos dois anos

Explique a abrangência da meta e identifique eventuais exclusões

JBS will reset the balance of its greenhouse gas emissions, reducing its direct and indirect emissions (scopes 1, 2 and 3) and offsetting all residual emissions. The Company will develop goals to reduce greenhouse gas emissions in its global operations and value chains in South America, North America, Europe, the United Kingdom, Australia and New Zealand. In this regard, it will present a science-based plan to reach Net Zero, consistent with the criteria established by the Science-Based Targets initiative (SBTi). It is worth noting that Pilgrim's Moy Park and Pilgrim's UK already have emission reduction targets approved by SBTi. And to strengthen this commitment, in 2021 we issued and priced in the international market four bond issues linked to our sustainability targets, totaling US\$3.2 billion. These operations are related to the Company's commitment to reduce GHG emissions and to its engagement in the Livestock Transparent Platform. Thus, JBS will reduce its global scope 1 and 2 emissions intensity by at least 30% by 2030 against base year 2019.

A organização pretende neutralizar eventuais emissões inalteradas com remoções permanentes de carbono no ano da meta?

Sim

Marcos planejados e/ou investimentos de curto prazo para a neutralização no ano da meta

JBS most significant emissions are FLAG scope 3 emissions. We are still waiting the final SBTi guidance to address the reduction target, but so far our target might be to reduce 90% scope 1 and 2 and 72% scope 3 on a linear basis, that is, by 2030 (our near term target) might delivery 42% reduction scope 1 and 2 and 35% scope 3.

Ações planejadas para mitigar as emissões além da cadeia de valor da organização (opcional)

The company will act beyond the value chain and is assessing the possibilities.

C4.3

(C4.3) Existiam iniciativas de redução de emissões ativas no ano de reporte? Observe que isto pode incluir aquelas nas fases de planejamento e/ou implementação.

Sim

C4.3a

(C4.3a) Identifique o número total de iniciativas em cada estágio de desenvolvimento; para aquelas em fase de implementação, identifique a economia de CO2e estimada.

	Número de iniciativas	Economia anual total estimada de CO2e em toneladas métricas de CO2e (somente para linhas marcadas com *)
Em fase de pesquisa	0	0
A ser implementada*	0	0
Implementação iniciada*	0	0
Implementado*	8	81062
Não será implementada	0	0

C4.3b

(C4.3b) Dê detalhes na tabela abaixo sobre as iniciativas implementadas no ano de reporte.

Categoria de iniciativa e Tipo de iniciativa

Eficiência energética em construções	Iluminação
--------------------------------------	------------

Economia anual estimada de CO2e (toneladas métricas de CO2e)

2897

Escopo(s) ou categoria(s) do Escopo 3 em que ocorrem as reduções nas emissões

Escopo 2 (com base na localização)

Voluntário/obrigatório

Voluntária

Economia monetária anual (unidade monetária – conforme especificada em C0.4)

302816

Investimento necessário (unidade monetária – conforme especificada em C0.4)

14221528

Período de retorno

4-10 anos

Duração estimada da iniciativa

Em andamento

Comentários

Numerous facilities upgraded lighting to LED.

Categoria de iniciativa e Tipo de iniciativa

Eficiência energética nos processos de produção	Substituição de máquinas/equipamentos
---	---------------------------------------

Economia anual estimada de CO2e (toneladas métricas de CO2e)

11400

Escopo(s) ou categoria(s) do Escopo 3 em que ocorrem as reduções nas emissões

Escopo 1

Voluntário/obrigatório

Voluntária

Economia monetária anual (unidade monetária – conforme especificada em C0.4)

6029279

Investimento necessário (unidade monetária – conforme especificada em C0.4)

24008967

Período de retorno

1-3 anos

Duração estimada da iniciativa

Em andamento

Comentários

This represents a wide category of projects, such as installing heat exchangers, new more efficient boilers, automation of refrigeration equipment, etc.

Categoria de iniciativa e Tipo de iniciativa

Redução das emissões fugitivas	Captura de metano agrícola
--------------------------------	----------------------------

Economia anual estimada de CO2e (toneladas métricas de CO2e)

23500

Escopo(s) ou categoria(s) do Escopo 3 em que ocorrem as reduções nas emissões

Escopo 1

Voluntário/obrigatório

Voluntária

Economia monetária anual (unidade monetária – conforme especificada em C0.4)

0

Investimento necessário (unidade monetária – conforme especificada em C0.4)

43800143

Período de retorno

Nenhum retorno

Duração estimada da iniciativa

Em andamento

Comentários

Project for capturing biogas from anaerobic digesters. The main objective of this initiative is not financial gain, but rather the reduction of emissions.

Categoria de iniciativa e Tipo de iniciativa

Consumo de energia de baixo carbono	Combinação de eletricidade de baixo carbono
-------------------------------------	---

Economia anual estimada de CO2e (toneladas métricas de CO2e)

8000

Escopo(s) ou categoria(s) do Escopo 3 em que ocorrem as reduções nas emissões

Escopo 2 (com base na localização)

Voluntário/obrigatório

Voluntária

Economia monetária anual (unidade monetária – conforme especificada em C0.4)

13518563

Investimento necessário (unidade monetária – conforme especificada em C0.4)

97333650

Período de retorno

4-10 anos

Duração estimada da iniciativa

16-20 anos

Comentários

The company is installing a cogeneration system at a facility in Florida. By capturing its waste heat, we will improve our Scope 2 emissions.

Categoria de iniciativa e Tipo de iniciativa

Política da empresa ou mudança comportamental	Eficiência de recursos
---	------------------------

Economia anual estimada de CO2e (toneladas métricas de CO2e)

3500

Escopo(s) ou categoria(s) do Escopo 3 em que ocorrem as reduções nas emissões

Escopo 1

Voluntário/obrigatório

Voluntária

Economia monetária anual (unidade monetária – conforme especificada em C0.4)

1351856

Investimento necessário (unidade monetária – conforme especificada em C0.4)

5407425

Período de retorno

< 1 ano

Duração estimada da iniciativa

Em andamento

Comentários

Our production facilities have established goals to reduce energy usage and GHG emissions. There have been countless behavioral improvements and low/no cost improvements to improve. We are estimating the reduction and spend.

Categoria de iniciativa e Tipo de iniciativa

Transporte	Substituição dos veículos da frota da empresa
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Economia anual estimada de CO2e (toneladas métricas de CO2e)

2750

Escopo(s) ou categoria(s) do Escopo 3 em que ocorrem as reduções nas emissões

Escopo 1

Voluntário/obrigatório

Voluntária

Economia monetária anual (unidade monetária – conforme especificada em C0.4)

0

Investimento necessário (unidade monetária – conforme especificada em C0.4)

0

Período de retorno

Nenhum retorno

Duração estimada da iniciativa

6-10 anos

Comentários

Replacement of aged trucks with new, improved efficiency trucks is ongoing company within our transportation business unit.

Categoria de iniciativa e Tipo de iniciativa

Outro, especifique	Outro, especifique (Regenerative agriculture production)
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Economia anual estimada de CO2e (toneladas métricas de CO2e)

10000

Escopo(s) ou categoria(s) do Escopo 3 em que ocorrem as reduções nas emissões

Escopo 3 categoria 1: Bens e serviços adquiridos

Voluntário/obrigatório

Voluntária

Economia monetária anual (unidade monetária – conforme especificada em C0.4)

0

Investimento necessário (unidade monetária – conforme especificada em C0.4)

811114

Período de retorno

Nenhum retorno

Duração estimada da iniciativa

Em andamento

Comentários

JBS and the Soil and Water Outcomes Fund, the leading agricultural ecosystem services program, announced a new partnership to catalyze farmer adoption of conservation practices that generate verifiable carbon reductions and water quality improvements. The main objective of this initiative is not financial gain, but rather the reduction of emissions.

Categoria de iniciativa e Tipo de iniciativa

Geração de energia de baixo carbono	Solar FV
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Economia anual estimada de CO2e (toneladas métricas de CO2e)

19015

Escopo(s) ou categoria(s) do Escopo 3 em que ocorrem as reduções nas emissões

Escopo 2 (com base na localização)

Voluntário/obrigatório

Voluntária

Economia monetária anual (unidade monetária – conforme especificada em C0.4)

23696

Investimento necessário (unidade monetária – conforme especificada em C0.4)

0

Período de retorno

Nenhum retorno

Duração estimada da iniciativa

Em andamento

Comentários

Swift, a reference in quality frozen food products, is taking a very important step for the preservation of the environment: the adoption of solar energy in 100% of its chain of stores in Brazil. The project is a partnership with Âmbor Energia, a company from the J&F group that operates from the generation to the commercialization of energy. The initiative is already at an advanced stage of implementation, with photovoltaic panels working in several stores. By the end of 2021 we had 21 stores with the system operating, 15 more stores with the modules installed in commissioning stages and finalizing the release of the concessionaire for installation! The total generation of the systems in 2021 was 151,063.17 kWh. The agreement also contemplates Swift's expansion plan, ensuring the supply by solar energy in all the stores inaugurated until 2025. The program involves an investment of R\$150 million by Âmbor Energia, responsible for operating the system.

C4.3c**(C4.3c) Que métodos a empresa usa para estimular os investimentos em atividades de redução de emissões?**

Método	Comentários
Orçamento específico para outras atividades de redução das emissões	JBS is committing to be Net Zero by 2040. Therefore, we invest in initiatives with the objective of reducing emissions and over the next 10 years we will have the investment of US\$ 1 billion, including the promotion of third-party projects focused on our operations.
Orçamento específico para o P&D de produtos de baixo carbono	As part of the US\$ 1 billion investment, by 2030 there will be a \$100 million investment in Research and Development to implement emission mitigation solutions such as improved regenerative agricultural practices, intensified soil carbon sequestration, and in technologies for supplying farms.
Especificação de menor retorno sobre o investimento (ROI)	We invest in initiatives and projects that have the goal of reducing emissions and also have a return on investment.

C-AC4.4/C-FB4.4/C-PF4.4**(C-AC4.4/C-FB4.4/C-PF4.4) São implementadas práticas de manejo agrícola ou florestal em terras próprias com o benefício da mitigação e/ou da adaptação às mudanças climáticas?**

Sim

C-AC4.4a/C-FB4.4a/C-PF4.4a

(C-AC4.4a/C-FB4.4a/C-PF4.4a) Especifique as práticas de gestão agrícola ou florestal implementadas nas terras da organização com os benefícios de mitigação e/ou adaptação às mudanças climáticas e indique um valor de emissões correspondente, se conhecido.

Número de referência da prática de manejo

MP3

Prática de manejo

Reflorestamento

Descrição da prática de manejo

Reforestation on JBS Biodiesel's own land, located in Mafra, Santa Catarina. There were new plantings of 200 seedlings of the Araucaria species. Once there was the suppression of 4 Araucaria units. The restoration of native vegetation has the potential to mitigate GHG emissions through the removal of C from the atmosphere and storage in the biomass of trees. Through the mechanism of photosynthesis, the aerial components of the tree biomass absorb atmospheric CO₂ to allow the synthesis of organic molecules, necessary for the development of trees.

Principal benefício relacionado às mudanças climáticas

Aumento do reservatório de carbono (mitigação)

Economia estimada de CO₂e (toneladas métricas de CO₂e)

1.73

Explique

Based on references, a theoretical potential removal of 4.73 tC/ha/year was adopted for the increment of tree biomass development (age less than 20 years) in the restoration area, having approximately 17.34 t CO₂e per hectare per year of removal. For the calculation, the assumed tree density was 2000 trees per hectare, totaling the removal of 1.73 tCO₂e. The reference estimates the annual removal of carbon in areas of forest vegetation, regardless of the biome. Reference: Third Brazilian Inventory of Greenhouse Gas Emissions and Removals.

Número de referência da prática de manejo

MP4

Prática de manejo

Restauração

Descrição da prática de manejo

Forest restoration of 18.88 hectares with 31,520 seedlings of 89 different species on JBS's own land, located in Genu-in - Presidente Epitácio/SP. Due to suppression of 0.86 ha of native vegetation at an early stage, cutting of 52 isolated native trees and intervention in a permanent preservation area of 246.87 m². The restoration of native vegetation has the potential to mitigate GHG emissions through the removal of C from the atmosphere and storage in the biomass of trees. Through the mechanism of photosynthesis, the aerial components of the tree biomass absorb atmospheric CO₂ to allow the synthesis of organic molecules, necessary for the development of trees.

Principal benefício relacionado às mudanças climáticas

Aumento do reservatório de carbono (mitigação)

Economia estimada de CO₂e (toneladas métricas de CO₂e)

327.44

Explique

Based on references, a theoretical removal potential of 4.73 tC/ha/year was adopted for the increment of tree biomass development (age less than 20 years) in the restoration area, having approximately 17.34 t CO₂e per hectare per year of removal. Thus, for 18.88 hectares resulted in the removal of 327.44 tCO₂e per year. The reference estimates the annual removal of carbon in areas of forest vegetation, regardless of the biome. Reference: Third Brazilian Inventory of Greenhouse Gas Emissions and Removals.

C4.5

(C4.5) A organização classifica algum dos seus bens e/ou serviços existentes como produto de baixo carbono?

Sim

C4.5a

(C4.5a) Dê detalhes dos produtos e/ou serviços da organização classificados como produtos de baixo carbono.

Nível de agregação

Produto ou serviço

Taxonomia utilizada para classificar o(s) produto(s) ou serviço(s) como de baixo carbono

Outro, especifique (Renovabio)

Tipo do(s) produto(s) ou serviço(s)

Biocombustíveis	Outro, especifique (biodiesel)
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Descrição do(s) produto(s) ou serviço(s)

JBS Biodiesel produces biodiesel using beef tallow and used cooking oil. It contributes to reducing GHG emissions from third parties' scope 1 regarding fossil fuel burning. With two plants located in Brazil – Campo Verde/Mt and Lins/SP – JBS Biodiesel is the largest vertically producer of biodiesel from beef tallow worldwide. It is the first company in Brazil to hold the carbon, sustainability and traceability seal of the International Sustainability and Carbon Certification (ISCC), allowing it to enter the European market without restrictions on the products since 2013. Beef tallow is a byproduct of cattle slaughter activity and if the residue does not have the proper treatment or disposal, it can be considered as a high potential pollutant. Beef tallow is one of the most important raw materials for biodiesel production in Brazil. Beef tallow biodiesel is a clean and high-quality fuel that adds value to the beef chain and contributes to the environment by properly disposing unwanted waste. In Brazil, the production of biodiesel is promoted and regulated by the State. JBS is certified by Renovabio, which is a State policy that seeks to expand the production of biofuels, based on predictability and environmental, economic and social sustainability. Through Renovabio's certification, it is possible to issue CBios (decarbonization credits), which

classifies biodiesel as a low carbon product.

A organização fez uma estimativa das emissões evitadas por este(s) produto(s) ou serviço(s) de baixo carbono?

Sim

Metodologia utilizada para calcular as emissões evitadas

Outro, especifique (Brazilian GHG Protocol Program)

Estágio(s) do ciclo de vida abrangido(s) para o(s) produto(s) ou serviço(s) de baixo carbono

Não se aplica

Unidade funcional utilizada

Amount of energy, in TJ, that would be generated by biodiesel that could result in emissions from diesel

Produto/serviço de referência ou cenário de base utilizado

The estimations were performed considering the amount of energy that would be generated by biodiesel that could result in emissions from diesel

Fase(s) do ciclo de vida útil abrangida(s) do produto/serviço de referência ou cenário de base

Não se aplica

Estimativa das emissões evitadas (toneladas métricas de CO₂e por unidade funcional) com relação ao produto/serviço de referência ou ao cenário de base

600653.87

Explique os cálculos de emissões evitadas, incluindo eventuais suposições

In 2021, JBS Biodiesel produced over 215 thousand tonnes of biodiesel. The estimations were performed considering the amount of energy that would be generated by biodiesel (amount of biodiesel x net calorific value of biodiesel – 215,013 tonnes x 0.0377 TJ/tonnes = 8,105.99 TJ), that could result in emissions from diesel (8,814.86 TJ x 74.1 tCO₂/TJ = 600,653.87 tCO₂). The emission factor of diesel available in 2006 IPCC Guidelines for National Greenhouse Gas Inventories (74.1 tCO₂/TJ) were employed. The net calorific value was obtained from Brazilian National Energy Balance (0.0377 TJ/ton). A life cycle approach was not used to calculate the avoided emissions. Since, motivated by the Net Zero by 2040 commitment, our businesses are investing in research to better understand the product's carbon footprint. In this way, JBS can effectively understand better where to act in order to reduce emissions.

Receita gerada com produto(s) ou serviço(s) de baixo carbono como % do total de receita no ano do reporte

1

Nível de agregação

Produto ou serviço

Taxonomia utilizada para classificar o(s) produto(s) ou serviço(s) como de baixo carbono

Nenhuma taxonomia utilizada para classificar o(s) produto(s) ou serviço(s) como de baixo carbono

Tipo do(s) produto(s) ou serviço(s)

Outros	Outro, especifique (Waste Management)
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Descrição do(s) produto(s) ou serviço(s)

JBS offers solid waste management solutions by its Company, JBS Ambiental, that directly enables scope 1 GHG emissions to be avoided by a third party. The goal is to reduce waste disposal in landfills and to create value from waste processing and turning it back into raw material. Waste from plastic packaging generated in the JBS units or coming from other sources are routed to the JBS Ambiental, where it is made all the plastic transformation process in recycled raw material. JBS Ambiental has 18 recycling units, in Brazil. It is a business that manages solid waste, recycling solutions and the circular economy for the business. Concepts like the circular economy, where waste from one production chain becomes raw material for others, is not just a part of JBS's day-to-day business, it is central to the business model at JBS Novos Negócios. Several of the Company's operations use materials that were previously disposed of to create new products. JBS Ambiental manages the waste from its own business and provides services to a number of JBS plants around the country. It also develops products and solutions using industrial waste. In 2021, the Company developed pallet WPC (wood-polymer composite) and furniture WPC from plastic waste from the Company's operations in addition to other products that were reinserted into JBS' production chains from other sources are routed to the JBS Ambiental, where it is made all the plastic transformation process in recycled raw material

A organização fez uma estimativa das emissões evitadas por este(s) produto(s) ou serviço(s) de baixo carbono?

Sim

Metodologia utilizada para calcular as emissões evitadas

Outro, especifique (Brazilian GHG Protocol Program)

Estágio(s) do ciclo de vida abrangido(s) para o(s) produto(s) ou serviço(s) de baixo carbono

Não se aplica

Unidade funcional utilizada

Tons of paper and cardboard that would be sent to a sanitary landfill

Produto/serviço de referência ou cenário de base utilizado

Considering that the waste recycled by JBS Ambiental would be sent to a sanitary landfill

Fase(s) do ciclo de vida útil abrangida(s) do produto/serviço de referência ou cenário de base

Não se aplica

Estimativa das emissões evitadas (toneladas métricas de CO₂e por unidade funcional) com relação ao produto/serviço de referência ou ao cenário de base

7539.84

Explique os cálculos de emissões evitadas, incluindo eventuais suposições

In 2021, JBS Ambiental managed:

- 3,366 tons of paper and cardboard;
- 5,801 tons of plastic; and
- 9,250 tons of metals.

Considering that the waste recycled by JBS Ambiental would be sent to a sanitary landfill (paper and cardboard emission factor = 2,240 kgCO₂e/tonnes. For plastic and metals, emission factor = 0 - IPCC 2006 - Volume 5 - Chapter 2/3 - Paper/cardboard; GWP CH₄ = 28). A life cycle approach was not used to calculate the avoided emissions. Since, motivated by the Net Zero by 2040 commitment, our businesses are investing in research to better understand the product's carbon footprint. In this way, JBS can effectively understand better where to act in order to reduce emissions.

Receita gerada com produto(s) ou serviço(s) de baixo carbono como % do total de receita no ano do reporte

Nível de agregação

Produto ou serviço

Taxonomia utilizada para classificar o(s) produto(s) ou serviço(s) como de baixo carbono

Nenhuma taxonomia utilizada para classificar o(s) produto(s) ou serviço(s) como de baixo carbono

Tipo do(s) produto(s) ou serviço(s)

Biocombustíveis	Outro, especifique (Biomass)
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Descrição do(s) produto(s) ou serviço(s)

In Brazil, JBS has a cogeneration unit in Lins/SP, called Biolins, which uses biomass (sugarcane bagasse, eucalyptus chips and various biomass residues) to generate thermolectric and steam energy. The thermolectric plant has the capacity to generate 45 megawatts of energy per hour, a volume sufficient to supply a city with a population of 300,000. Around 33% of electricity generated by Biolins supplies the Friboi, JBS Couros and JBS Novos Negócios production plants the same industrial complex where it is installed. The rest is distributed to JBS facilities and is sold to the national market. Steam generation, in turn, is solely used to supply adjacent JBS production plants. Biolins alone generates the equivalent of 20% of total energy used by all JBS factories in Brazil. In 2021, Biolins produced 264,432 MWh.

A organização fez uma estimativa das emissões evitadas por este(s) produto(s) ou serviço(s) de baixo carbono?

Sim

Metodologia utilizada para calcular as emissões evitadas

Outro, especifique (Brazilian GHG Protocol Program)

Estágio(s) do ciclo de vida abrangido(s) para o(s) produto(s) ou serviço(s) de baixo carbono

Não se aplica

Unidade funcional utilizada

Amount of energy, in MWh, that would be consumed by grid electricity.

Produto/serviço de referência ou cenário de base utilizado

The estimations were performed considering the amount of energy, in MWh that would be consumed by grid electricity.

Fase(s) do ciclo de vida útil abrangida(s) do produto/serviço de referência ou cenário de base

Não se aplica

Estimativa das emissões evitadas (toneladas métricas de CO₂e por unidade funcional) com relação ao produto/serviço de referência ou ao cenário de base

8062.96

Explique os cálculos de emissões evitadas, incluindo eventuais suposições

In 2021, Biolins produced 264,432 MWh, which represents a reduction of 8,062.96 tCO₂e, comparing the same amount of energy used but considering different emission factors, one for grid consumption (Grid = 0.1264tCO₂e/MWh) and the other one for Biolins. A life cycle approach was not used to calculate the avoided emissions. Since, motivated by the Net Zero by 2040 commitment, our businesses are investing in research to better understand the product's carbon footprint. In this way, JBS can effectively understand better where to act in order to reduce emissions..

Receita gerada com produto(s) ou serviço(s) de baixo carbono como % do total de receita no ano do reporte

1

Nível de agregação

Produto ou serviço

Taxonomia utilizada para classificar o(s) produto(s) ou serviço(s) como de baixo carbono

Nenhuma taxonomia utilizada para classificar o(s) produto(s) ou serviço(s) como de baixo carbono

Tipo do(s) produto(s) ou serviço(s)

Outros	Outro, especifique (JBS Leather)
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Descrição do(s) produto(s) ou serviço(s)

JBS Couros, through Kind Leather, has offered the industry the solution kindest to the world: remove the hide parts that are not as frequently used right at the start of the process, since this material can still be used as raw material in other industries, such as the pharmaceutical and food industries. This means waste is turned into raw material, making a significant contribution to the entire chain's sustainability. This product production reduces water consumption by 52%, by energy consumption by 62% and solid waste 93% throughout the production chain.

A organização fez uma estimativa das emissões evitadas por este(s) produto(s) ou serviço(s) de baixo carbono?

Sim

Metodologia utilizada para calcular as emissões evitadas

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Estágio(s) do ciclo de vida abrangido(s) para o(s) produto(s) ou serviço(s) de baixo carbono

<i>Cradle-to-gate</i>

Unidade funcional utilizadaThe LCA study compares a m² of finished Regular Leather, full substance, article against its Kind Leather.**Produto/serviço de referência ou cenário de base utilizado**

The LCA study compares a Regular Leather, full substance, article against its Kind Leather, lime split.

Fase(s) do ciclo de vida útil abrangida(s) do produto/serviço de referência ou cenário de base

<i>Cradle-to-gate</i>

Estimativa das emissões evitadas (toneladas métricas de CO₂e por unidade funcional) com relação ao produto/serviço de referência ou ao cenário de base

0.00586

Explique os cálculos de emissões evitadas, incluindo eventuais suposições

The analysis has been carried on a specific leather article, named Kind Leather Antique Rave, of the tannery and not on its average production, while other sectoral studies have mainly been produced using data referring to the whole production of a reference tannery in a reference period. The main reason of the study is to provide a solid reference and indications on differences in environmental impacts on the 2 products.

All primary data collected in tanneries refer to 2019, being it 10 months old at the moment of publication of the study. Primary data have been collected using as a reference the whole year. All datasets used for modelling are the ones included in Ecoinvent 3.6. Thanks to its particular structure, JBS has been able to collect primary data referring to the overall 2019 supply of Hides to the São Luis de Montes Belos factory, in order to properly allocate impacts of the farming processes:

- Mass fraction 9,23%
- Economic allocation 0,87%.

Regarding the methodology used to calculate GHG Emissions from both products was IPCC 2013 GWP 100a. The Kind Leather article's version has a impact 44% lower than its original version in Regular Leather, which represents -5,86 kgCO₂eq/m² of finished leather.

Receita gerada com produto(s) ou serviço(s) de baixo carbono como % do total de receita no ano do reporte

0.1

C5. Metodologia de emissões**C5.1****(C5.1) Este é o primeiro ano de reporte de dados de emissões da organização ao CDP?**

Não

C5.1a**(C5.1a) A organização passou por alguma mudança estrutural no ano de reporte, ou há alguma mudança estrutural prévia sendo representada neste reporte de dados de emissões?****Linha 1****Houve alguma mudança estrutural?**

Sim, uma aquisição

Nome da(s) organização(ões) adquirida(s), desinvestida(s) ou fundida(s)

In the year 2021, there were 7 acquisitions: Vivera, Kerry's retail business, Rivalea, Huon, King's Group, SunnyValley and BioTechFoods.

Detalhes da(s) mudança(s) estrutural(is), incluindo as datas de conclusão

- On September 27, 2021, Pilgrim's Pride acquired Kerry Meats and Kerry Meals from Kerry Consumer Foods. The business was renamed to Pilgrim's Food Masters, and it has been excluded from this report since integration of the company's data systems is not yet complete.
- On November 17, 2021, JBS acquired HUON, and Australia salmon aquaculture company with vertically integrated operations situated in Tasmania, including hatcheries, marine farming, processing and distribution in the retail, wholesale and export channels. It has been excluded from this report since integration of the company's data systems is not yet complete.

C5.1b**(C5.1b) A metodologia de contabilização das emissões, os limites e/ou a definição do ano de reporte foram alterados no ano de reporte?**

	Alteração(ões) na metodologia, nos limites e/ou na definição do ano de reporte?	Detalhes da(s) alteração(ões) na metodologia, nos limites e/ou na definição do ano de reporte
Linha 1	Sim, uma alteração na metodologia Sim, uma alteração nos limites	There was a change in the calculation methodology, as from the 2022 cycle (inventories from the year 2021 onwards), the Brazilian GHG Protocol Program adopted the values described in the Fifth Annual Report of the IPCC - AR5 as reference values for the Global Warming Potential (GWP), in line with the Paris Agreement and associated regulations, in particular Decision 18/CMA.1, paragraph 37. In addition, new categories of scope 3 have been included: Purchased goods and services, Capital goods, Fuel-and-energy-related activities (not included in Scope 1 or 2), Use of sold products and Downstream leased assets.

C5.1c**(C5.1c) As emissões do ano-base da organização foram recalculadas, como resultado das alterações ou erros reportados em C5.1a e C5.1b?**

	Recálculo do ano-base	Política de recálculo das emissões do ano-base, incluindo o limite de significância
Linha 1	Sim	The base year was recalculated considering the change in GWP values (AR5) and there were improvements in the calculations regarding wastewater treatment.

C5.2**(C5.2) Informe o ano-base e as emissões do ano-base.**

Escopo 1

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

4625832.07

Comentários

Data provided from the 2020 JBS Global GHG Inventory: emissions from stationary combustion, mobile combustion, agricultural, waste and effluent, fugitive and process emissions.

Escopo 2 (com base na localização)

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

1554087.35

Comentários

Data provided from the 2020 JBS Global GHG Inventory.

Escopo 2 (com base no mercado)

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

156524.21

Comentários

Data provided from the 2020 JBS Global GHG Inventory.

Escopo 3, categoria 1: Bens e serviços adquiridos

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

48542170.44

Comentários

Data provided by the JBS Global GHG Inventory 2020. To calculate the Purchased Goods and Services category, the following data were used: enteric fermentation of purchased cattle, purchase of grains and packaging.

Escopo 3, categoria 2: Bens de capital

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

191195

Comentários

Data provided from the 2020 JBS Global GHG Inventory: emissions from capital goods.

Escopo 3, categoria 3: Atividades relacionadas a combustível e energia (não incluídas no Escopo 1 ou 2)

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

115497.42

Comentários

Data provided from the 2020 JBS Global GHG Inventory: emissions from energy and fuel related activities.

Escopo 3, categoria 4: Transporte e distribuição <i>upstream</i>

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

4173914.74

Comentários

Data provided from the 2020 JBS Global GHG Inventory: emissions from transportation and distribution of products purchased or acquired by the organization. Emissions from category 9 were reported together with category 4, due to the difficulty of segregating data.

Escopo 3, categoria 5: Resíduos gerados nas operações

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

411953.79

Comentários

Data provided from the 2020 JBS Global GHG Inventory: emissions from external treatment of residues (landfill, composting, incineration and fertigation) from the organization's operations. The data is provided by JBS operations.

Escopo 3, categoria 6: Viagens de negócios

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

3006.03

Comentários

Data provided from the 2020 JBS Global GHG Inventory. In this way, the emissions described refer to the air travels from JBS staff.

Escopo 3, categoria 7: Deslocamentos diários dos funcionários para/do trabalho

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

45443.91

Comentários

Data provided from the 2020 JBS Global GHG Inventory. In this way, the emissions from this category are partially reported (only for Brazil) and the data is provided by JBS operations.

Escopo 3, categoria 8: Ativos arrendados <i>upstream</i>

Início do ano-base

Fim do ano-base

Emissões do ano-base (toneladas métricas de CO2e)

Comentários

Escopo 3, categoria 9: Transporte e distribuição <i>downstream</i>

Início do ano-base

Fim do ano-base

Emissões do ano-base (toneladas métricas de CO2e)

Comentários

Emissions in this category were reported together with category 4, due to the difficulty of segregating data.

Escopo 3, categoria 10: Processamento de produtos vendidos

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

512413.66

Comentários

Data provided from the 2020 JBS Global GHG Inventory: emissions from processing of sold products.

Escopo 3, categoria 11: Uso de produtos vendidos

Início do ano-base

Fim do ano-base

Emissões do ano-base (toneladas métricas de CO2e)

Comentários

Escopo 3, categoria 12: Tratamento de produtos vendidos ao final de sua vida útil

Início do ano-base

janeiro 1 2020

Fim do ano-base

dezembro 31 2020

Emissões do ano-base (toneladas métricas de CO2e)

424775.61

Comentários

Data provided from the 2020 JBS Global GHG Inventory.

Escopo 3, categoria 13: Ativos arrendados <i>downstream</i>

Início do ano-base

Fim do ano-base

Emissões do ano-base (toneladas métricas de CO2e)

Comentários

Escopo 3, categoria 14: Franquias

Início do ano-base

Fim do ano-base

Emissões do ano-base (toneladas métricas de CO2e)

Comentários

Escopo 3, categoria 15: Investimentos

Início do ano-base

Fim do ano-base

Emissões do ano-base (toneladas métricas de CO2e)

Comentários

Escopo 3: Outros (<i>upstream</i>)

Início do ano-base

Fim do ano-base

Emissões do ano-base (toneladas métricas de CO2e)

Comentários

Escopo 3: Outros (<i>downstream</i>)

Início do ano-base

Fim do ano-base

Emissões do ano-base (toneladas métricas de CO2e)

Comentários

C5.3

(C5.3) Seleccione o nome da norma, do protocolo ou da metodologia usado/a para coletar os dados das atividades e calcular as emissões.

Programa do GHG Protocol Brasil

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

ISO 14064-1

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Outro, especifique (The Greenhouse Gas Protocol: Scope 3 Evaluator)

C6. Dados de emissões

C6.1

(C6.1) Qual foi o total de emissões brutas de Escopo 1 da organização, em toneladas métricas de CO2e?

Ano de reporte

Emissões brutas globais de Escopo 1 (toneladas métricas de CO2e)

4675368.17

Data de início

<Not Applicable>

Data de fim

<Not Applicable>

Comentários

Data provided from the 2021 JBS Global GHG Inventory: emissions from stationary combustion, mobile combustion, agricultural, waste and effluent, fugitive and process emissions.

C6.2

(C6.2) Descreva o método usado para reportar as emissões de Escopo 2 da organização.

Linha 1

Escopo 2, com base na localização

Estamos divulgando um valor de Escopo 2 com base na localização

Escopo 2, com base no mercado

Temos operações em locais onde podemos acessar fatores de emissões de fornecedores de eletricidade ou fatores de emissões residuais, mas não podemos declarar um valor de Escopo 2 com base no mercado

Comentários

The Company has a cogeneration unit installed in Lins/SP, called Biolins, which is responsible for producing electricity and steam from biomass (sugarcane bagasse, eucalyptus chips and various biomass residues), with a generating capacity of 45 megawatts (MW). This way, Biolins supplies 100% of electricity and steam to the Friboi, JBS Couros and JBS Novos Negócios plants, resulting in the equivalent of 25% of the total electricity used by all JBS units in Brazil. In addition, the company has expanded its use of solar energy from nine in 2020 to 50 Swift stores in 2021. In 2021, it was not possible to obtain energy-specific data under the market-based method due to improved data collection and the search for closer contact with suppliers in order to access emission factors.

C6.3

(C6.3) Qual foi o total de emissões brutas de Escopo 2 da organização, em toneladas métricas de CO2e?

Ano de reporte

Escopo 2, com base na localização

1399521.01

Escopo 2, com base no mercado (se aplicável)

<Not Applicable>

Data de início

<Not Applicable>

Data de fim

<Not Applicable>

Comentários

Since 2018 JBS has reported Scope 2 emissions and has evolved this approach by maintaining the cogeneration unit, Biolins, in the countryside of São Paulo, which has the generation capacity of 45 megawatts (MW) and supplies 100% electricity and steam to Friboi, JBS Couros and JBS Novos Negócios. In addition, the company has expanded its use of solar energy from nine in 2020 to 50 stores in 2021. Data provided from the 2021 JBS Global GHG Inventory.

C6.4

(C6.4) Existem fontes (por ex., instalações, GEEs específicos, atividades, regiões etc.) de emissões de Escopo 1 e Escopo 2 que estejam dentro dos limites de reporte selecionados, mas que não estão incluídas na divulgação?

Sim

C6.4a

(C6.4a) Forneça detalhes sobre as fontes de emissões de Escopo 1 e Escopo 2 dentro dos limites de reporte selecionados, mas não incluídas no reporte.

Fonte

During the reporting year there were 7 acquisitions: Vivera, Kerry's retail business, Rivalea, Huon, King's Group, SunnyValley and BioTechFoods.

Relevância das emissões de Escopo 1 desta fonte

Emissões excluídas devido a uma recente aquisição ou fusão

Relevância das emissões de Escopo 2 desta fonte, com base na localização

Emissões excluídas devido a uma recente aquisição ou fusão

Relevância das emissões de Escopo 2 desta fonte, com base no mercado (se aplicável)

Nenhuma emissão desta fonte

Explique por que essa fonte foi excluída

Since the acquisitions took place in the reporting year, the integration of the company's data systems is not yet complete.

Porcentagem estimada do total de emissões de Escopo 1+2 representada por esta fonte excluída

<Not Applicable>

Explique como foi estimada a porcentagem de emissões representada por esta fonte excluída

<Not Applicable>

C6.5

(C6.5) Explique as emissões globais brutas de Escopo 3 da organização, divulgando e explicando eventuais exclusões.

Bens e serviços adquiridos

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

53626205.21

Metodologia de cálculo das emissões

Método baseado nos gastos

Outro, especifique (Method based on the purchase of animal and grain)

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

100

Explique

In general, a survey of information was carried out at JBS Brazil on the values consumed (mass or volume quantities, financial data, among others). To calculate the Purchased Goods and Services category, the following data were used: enteric fermentation of purchased cattle, purchase of grains and packaging. The methodology used to calculate this GHG emissions complies with "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)", The Scope 3 Evaluator from Greenhouse Gas Protocol and Quantis, emissions factors from Ecoinvent version 3.7 and for Brazil, it was considered national emission factors, according to Fourth National Inventory of Greenhouse Gas (GHG) Emissions and Removals.

Bens de capital

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

225526.11

Metodologia de cálculo das emissões

Método baseado nos gastos

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

100

Explique

In general, a survey of information was carried out at JBS Brazil on the values consumed (mass or volume quantities, financial data, among others).The methodology used to calculate this GHG emissions was The Scope 3 Evaluator from Greenhouse Gas Protocol and Quantis.

Atividades relacionadas a combustível e energia (não incluídas no Escopo 1 ou 2)

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

129123.3

Metodologia de cálculo das emissões

Método baseado no combustível

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

100

Explique

In general, a survey of information was carried out at JBS Brazil on the values consumed (mass or volume quantities, financial data, among others).The methodology used to calculate this GHG emissions complies with "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)". In addition, it was used emission factors from Ecoinvent version 3.7, UK Defra and national emission factor (Grid).

Transporte e distribuição <i>upstream</i>

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

3115035.66

Metodologia de cálculo das emissões

Método baseado na distância

Outro, especifique (Based on modal and weight transported)

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

100

Explique

In general, a survey of information was carried out at JBS Brazil on the values consumed (mass or volume quantities, travel distances, financial data, among others). Emissions from transportation and distribution of products purchased or acquired by the organization. The methodology used to calculate this GHG emissions complies with The GHG Protocol Programme, IPCC Guidelines for National Greenhouse Gas Inventories, 2006 and the Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting. Category 9 emissions are also reported in this category.

Resíduos gerados nas operações

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

475050.57

Metodologia de cálculo das emissões

Método específico por tipo de resíduos

Outro, especifique (waste treatment type)

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

0

Explique

In general, a survey of information was carried out at JBS Brazil on the values consumed (mass or volume quantities, travel distances, financial data, among others). Emissions from external treatment of residues (landfill, composting, incineration and fertigation) from the organization's operations. The data is provided by JBS operations. The methodology used to calculate this GHG emissions complies with The GHG Protocol Programme and IPCC Guidelines for National Greenhouse Gas Inventories, 2006.

Viagens de negócios

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

2401.21

Metodologia de cálculo das emissões

Método baseado na distância

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

100

Explique

In general, a survey of information was carried out at JBS Brazil on the values consumed (mass or volume quantities, travel distances, financial data, among others). The emissions described refer to the air travels from JBS staff. The methodology applied complies with GHG Protocol Programme and the Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting.

Deslocamentos diários dos funcionários para/do trabalho

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

55228.87

Metodologia de cálculo das emissões

Método baseado no combustível

Método baseado na distância

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

100

Explique

In general, a survey of information was carried out at JBS Brazil on the values consumed (mass or volume quantities, travel distances, financial data, among others). Emissions from this category are partially reported (only for Brazil, Argentina and México) and the data is provided by JBS operations. The methodology applied complies with Brazil GHG Protocol Programme.

Ativos arrendados <i>upstream</i>

Status da avaliação

Não relevante, explicação fornecida

Emissões no ano de reporte (toneladas métricas de CO2e)

<Not Applicable>

Metodologia de cálculo das emissões

<Not Applicable>

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

<Not Applicable>

Explique

Upstream leased assets required for the Company's operations do not contribute to their exposure to risks related to climate change and are not considered critical by stakeholders, and especially those associated with the life cycle emissions cannot be significantly influenced by the Company. Furthermore, compared to emissions associated with purchased goods (mainly animals and meat), these emissions would be negligible

Transporte e distribuição <i>downstream</i>

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

Metodologia de cálculo das emissões

Método baseado na distância

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

100

Explique

Emissions in this category were reported together with category 4, due to the difficulty of segregating data.

Processamento de produtos vendidos

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

169940.24

Metodologia de cálculo das emissões

Outro, especifique (Based on product type and weight)

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

100

Explique

In general, a survey of information was carried out at JBS Brazil on the values consumed (mass or volume quantities, financial data, among others). The methodology used to calculate this GHG emissions complies with The GHG Protocol Programme and emissions factors from Ecoinvent version 3.7

Uso de produtos vendidos

Status da avaliação

Não relevante, explicação fornecida

Emissões no ano de reporte (toneladas métricas de CO2e)

<Not Applicable>

Metodologia de cálculo das emissões

<Not Applicable>

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

<Not Applicable>

Explique

The use of goods sold consists of the consumption of meat and processed food to meet nutritional needs. The only emissions associated would be the use of energy (or fuel) for cooking/ preparation and refrigeration products and fugitive emissions related to refrigerants.

Tratamento de produtos vendidos ao final de sua vida útil

Status da avaliação

Relevante, calculadas

Emissões no ano de reporte (toneladas métricas de CO2e)

311761.57

Metodologia de cálculo das emissões

Outro, especifique (Based on type, quantity and location of waste consumption)

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

50

Explique

In general, a survey of information was carried out at JBS Brazil on the values consumed (mass or volume quantities, travel distances, financial data, among others). The methodology used to calculate this GHG emissions complies with The GHG Protocol Programme , IPCC Guidelines for National Greenhouse Gas Inventories 2006 and literary bibliography.

Ativos arrendados <i>downstream</i>

Status da avaliação

Não relevante, explicação fornecida

Emissões no ano de reporte (toneladas métricas de CO2e)

<Not Applicable>

Metodologia de cálculo das emissões

<Not Applicable>

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

<Not Applicable>

Explique

Compared to the owned units themselves, the leased plants are not relevant.

Franquias

Status da avaliação

Não relevante, explicação fornecida

Emissões no ano de reporte (toneladas métricas de CO2e)

<Not Applicable>

Metodologia de cálculo das emissões

<Not Applicable>

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

<Not Applicable>

Explique

Not applicable to JBS operations.

Investimentos

Status da avaliação

Não relevante, explicação fornecida

Emissões no ano de reporte (toneladas métricas de CO2e)

<Not Applicable>

Metodologia de cálculo das emissões

<Not Applicable>

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

<Not Applicable>

Explique

Emissions of investments are not significant in comparison with the other scope 3 emissions.

Outros (<i>upstream</i>)

Status da avaliação

Não relevante, explicação fornecida

Emissões no ano de reporte (toneladas métricas de CO2e)

<Not Applicable>

Metodologia de cálculo das emissões

<Not Applicable>

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

<Not Applicable>

Explique

There are no other (upstream) relevant emissions.

Outros (<i>downstream</i>)

Status da avaliação

Não relevante, explicação fornecida

Emissões no ano de reporte (toneladas métricas de CO2e)

<Not Applicable>

Metodologia de cálculo das emissões

<Not Applicable>

Porcentagem de emissões calculada com dados obtidos de fornecedores ou parceiros da cadeia de valor

<Not Applicable>

Explique

There are no other (downstream) relevant emissions.

(C-AC6.8/C-FB6.8/C-PF6.8) O carbono biogênico relacionado às operações diretas é relevante para a atual divulgação de mudanças climáticas da organização ao CDP?

Não

C-AC6.9/C-FB6.9/C-PF6.9

(C-AC6.9/C-FB6.9/C-PF6.9) A organização coleta dados ou calcula as emissões de gases de efeito estufa para cada <i>commodity </i>reportada como significativa para seus negócios em C-AC0.7/FB0.7/PF0.7?

<i>Commodities </i>agrícolas

Produtos da pecuária

A organização coleta ou calcula as emissões de GEEs para esta <i>commodity</i>?

Sim

Explique

JBS monitors and accounts for GHG emissions from its direct and indirect operations and reports them within scopes 1, 2 and 3, through annual GHG inventories, in a computerized system, through the CREDIT360 system. In this way, the GHG emissions of production of cattle, poultry and pork products are calculated annually.

<i>Commodities </i>agrícolas

Outros (Poultry products)

A organização coleta ou calcula as emissões de GEEs para esta <i>commodity</i>?

Sim

Explique

JBS monitors and accounts for GHG emissions from its direct and indirect operations and reports them within scopes 1, 2 and 3, through annual GHG inventories, in CREDIT360 system. In this way, the GHG emissions of production of cattle, poultry and pork products are calculated annually.

<i>Commodities </i>agrícolas

Outros (Pork products)

A organização coleta ou calcula as emissões de GEEs para esta <i>commodity</i>?

Sim

Explique

JBS monitors and accounts for GHG emissions from its direct and indirect operations and reports them within scopes 1, 2 and 3, through annual GHG inventories, in a computerized system. In this way, the GHG emissions of production of cattle, poultry and pork products are calculated annually.

C-AC6.9a/C-FB6.9a/C-PF6.9a

(C-AC6.9a/C-FB6.9a/C-PF6.9a) Relate o(s) valor(es) das emissões de gases de efeito estufa para a(s) <i>commodity(ies)</i> da organização que está(ão) sendo divulgada(s), explique a metodologia usada e mencione eventuais exclusões.

Produtos da pecuária

Divulgando emissões por

Total

Emissões (toneladas métricas de CO2e)

2212233.55

Denominador: unidade de produção

<Not Applicable>

Mudança com relação ao último ano de reporte

Mais baixo

Explique

The reported data includes the values of scope 1 and 2 emissions associated with the commodity, which include the activities performed by the JBS USA Beef, JBS Canada, JBS Australia and Friboi business units. Scope 3 emissions were not included in this indicator because JBS Global's management of scope 3 emissions are under improvement. It is worth mentioning, that to calculate the percentage change from the previous year, it was used the recalculated 2020 emissions data. Thus, there was a decrease of 4.6% in the metric.

Outros

Divulgando emissões por

Total

Emissões (toneladas métricas de CO2e)

3331313.17

Denominador: unidade de produção

<Not Applicable>

Mudança com relação ao último ano de reporte

Mais baixo

Explique

The reported data includes the values of scope 1 and 2 emissions from both Poultry and Pork commodities. For Poultry, the emissions amount was 1746855 tCO2e and includes the following business units and proportion: Seara (10% of the total poultry emissions) + Pilgrim's Moy Park + Pilgrim's USA + Pilgrim's Mexico (90% of the total poultry emissions). Poultry products emission increased of 2% when compared to 2020. For Pork the emissions amount was 1584457 tCO2e and includes the following business units and proportion: Seara (5% of the total pork emissions) + JBS USA Pork + Plumrose + Pilgrim's Tulip (95%). Pork products emissions decreased 8% when compared to 2020. Overall, considering Pork and Poultry emissions together, there was a 3% decrease from 2020. It is worth mentioning, that to calculate the percentage change from the previous year, it was used the recalculated 2020 emissions data.

C6.10

(C6.10) Descreva as emissões combinadas globais brutas de Escopos 1 e 2 para o ano de reporte, em toneladas métricas de CO2e por receita total em moeda unitária, e forneça eventuais métricas de intensidade adicionais adequadas para as operações de negócios.

Valor de intensidade

0.00001732

Numerador da métrica (Emissões combinadas globais brutas de Escopos 1 e 2, em toneladas métricas de CO2e)

6074889.18

Denominador da métrica

receita total unitária

Denominador da métrica: Total da unidade

350695560000

Valor do Escopo 2 usado

Com base na localização

Porcentagem de variação em relação ao ano anterior

24.3

Direção da variação

Diminuiu

Motivo da variação

Since the combined global gross emissions of Scope 1 and Scope 2 decreased by only 2.09%, the 24.56% reduction in the prior year change occurred due to the 29.79% increase in total revenue. By 2021, the increase in revenue demonstrates our operational excellence and our ability to deliver short-term returns and growth. Our business strategy is based on a global multi-protein platform with a broad portfolio of high value-added products and strong brands. As a result, we face more challenging environments and cycles in certain businesses and regions, which we offset in other markets thanks to our diversified operations. At the same time that we recorded our best results, we continued to invest significant amounts in organic expansion and acquisitions. This journey of growth brought us the responsibility of being a protagonist in the global food industry to face another great challenge of humanity: the climate emergency. We need to transform the food production model throughout its entire value chain. In this sense, we made relevant investments, such as: hiring specialized consultants to improve the methodology for calculating emissions, projects to reduce emissions such as covering anaerobic lagoons, transition from electric energy to other less emitting energy sources, regenerative agriculture, modernization of the fleet, acquisition of electric trucks, among other initiatives.

Valor de intensidade

0.27

Numerador da métrica (Emissões combinadas globais brutas de Escopos 1 e 2, em toneladas métricas de CO2e)

5781463.79

Denominador da métrica

tonelada métrica de produto

Denominador da métrica: Total da unidade

21214496.91

Valor do Escopo 2 usado

Com base na localização

Porcentagem de variação em relação ao ano anterior

4.8

Direção da variação

Diminuiu

Motivo da variação

These intensity values consider the emissions of the JBS Global business units that generate products, such as JBS Carnes, JBS Hides, Rigamonti, JBS New Business, Seara, JBS USA and JBS Europe, contemplating 95% of total scope 1 and 2 emissions. Overall, there was a reduction of 4.8% in relation to the reporting of the year 2020. It is worth mentioning, that to calculate the percentage change from the previous year, it was used the recalculated 2020 emissions data. The decrease on this intensity figure is justified due to the decrease on Scope 1 + Scope 2 emissions, such as investment expansion to increase the share of clean energy in total consumption. Mainly due to the introduction of solar energy production and consumption at Swift Brazil, USA and Australia, there has been a drop in electricity consumption from the grid.

C7. Decomposição das emissões

C7.1

(C7.1) A organização decompõe suas emissões de Escopo 1 por tipo de gás de efeito estufa?

Sim

C7.1a

(C7.1a) Decomponha o total de emissões brutas globais de Escopo 1 por tipo de gás de efeito estufa e forneça a fonte de cada potencial de aquecimento global de efeito estufa (GWP) utilizado.

Gás de efeito estufa	Emissões de Escopo 1 (toneladas métricas de CO2e)	Referência de GWP
CO2	1974002.92	Quinto Relatório de Avaliação do IPCC (AR5 – 100 anos)
CH4	2462892.33	Quinto Relatório de Avaliação do IPCC (AR5 – 100 anos)
N2O	168724.72	Quinto Relatório de Avaliação do IPCC (AR5 – 100 anos)
HFCs	69748.2	Quinto Relatório de Avaliação do IPCC (AR5 – 100 anos)

C7.2

(C7.2) Decomponha o total de emissões brutas de Escopo 1 por país/região.

País/Região	Emissões de Escopo 1 (toneladas métricas de CO2e)
Brasil	1153736.13
Itália	5103.51
Argentina	5167.55
Uruguai	9.67
Alemanha	1904.1
México	142172.85
Reino Unido da Grã-Bretanha e Irlanda do Norte	152995.42
França	13980.27
Holanda	2842.19
Estados Unidos da América	2726165.8
Canadá	96288.7
Austrália	370771.45
Porto Rico	1415.54
Nova Zelândia	95.43
Vietnã	2719.56

C7.3

(C7.3) Indique quais decomposições de emissões brutas de Escopo 1 a organização pode apresentar.

Por divisão de negócios

Por atividade

C7.3a

(C7.3a) Decomponha as emissões brutas globais totais de Escopo 1 por divisão de negócios.

Divisão de negócios	Emissões de Escopo 1 (toneladas métricas de CO2e)
JBS North America	3506526.67
JBS South America	1168841.5

C7.3c

(C7.3c) Decomponha as emissões brutas globais totais de Escopo 1 por atividade de negócio.

Atividade	Emissões de Escopo 1 (toneladas métricas de CO2e)
Agricultural	464554.2
Stationary Combustion	1379885.6
Mobile Combustion	425022.44
Process Emissions	228744.96
Fugitive Emissions	69748.2
Waste and Effluent	2107412.76

C-AC7.4/C-FB7.4/C-PF7.4

(C-AC7.4/C-FB7.4/C-PF7.4) Estão incluídas emissões relacionadas às atividades de negócios nas operações diretas como parte do valor global bruto de Escopo 1?

Sim

C-AC7.4a/C-FB7.4a/C-PF7.4a

(C-AC7.4a/C-FB7.4a/C-PF7.4a) Selecione o(s) formulário(s) em que as emissões agrícolas/florestais estão sendo reportadas.

Emissões totais

C-AC7.4b/C-FB7.4b/C-PF7.4b

(C-AC7.4b/C-FB7.4b/C-PF7.4b) Divulgue as emissões de Escopo 1 relacionadas à(s) atividade(s) de negócios da organização e explique eventuais exclusões. Se aplicável, desagregue as atividades agrícolas/florestais por categoria de emissões de GEE.

Atividade

Agricultura/Florestas

Categoria de emissões

<Not Applicable>

Emissões (toneladas métricas de CO2e)

464554.2

Metodologia

Fator de emissão padrão

Explique

For Agriculture/Forestry emission we considered we included all CO2 emission from enteric fermentation and fertigation.

Atividade

Processamento/Fabricação

Categoria de emissões

<Not Applicable>

Emissões (toneladas métricas de CO2e)

3785791.53

Metodologia

Fator de emissão padrão

Explique

For processing/manufacturing emissions we considered the emissions from Stationary combustion, waste and effluents, fugitives and process.

Atividade

Distribuição

Categoria de emissões

<Not Applicable>

Emissões (toneladas métricas de CO2e)

425022.44

Metodologia

Fator de emissão padrão

Explique

For emission from distribution we considered emission from Mobile Combustion.

C7.5

(C7.5) Decomponha o total de emissões brutas de Escopo 2 por país/região.

País/Região	Escopo 2, com base na localização (toneladas métricas de CO2e)	Escopo 2, com base no mercado (toneladas métricas de CO2e)
Brasil	300692.74	
Itália	3548.35	
Argentina	3163.67	
Uruguai	95.87	
Alemanha	42.09	
México	109249.92	
Reino Unido da Grã-Bretanha e Irlanda do Norte	63196.91	
França	1939.41	
Holanda	1545.88	
Estados Unidos da América	856520.35	
Canadá	9441.73	
Porto Rico	0	
Austrália	43929.88	
Nova Zelândia	710.06	
Vietnã	5444.16	

C7.6**(C7.6) Indique quais decomposições de emissões brutas globais de Escopo 2 a organização pode fornecer.**

Por divisão de negócios
Por atividade

C7.6a**(C7.6a) Decomponha o total de emissões brutas de Escopo 2 por divisão de negócios.**

Divisão de negócios	Escopo 2, com base na localização (toneladas métricas de CO2e)	Escopo 2, com base no mercado (toneladas métricas de CO2e)
JBS North America	1083703.51	
JBS South America	315817.5	

C7.6c**(C7.6c) Decomponha o total de emissões brutas de Escopo 2 por atividade de negócio.**

Atividade	Escopo 2, com base na localização (toneladas métricas de CO2e)	Escopo 2, com base no mercado (toneladas métricas de CO2e)
Purchase of Grid Electricity	1398887.22	
Purchase of Steam	633.79	

C7.9**(C7.9) Como o total de emissões brutas (Escopos 1 e 2 combinados) do ano de reporte variou em comparação com o do ano de reporte anterior?**

Diminuiu

C7.9a

(C7.9a) Identifique os motivos para eventuais variações nas emissões brutas globais (Escopos 1 e 2 combinados) e, para cada uma delas, especifique como as emissões se comparam ao ano anterior.

	Variação nas emissões (toneladas métricas de CO2e)	Direção da variação	Valor das emissões (porcentagem)	Explique os cálculos
Variação no consumo de energia renovável	154566.34	Diminuiu	2.5	In line with the commitment to reduce Scope 2 emissions, investments were expanded globally to increase the share of clean energy in total consumption. Mainly due to the introduction of solar energy production and consumption at Swift Brazil, USA and Australia, there has been a drop in electricity consumption from the grid, totaling 153157.88 tCO2eq reduced. So, we arrived at -2.50% by $(-154566.34 / 6179919.43) * 100 = -2.50\%$ (i.e., a 2% decrease in emissions).
Outras atividades de redução de emissões	137841.1	Diminuiu	2.23	So last year 137841.1tCO2e were reduced due to improvements in the overall water and wastewater treatment process, and our total scope 1 and scope 2 emissions in the previous year were 6179919.43 tCO2e, so we arrived at -2% at $(-137841.1/6179919.43) * 100 = -2.23\%$ (i.e., a 2% decrease in emissions). There was an investment of 110.3 million reais.
Desinvestimento		<Not Applicable>		
Aquisições		<Not Applicable>		
Fusões		<Not Applicable>		
Variação na produção		<Not Applicable>		
Mudança de metodologia		<Not Applicable>		
Mudança de limite		<Not Applicable>		
Mudança nas condições físicas de operação		<Not Applicable>		
Não identificado		<Not Applicable>		
Outros		<Not Applicable>		

C7.9b

(C7.9b) Os cálculos de desempenho de emissões de C7.9 e C7.9a se baseiam no valor das emissões de Escopo 2 com base na localização ou no valor das emissões de Escopo 2 com base no mercado?

Com base na localização

C8. Energia

C8.1

(C8.1) Durante o ano de reporte, que porcentagem do total de gastos operacionais corresponde aos gastos com energia?

Superior a 5%, mas inferior ou igual a 10%

C8.2

(C8.2) Selecione quais atividades relacionadas à energia foram realizadas pela organização.

	Indique se a organização realizou esta atividade relacionada à energia no ano de referência
Consumo de combustível (exceto matérias-primas)	Sim
Consumo de eletricidade comprada ou adquirida	Sim
Consumo de aquecimento comprado ou adquirido	Não
Consumo de vapor comprado ou adquirido	Sim
Consumo de resfriamento comprado ou adquirido	Não
Geração de eletricidade, aquecimento, vapor ou refrigeração	Sim

C8.2a

(C8.2a) Divulgue os consumos totais de energia (exceto matérias-primas) da organização em MWh.

	Poder calorífico	MWh de fontes renováveis	MWh de fontes não renováveis	Total (renováveis e não renováveis) em MWh
Consumo de combustível (exceto matérias-primas)	LHV (menor poder calorífico)	6055407.12	7808370.4	13863777.52
Consumo de eletricidade comprada ou adquirida	<Not Applicable>	2089495.43	3597913.94	5687409.37
Consumo de aquecimento comprado ou adquirido	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumo de vapor comprado ou adquirido	<Not Applicable>	603609.77	299009.91	902619.68
Consumo de resfriamento comprado ou adquirido	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumo de energia renovável não combustível autogerada	<Not Applicable>	151.06	<Not Applicable>	151.06
Consumo total de energia	<Not Applicable>	8748663.38	11705294.25	20453957.63

C8.2b**(C8.2b) Seleccione as aplicações do consumo de combustível da organização.**

	Indique se a organização adota esta aplicação do combustível
Consumo de combustível para a geração de eletricidade	Sim
Consumo de combustível para a geração de aquecimento	Sim
Consumo de combustível para geração de vapor	Sim
Consumo de combustível para a geração de refrigeração	Não
Consumo de combustível para cogeração ou trigeração	Sim

C8.2c**(C8.2c) Informe a quantidade de combustível em MWh que a organização consumiu (exceto matérias-primas) por tipo de combustível.****Biomassa sustentável****Poder calorífico**

Não é possível confirmar o poder calorífico

Total de combustível em MWh consumido pela organização

0

Combustível consumido, em MWh, para a autogeração de eletricidade

0

Combustível consumido, em MWh, para a autogeração de calor

0

Combustível consumido, em MWh, para a autogeração de vapor

0

Combustível consumido, em MWh, para a autogeração de refrigeração

<Not Applicable>

MWh de combustível consumidos para a autocogeração ou autotrigeração

0

Comentários

0

Outra biomassa**Poder calorífico**

LHV

Total de combustível em MWh consumido pela organização

6026233.93

Combustível consumido, em MWh, para a autogeração de eletricidade

0

Combustível consumido, em MWh, para a autogeração de calor

3133.24

Combustível consumido, em MWh, para a autogeração de vapor

3915015.45

Combustível consumido, em MWh, para a autogeração de refrigeração

<Not Applicable>

MWh de combustível consumidos para a autocogeração ou autotrigeração

2108085.24

Comentários

For heat generation the following fuels were considered: wood chips and renewable firewood. For steam generation and cogeneration the following fuels were considered: sugarcane bagasse, eucalyptus chips and various biomass residues.

Outros combustíveis renováveis (por ex., hidrogênio renovável)

Poder calorífico

LHV

Total de combustível em MWh consumido pela organização

29173.19

Combustível consumido, em MWh, para a autogeração de eletricidade

0

Combustível consumido, em MWh, para a autogeração de calor

719.44

Combustível consumido, em MWh, para a autogeração de vapor

28453.74

Combustível consumido, em MWh, para a autogeração de refrigeração

<Not Applicable>

MWh de combustível consumidos para a autocogeração ou autotrigeração

0

Comentários

For heat generation the following fuels were considered: biodiesel and ethanol. For steam generation the following fuels were considered: biodiesel and biogas.

Carvão

Poder calorífico

LHV

Total de combustível em MWh consumido pela organização

98552.21

Combustível consumido, em MWh, para a autogeração de eletricidade

0

Combustível consumido, em MWh, para a autogeração de calor

0

Combustível consumido, em MWh, para a autogeração de vapor

98552.21

Combustível consumido, em MWh, para a autogeração de refrigeração

<Not Applicable>

MWh de combustível consumidos para a autocogeração ou autotrigeração

0

Comentários

Coal was consumed for steam generation.

Divisão das reservas de petróleo

Poder calorífico

Não é possível confirmar o poder calorífico

Total de combustível em MWh consumido pela organização

0

Combustível consumido, em MWh, para a autogeração de eletricidade

0

Combustível consumido, em MWh, para a autogeração de calor

0

Combustível consumido, em MWh, para a autogeração de vapor

0

Combustível consumido, em MWh, para a autogeração de refrigeração

<Not Applicable>

MWh de combustível consumidos para a autocogeração ou autotrigeração

0

Comentários

NA

Gás

Poder calorífico

Não é possível confirmar o poder calorífico

Total de combustível em MWh consumido pela organização

0

Combustível consumido, em MWh, para a autogeração de eletricidade

0

Combustível consumido, em MWh, para a autogeração de calor

0

Combustível consumido, em MWh, para a autogeração de vapor

0

Combustível consumido, em MWh, para a autogeração de refrigeração

<Not Applicable>

MWh de combustível consumidos para a autocogeração ou autotrigeração

0

Comentários

NA

Outros combustíveis não renováveis (por ex., hidrogênio não renovável)

Poder calorífico

LHV

Total de combustível em MWh consumido pela organização

7709818.19

Combustível consumido, em MWh, para a autogeração de eletricidade

41189.35

Combustível consumido, em MWh, para a autogeração de calor

2440815.85

Combustível consumido, em MWh, para a autogeração de vapor

5227812.99

Combustível consumido, em MWh, para a autogeração de refrigeração

<Not Applicable>

MWh de combustível consumidos para a autocogeração ou autotrigeração

0

Comentários

For electricity generation the following fuels were considered: Diesel and gasoline. For heat generation the following fuels were considered: Diesel, GLP, Natural Gas, gasoline and kerosene. For steam generation the following fuels were considered: Diesel, GLP, Natural Gas, GMP, Shale Oil, and gasoline.

Total de combustíveis

Poder calorífico

LHV

Total de combustível em MWh consumido pela organização

13863777.52

Combustível consumido, em MWh, para a autogeração de eletricidade

41189.35

Combustível consumido, em MWh, para a autogeração de calor

2444668.54

Combustível consumido, em MWh, para a autogeração de vapor

9269834.38

Combustível consumido, em MWh, para a autogeração de refrigeração

<Not Applicable>

MWh de combustível consumidos para a autocogeração ou autotrigeração

2108085.24

Comentários

Total fuel MWh consumed by the organization was 13,863,777.52.

C8.2d

(C-C8.2d) Dê detalhes sobre a eletricidade, o aquecimento, o vapor e a refrigeração que gerados e consumidos pela organização e consumiu no ano de reporte.

	Geração bruta total (MWh)	Geração consumida pela organização (MWh)	Geração bruta proveniente de fontes renováveis (MWh)	Geração proveniente de fontes renováveis consumida pela organização (MWh)
Eletricidade	2149274.59	2149274.59	2108085.24	2108085.24
Aquecimento	0	0	0	0
Vapor	9269834.38	9269834.38	3943469.19	3943469.19
Refrigeração	0	0	0	0

C8.2g

(C8.2g) Apresente uma decomposição do seu consumo de energia não proveniente de combustíveis por país.

País/área

Brasil

Consumo de eletricidade (MWh)

151.06

Consumo de aquecimento, vapor e refrigeração (MWh)

0

Consumo total de energia não proveniente de combustíveis (MWh) [calculado automaticamente]

151.06

Este consumo está excluído do compromisso com a RE100?

<Not Applicable>

C9. Métricas adicionais

C9.1

(C9.1) Indique eventuais métricas climáticas adicionais relevantes para os negócios da organização.

Descrição

Resíduos

Valor da métrica

0.01

Numerador da métrica

Waste sent to landfills in metric tonnes.

Denominador da métrica (apenas para métrica de intensidade)

Production data in metric tonnes

Porcentagem de variação em relação ao ano anterior

1.3

Direção da variação

Diminuiu

Explique

In 2021, JBS had a decreased of 1.3 % of the intensity of waste generated (intensity of tonnes waste by tonnes produced). The tonnes produced had a increase of 4%, as well as the metric tonnes of waste generated also had a increase of 2.6%. This result shows JBS efforts to improve our impacts.

Descrição

Outro, especifique (Wastewater discharged)

Valor da métrica

6.86

Numerador da métrica

Total volume of discharged wastewater (m³)

Denominador da métrica (apenas para métrica de intensidade)

Production data in metric tonnes

Porcentagem de variação em relação ao ano anterior

Direção da variação

<Not Applicable>

Explique

It is not possible to calculate the annual variation, because 2021 is the first year that this indicator is being reported.

C10. Verificação

C10.1

(C10.1) Indique o status da verificação/garantia que se aplica às emissões relatadas.

	Status da verificação/garantia
Escopo 1	Processo de verificação ou garantia por terceiros em vigor
Escopo 2 (com base na localização ou com base no mercado)	Processo de verificação ou garantia por terceiros em vigor
Escopo 3	Não há verificação ou garantia por terceiros

C10.1a

(C10.1a) Dê mais detalhes sobre a verificação/garantia realizada para as emissões de Escopo 1 e anexe as declarações relevantes.

Ciclo de verificação ou garantia em vigor

Processo anual

Status do ano de reporte atual

Completo

Tipo de verificação ou garantia

Garantia limitada

Anexe a declaração

JBS_SA-44675-V01-CDP-EN.pdf

Página/seção de referência

All the pages

Norma relevante

ISO14064-3

Proporção das emissões divulgadas verificadas (%)

25

C10.1b

(C10.1b) Dê mais detalhes sobre a verificação/garantia realizada para as emissões de Escopo 2 e anexe as declarações relevantes.

Abordagem do Escopo 2

Escopo 2 com base na localização

Ciclo de verificação ou garantia em vigor

Processo anual

Status do ano de reporte atual

Completo

Tipo de verificação ou garantia

Garantia limitada

Anexe a declaração

JBS_SA-44675-V01-CDP-EN.pdf

Página/seção de referência

All the pages

Norma relevante

ISO14064-3

Proporção das emissões divulgadas verificadas (%)

23

C10.2

(C10.2) É verificada alguma informação relacionada ao clima relatada na divulgação ao CDP, além dos valores de emissões relatados em C6.1, C6.3 e C6.5?

Não, mas estamos ativamente considerando fazer a verificação nos próximos dois anos

C11. Precificação do carbono

C11.1

(C11.1) Alguma (ou algumas) de suas operações ou atividades é regulamentada por um sistema de precificação do carbono (por ex., ETS, Cap & Trade ou Carbon Tax)?

Sim

C11.1a

(C11.1a) Selecione a(s) regulamentação(ões) de precificação do carbono que causam impactos nas operações da organização.

ETS da UE

Outros ETS, especifique (TIER - Technology Innovation and Emissions Reduction Regulation (Brooks, Canada))

C11.1b

(C11.1b) Preencha a tabela a seguir para cada um dos esquemas de comercialização de emissões que regulam a organização.

ETS da UE

Porcentagem das emissões de Escopo 1 abrangida pelo ETS

100

Porcentagem das emissões de Escopo 2 abrangida pelo ETS

0

Data de início do período

janeiro 1 2013

Data de fim do período

dezembro 31 2022

Subsídios alocados

4531

Subsídios adquiridos

1400

Emissões de Escopo 1 verificadas, em toneladas métricas de CO₂e

1798983

Emissões de Escopo 2 verificadas, em toneladas métricas de CO₂e

0

Detalhes de propriedade

Instalações que possuímos e operamos

Comentários

The trading system includes Pilgrim's Moy Park Dungannon, Country Tyrone, Northern Ireland. Costs: 496,267 pounds.

Outros ETS, especifique

Porcentagem das emissões de Escopo 1 abrangida pelo ETS

41.64

Porcentagem das emissões de Escopo 2 abrangida pelo ETS

0

Data de início do período

janeiro 1 2020

Data de fim do período

dezembro 31 2022

Subsídios alocados

0

Subsídios adquiridos

0

Emissões de Escopo 1 verificadas, em toneladas métricas de CO₂e

0

Emissões de Escopo 2 verificadas, em toneladas métricas de CO₂e

0

Detalhes de propriedade

Instalações que possuímos e operamos

Comentários

Stationary combustion (natural gas, diesel), enteric fermentation, manure extraction, storage, volatilization and leaching, soil fertilization and crop growth, on site transportation (Gasoline and propane), Wastewater emissions, emissions from decomposition of biomass. Total Regulated Emission for Brooks Facility were 181,764 tonnes of CO₂e out of which 2019 EPC credits were used for 2020 total emissions - 28,316 tonnes of CO₂e.

C11.1d

(C11.1d) Qual é a estratégia da organização para cumprir com os sistemas que a regulamentam ou que ela prevê que a regulamentarão?

In the matrix of Main Financial and Social and Environmental Risks of JBS, the risk of Climate Change was mapped, which was described as: "Climate changes can negatively impact the company's business. Resources such as water, electricity and animal feed (dependent on agriculture) are essential for the production of raw materials (cattle, poultry, swine and sheep). Business can also be impacted by new legislation and regulations on the subject. And in the Risk Response procedures, it was highlighted that the Company assumed the commitment to zero the balance of its carbon emissions (scopes 1, 2 and 3) by 2040, in order to avoid potential carbon taxes. The commitment is to make the company Net Zero by 2040, that is, to bring the net balance of greenhouse gas emissions to zero. The company will invest US\$ 1 billion until 2030 to decarbonize operations, allocating US\$ 100 million in research and development actions. By mid-2023, the Company will present to the SBTi (Science Based Targets Initiative) a detailed roadmap to achieve the objective of being Net Zero. Many initiatives are already in place globally. For example, in 2021, JBS entered into a partnership to adopt a nutritional supplement capable of significantly reducing enteric methane emissions from cattle on a global scale, which is already being applied initially in Brazil.

Our UK/European facilities are subject to carbon regulation. They are EU ETS, Climate Change Agreement Scheme (UK), Community and Environmental Measurement Scheme (UK). Given the exit from the EU, the UK has migrated from EU ETS, to its own UK ETS Scheme, which is still aligned to the EU regulations until the end of 2023 at the earliest. As of April 1st 2019, the UK introduced the Streamline Energy and Carbon Reporting legislation (SCER), which large UK businesses (turnover of greater than £36M) must collect information relating their energy use and associated carbon emissions, then submit this as part of their annual reporting to Companies House.

Until today, the JBS business unit that actively participated in an emissions trading scheme was Pilgrim's Moypark, located in the United Kingdom (France, Netherlands and Republic of Ireland) below the EU ETS threshold. In the UK, Pilgrim's Moy Park joins a voluntary carbon emission reduction scheme, "Climate Change Agreements", Pilgrim's Moy Park abides by this agreement. Pilgrim's Moypark are required to participate in EU ETS through emissions reduction projects and buying the necessary allowances. The agreement states that if the UK is to cut its greenhouse gas emissions by 80% by 2050, energy efficiency will have to increase across all sectors to the extent that energy use per capita is between a fifth and a half lower than it is today.

In order to comply with its obligations, Pilgrim's Moy Park develops emissions reduction projects such as fuel switching, process improvements and technology upgrades.

Flaring Biogas will reduce 50% emission. Anaerobic lagoon is the highest factor for the CO2 tonnes for emissions. Furthermore, JBS is looking into opportunities to be able to use Biogas as renewable source back into facility. Electricity consumption is being reduced in plant by using LED lights on ongoing basis. In addition to the 2020 Action plan. JBS will optimize the new anaerobic system and use it to its full capacity this will enable us to start earning Emission Credits and put back in market place rather than owing emissions charges. JBS also commits to do best practices for sampling procedures at Anaerobic and Facultative Lagoon.

Today, 100% of the electricity consumed by Pilgrim's Pride in the UK comes from renewable sources. In Brazil, this percentage is 90%. In the transport division of Moy Park, in the United Kingdom, we are promoting the decarbonisation of the local vehicle fleet, with the acquisition of trucks powered by biogas. In the same scope, No Carbon, a new JBS business focused on renting electric trucks, has already started its work in the operations of the group's own companies in Brazil. It is worth mentioning that Pilgrim's Moy Park and Pilgrim's UK already have emission reduction targets approved by the SBTi. Pilgrim's Moy Park is still committed to zero waste to landfill, while Pilgrim's UK has expanded this commitment to most of its sites. Moy Park and Pilgrim's UK have adopted the strategy of "Remove, Reduce, Recycle and Research", and will start using 100% recyclable rigid packaging by 2022. All other packaging will be largely recyclable by 2025.

C11.2

(C11.2) A organização criou ou adquiriu créditos de carbono com base em projetos no período de reporte?

Sim

C11.2a

(C11.2a) Dê detalhes dos créditos de carbono com base em projetos gerados ou comprados pela organização no período de reporte.

Geração ou compra de créditos

Geração de créditos

Tipo de projeto

Outro, especifique (Decarbonization credits)

Identificação do projeto

Production of Biofuels is issued by an inspecting firm accredited by RenovaBio as a result of the Biofuels Certification process approved by Agência Nacional do Petróleo, Gás Natural e Biocombustíveis (ANP). Certificates of Efficient Biofuel Production approved by the ANP is available for consultation at: <https://www.gov.br/anp/pt-br/assuntos/renovabio/certificados-producao-importacao-eficiente-biocombustiveis> .

In the following link, it is possible to download the worksheet with the Certificates of Efficient Production of Biofuels approved by the ANP. JBS appears on lines 3 and 394: <https://www.gov.br/anp/pt-br/assuntos/renovabio/arq/certificacoes/certificados-aprovados-producao.xlsx>

Verificado de acordo com qual norma

Outro, especifique (Agência Nacional do Petróleo, Gás Natural e Biocombustíveis (ANP))

Número de créditos (toneladas métricas de CO2e)

518124

Número de créditos (toneladas métricas de CO2e): Volume ajustado ao risco

518124

Créditos cancelados

Não

Finalidade, por exemplo, conformidade

Outro, especifique (Renovabio Program (voluntary for biofuels producers): <https://www.gov.br/anp/pt-br/assuntos/renovabio>)

C11.3

(C11.3) A organização usa um preço interno do carbono?

Não, mas prevemos fazê-lo nos próximos dois anos

C12. Engajamento

C12.1

(C12.1) Há engajamento da organização com a cadeia de valor nas questões relacionadas ao clima?

Sim, com nossos fornecedores

Sim, com nossos clientes/compradores

Sim, com outros parceiros da cadeia de valor

C12.1a

C12.1a) Dê detalhes da estratégia de engajamento com os fornecedores para as questões climáticas.

Tipo de engajamento

Engajamento e incentivos (mudança no comportamento dos fornecedores)

Detalhes do engajamento

Realizar campanhas de engajamento para instruir os fornecedores sobre as mudanças climáticas

Porcentagem de fornecedores por número

70

Porcentagem do total de gastos com aquisição (diretos e indiretos)

70

Porcentagem das emissões de Escopo 3 relacionadas aos fornecedores, conforme divulgado em C6.5

0

Justificativa para a abrangência do engajamento

With the aim of producing in an increasingly sustainable way, JBS has been investing in concrete environmental actions for over a decade. The Company uses satellite images to monitor an area that is larger than the territory of France, the largest country in Western Europe. The last two audits, carried out by an independent certifier, attested that 100% of the direct cattle acquisitions audited were in compliance with JBS' Responsible Raw Material Procurement Policy. In 2020, the Company went further, taking on a stronger commitment to sustainability in the region Amazon, by launching the Transparent Livestock Farming Platform, which allows JBS livestock suppliers to include their own suppliers in the register, with the aim of complying with the social and environmental aspects of cattle breeding. One of the Transparent Livestock Farming Platform's tools is the Green Office. JBS has set up 15 Green Offices at processing units throughout the country: in Marabá, Redenção, Santana do Araguaia and Tucumã (PA), Porto Velho and São Miguel do Guaporé (RO), and another six in Mato Grosso (MT): Alta Floresta, Barra do Garças, Confresa, Juara, Pedra Preta and Pontes e Lacerda. The initiative has also reached Goiânia and Mozarlândia (GO) and Campo Grande (MS). The teams will mainly help the suppliers of JBS's suppliers to regularize their environmental situation. The states where the Green Offices are located produce over 70% of Friboi's production.

Impacto do engajamento, incluindo medições de sucesso

The impact of the Green Offices is to assist livestock farmers in the Amazon Biome region, especially those that are suppliers of JBS cattle suppliers, to meet the socioenvironmental requirements by the end of 2025, helping to avoid deforestation and consequently, GHG emissions.

Since the Green Offices have started until the beginning of 2022, around 2,000 direct and indirect suppliers have received technical support.

In early 2022, JBS announced partnerships with Banco do Brasil and Bradesco to facilitate access to rural credit.

The JBS Green Offices have teams of specialist professionals and a network of certified consultants that work with livestock farmers to assist them with their environmental regularization. These professionals can provide this service in person at the offices located at the Friboi plants, or remotely via e-mail, telephone and WhatsApp. Livestock farmers interested in regularizing their status, therefore, can turn to one of the Green Offices for specialized professional assistance. This is an inclusion process that will assist both producers and the sustainable progress of Brazilian livestock farming.

The JBS Green Office's Teams are connected to a network of consultants specialized in environmental issues that will help producers in practical activities, such as registering the property in the Rural Environmental Registry (CAR), reforestation plans to comply with the Environmental Regularization Program (PRA), in addition to supporting processes for the regularization of areas with illegal deforestation or environmental embargoes from IBAMA or State Secretaries of the Environment. All this technical support will be free for our suppliers.

From the request of the producer who wants to regularize himself, the JBS Green Office team will ask him for the result of the socio-environmental analysis of his property on the Transparent Livestock Platform, identifying exactly what the problem is that needs to be solved. The solutions:

- Legal assistance for the administrative process of disembargo of embargoed areas (IBAMA and SEMAs);
- Preparation and submission of the technical project for reforestation of areas to be presented to environmental agencies (with the prior approval of the producer);
- State platforms for reinsertion of producers (IMAC and Siflor);
- Action plan for the complete environmental regularization of the property.

Comentários

More information about Green Offices and Transparent Livestock Farming Platform can be found at: <https://www.pecuariatransparente.org.br/>.

C12.1b

(C12.1b) Dê detalhes da estratégia de engajamento climática com os clientes.

Tipo de engajamento e Detalhes do engajamento

Colaboração e inovação	Realizar uma campanha de incentivo à inovação para reduzir os impactos das mudanças climáticas
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Porcentagem de clientes por número

100

Porcentagem das emissões de Escopo 3 relacionadas aos clientes, conforme reportado em C6.5

0

Explique a justificativa para selecionar este grupo de clientes e o escopo do engajamento

The Company, by supporting Reverse Logistics Programs in Brazil, recovers at least 22% of packaging volume it places on the Brazilian market. All (100%) packaging volume in Brazil' operations is considered on the initiative, that means that 22% of all the primary and secondary package that our customer buy is part of a relevant logistics program.

Impacto do engajamento, incluindo medições de sucesso

City+ Program JBS supports the performance of the City+ Program, developed and managed by the NGO Recicleiros, which advises city halls on the implementation of selective collection while enabling companies to comply with Law 12305 National Solid Waste Policy (PNRS), which also requires investment in recyclable material collectors' cooperatives through training, infrastructure, equipment donation, among others. The program commits to recover 22% of the contracted volume in five years.

Prolata JBS is part of the Prolata Program, an initiative of the Brazilian Association of Steel Packaging (Abeaço), in compliance with the PNRS in 2014. The program operates on three pillars: reception/depot centers, with a structure aimed at receiving large volumes; cooperatives of recyclable material collectors, responsible for the work of social inclusion; and Voluntary Delivery Points (PEV), which interface with the end consumer.

The program is committed to recovering 28% of the steel packaging placed on the market. According to data from Abeaço, the program has already recycled more than 54 thousand tons of steel.

Friboi and Seara are partners of City + and Prolata programs in its reverse logistics projects. In 2021, both companies recycled a total of 7,862 tons of plastic and cardboards and 11,008 tons of metal. In partnership with JBS Ambiental, the businesses have another project in progress to increase segregation efficiency of recyclable materials.

In 2020 Swift started a project to offset 100% of its packaging, directing to the recycling of waste equivalent to its own, in weight and material, with the objective of neutralizing possible impacts of its postconsumer packaging, going beyond what is established by the PNRS. For this, it signed a partnership with eureciclo, a reverse logistics certifier resulting in more than 2,500 tons of materials removed from the environment in 2021.

All products with the Swift brand will have the eureciclo seal, which is intended for companies seeking to communicate their concern and efforts to mitigate the impacts of their business on the environment.

Tipo de engajamento e Detalhes do engajamento

Colaboração e inovação	Realizar uma campanha de incentivo à inovação para reduzir os impactos das mudanças climáticas
------------------------	--

Porcentagem de clientes por número

10

Porcentagem das emissões de Escopo 3 relacionadas aos clientes, conforme reportado em C6.5

0

Explique a justificativa para selecionar este grupo de clientes e o escopo do engajamento

For JBS USA we have recurring conversations with several of our key customers regarding brainstorming process of how we can partner together to facilitate innovation across the value-chain. These customers are our set of key customers and have more extensive relationships with our company

Impacto do engajamento, incluindo medições de sucesso

Number of scope 3 reduction projects identified, number of scope 3 projects implemented together, total scope 3 emissions reduced.

C12.1d

(C12.1d) Dê detalhes sobre a estratégia de engajamento com outros parceiros da cadeia de valor para as questões climáticas.

JBS sustainability strategy is focused on its supply chain and prioritize initiatives that promotes sustainable best practices on its cattle suppliers and avoiding deforestation from its value chain. JBS participates and holds leadership roles in several multi-stakeholder partnerships dedicated to responsibly addressing sustainability, including climate change aspects to advance continuous improvement throughout the supply chain. A few of our active partnerships are listed below.

JBS USA holds leadership roles in several multi-stakeholder partnerships dedicated to responsibly addressing sustainability to advance continuous improvement through the supply chain: Global Roundtable for Sustainable Beef (GRSB), U.S. Roundtable for Sustainable Beef (USRSB), Canadian Roundtable for Sustainable Beef (CRSB) and Australian Beef Sustainability Framework. JBS USA has held numerous leadership positions in these organizations, including President, Executive Committee member, Board of Director member Chair, and Council. Pilgrim's is a founding member and board of directors member of the U.S. Roundtable for Sustainable Poultry and Eggs (USRSPE). Pilgrim's Moy Park is a member of the Sustainable Agriculture Initiative (SAI) Platform.

JBS Brazil makes efforts to enhance industry standards, through open dialog and by engaging stakeholders in order to improve sustainability across the industry's entire value chain, the Company is a founding member of the Sustainable Livestock Working Group (GTPS), which the main goal is to debate and develop principles, standards and common practices adopted by the industry, with the premise of building sustainable, fair, environmentally correct and economically feasible breeding. It is also a member of the Tropical Forest Alliance (TFA), an initiative connected to the World Economic Forum, fostering and promoting actions aimed at ending deforestation in the world, a member of the Brazilian Coalition on Climate, Forests and Agriculture, which works collaboratively on issues connected to climate change and the Company is a member of the Leather Working Group (LWG) as well, which objective is to develop/maintain a protocol that assesses the environmental compliance and performance capabilities of leather manufacturers and promotes sustainable environmental practices. Besides, JBS is a CEBDS' member, Brazilian Business Council for Sustainable Development, a non-profit civil association that promotes sustainable development through articulation with governments and civil society, in addition to disseminating the most current concepts and practices on the subject.

JBS promotes good practices among small livestock producers through the Social Biofuel Seal Program (Programa Selo Biocombustível Social), an initiative by the Department of Family Agriculture and Cooperatives (SAF) of the Ministry of Agriculture, Livestock Farming and Supply (Mapa). In this program, JBS' role is to support these ranchers with free technical assistance and guaranteed purchase of animals. Since the early days of the integration of livestock farming with the Seal in 2015, the Company has already acquired over 110,000 animals from 437 properties in the 21 municipalities served by the program in the region of São Miguel do Guaporé (RO), in addition to investing around R\$ 5 million in free technical assistance focused on efficient and responsible production.

Additionally, JBS developed the Fazenda Nota 10 program (Fazenda Nota 10), which offers training for high-performance management, allowing for the maximization of results on beef cattle farms in Brazil. Developed by the Company in partnership with Instituto Inttegra, the program is aimed at ranchers across the country. In the 2021/2022 harvest, 356 farms received digital assistance and more than 60 farms are in the registration process. The program offers more than 80 hours between live online meetings, real-time assistance by consultants (5 consultants attending participating farms daily) and reports with benchmarking for better decision making. Today, 94% of farms have approved the content, methodology and 100% online format. In 2021 alone, more than 300 JBS suppliers participated in the program.

Annually, Seara evaluates all its members through the Sustainability Index, which measures from the most basic to the most advanced practices in environmental, economic and social aspects. The results achieved in the 2020 assessment, the first year of application, showed an average score of 71% considering all dimensions assessed. In 2021, the average score reached approximately 75%. The established indicators are mapped into a set of questions that cover the environmental, economic and social aspects related to integrated production, such as environmental licensing, water consumption, production model, income, rainwater storage, energy sources alternatives, heating supplies, communication, training, use of PPE, biosecurity, family succession, among others.

C12.2

(C12.2) Os fornecedores da organização atenderam às exigências relacionadas ao clima como parte do processo de aquisição da organização?

Sim, estão incluídas exigências relacionadas ao clima nos contratos com nossos fornecedores

C12.2a

(C12.2a) Dê detalhes das exigências relacionadas ao clima que os fornecedores devem atender como parte do processo de aquisição e dos mecanismos de conformidade da organização em vigor.

Exigência relacionada ao clima

Cumprir os requisitos normativos

Descrição desta exigência relacionada ao clima

To ensure a deforestation-free chain, in 2021 we started the Transparent Livestock Platform operation, which, using blockchain technology, operationalizes the tracking of the cattle chain. The objective is to achieve a deforestation-free supply structure by 2025, including direct and indirect suppliers.

Monitored suppliers must comply with the Company's Responsible Purchasing Policy; otherwise, they are blocked. As of January 1, 2026, 100% of direct suppliers will be required to integrate the Platform. In 2021, 14.6% of the cattle processed by the Company were already included in the Platform.

JBS successfully monitors all farms that directly supply cattle to the Company with a geospatial monitoring system, through the use of satellite images, considered one of the best and most sophisticated in the industry. Monitoring includes more than 860,000 square kilometers of area and assesses more than 80,000 potential direct supply farms every day. Around 14,000 properties have already been suspended for failing to comply with JBS' Raw Materials Responsible Purchasing Policy.

The supplier monitoring system is managed by Friboi's Sustainability area and is constantly audited in internal processes and annually by external processes. In 2021, BRL 4.5 million was invested in the theme.

The last four audits, carried out by an independent certifier, attested that 100% of the direct purchases of cattle verified were in compliance with JBS's Responsible Raw Material Purchasing Policy.

Porcentagem de fornecedores por gastos com aquisições que devem cumprir com esta exigência relacionada ao clima

80

Porcentagem de fornecedores por gastos com aquisições em conformidade com esta exigência relacionada ao clima

80

Mecanismos para o monitoramento da conformidade com esta exigência relacionada ao clima

Verificação externa por terceiros

Resposta à não-conformidade do fornecedor com esta exigência relacionada ao clima

Suspender e engajar

C-AC12.2/C-FB12.2/C-PF12.2

(C-AC12.2/C-FB12.2/C-PF12.2) A organização incentiva seus fornecedores a adotarem práticas de gestão agrícola ou florestal com benefícios de mitigação e/ou adaptação às mudanças climáticas?

Sim

C-AC12.2a/C-FB12.2a/C-PF12.2a

(C-AC12.2a/C-FB12.2a/C-PF12.2a) Especifique quais práticas de manejo agrícola ou florestal com os benefícios de mitigação e/ou adaptação às mudanças climáticas a organização incentiva seus fornecedores a adotar e descreva seu papel na implementação de cada prática.

Número de referência da prática de manejo

MP1

Prática de manejo

Manejo agroflorestal

Descrição da prática de manejo

Araguaia Herd (Rebanho Araguaia) Project promotes the development of sustainable livestock raising in the Médio Vale do Araguaia region, in Mato Grosso, one of the main cattle-producing regions in the country. In partnership with the Araguaia League, whose members include around 60 livestock producers in the region, JBS offers technical support from consultants specialized in pasture lands management, ensuring better productivity in environmentally regulated areas and greater profitability for producers, an action that contributes to the net reduction in greenhouse gas emissions. In 20/21 harvest, the initiative gathered 12 farms and more than 57 thousand heads of cattle distributed in more than 56 thousand hectares. Currently in 21/22 harvest, it expanded to 14 farms and more than 51 thousand heads of cattle distributed in 42 thousand hectares, only in the first trimester.

The producers were selected for their efforts to adopt sustainable intensification practices and increase productivity in beef cattle in the region. Focused on supporting the production management and good practices of these farms, the program's schedule began in August and provides training and monitoring activities, including the use of production management tools and good practices, with monitoring of the reduction of greenhouse gas emissions. The Program will support sustainable intensification practices in beef cattle farming in the region, such as the recovery of degraded pastures, adoption of crop-livestock integration models, environmental regularization, development activities to encourage the reduction of gas emissions Greenhouse Effect (GHG) and the conservation and restoration of forest areas.

O papel da organização na implementação

Financeiro

Explicação sobre como a organização incentiva a implementação

JBS Green Offices were created to support our suppliers in the environmental regularization processes of their properties. For this, we will be offering free legal and environmental advice, through specialized consultants, to resolve the environmental liabilities of the farms. Araguaia League's technical team organizes the livestock farmers, while Friboi subsidizes the hiring of consultants specialized in property management for the intensification of its pastures, ensuring better productivity per area and reducing the need for new pasture areas, the which contributes to the preservation of local vegetation and biodiversity. As a result, ranchers have better conditions to invest, increase their productivity indicators, improve the quality of their animals and, above all, collaborate with the sustainability of production.

Benefício relacionado às mudanças climáticas

Redução nas emissões (mitigação)

Comentários

The Forest and Agricultural Management and Certification Institute (Imaflora), Inttegra – Institute of Agricultural Metrics and Ímpar – Consultancy in Agribusiness are strategic partners of the project.

Número de referência da prática de manejo

MP2

Prática de manejo

Manejo agroflorestal

Descrição da prática de manejo

Row crop production: no tillage, cover crops, precision management; cattle production: grazing management plans.

O papel da organização na implementação

Financeiro

Explicação sobre como a organização incentiva a implementação

We encourage through financial incentives. We pay for outcomes of the production practices, with the outcomes being verified emission reductions.

Benefício relacionado às mudanças climáticas

Redução nas emissões (mitigação)

Comentários

C-AC12.2b/C-FB12.2b/C-PF12.2b

(C-AC12.2b/C-FB12.2b/C-PF12.2b) A organização coleta informações dos fornecedores sobre os resultados de eventuais práticas de manejo agrícola/florestal que tenha incentivado?

Sim

C12.3

(C12.3) A organização se engaja com atividades que podem direta ou indiretamente influenciar uma política, uma lei ou uma regulamentação que possa exercer impactos sobre o clima?

Linha 1

Engajamento direto ou indireto que pode influenciar uma política, uma lei ou uma regulamentação que possa exercer impacto sobre o clima

Sim, nós nos engajamos diretamente com os formuladores de políticas públicas

Sim, nós nos engajamos indiretamente, por meio de associações profissionais

Sim, nós nos engajamos indiretamente, financiando outras organizações cujas atividades podem influenciar uma política, lei ou regulamentação que possa exercer impactos significativos para o clima

A organização tem um compromisso público ou uma declaração de posicionamento para orientar suas atividades de engajamento em alinhamento com os objetivos do Acordo de Paris?

Sim

Anexe a(s) declaração(ões) de posição ou compromisso

JBS NetZero Commitment: <https://jbs.com.br/netzero/en/>

Carta-Compromisso-JBS-Net-Zero-2040.pdf

Descreva o(s) processo(s) que a organização tem em vigor para assegurar que suas atividades de engajamento sejam consistentes com sua estratégia geral para as mudanças climáticas

In announcing its NetZero objective, JBS committed to: investing US\$ 1 billion over the next 10 years in emission reduction projects, with US\$ 100 million in Research and Development, by 2030, to implement emission mitigation solutions; achieve, by 2025, a cattle supply chain free from illegal deforestation in the Amazon and other Brazilian biomes, including the suppliers of these suppliers; convert 100% of the electricity consumed in the entire JBS operation to renewable sources by 2040; link the variable compensation of senior executives to climate goals; report your climate change information in line with the TCFD.

Razão principal para que a organização não se envolve em atividades que possam direta ou indiretamente influenciar uma política, uma lei ou um regulamento que possa exercer impactos sobre o clima

<Not Applicable>

Explique por que a organização não se engaja em atividades que podem direta ou indiretamente influenciar uma política, uma lei ou uma regulamentação que possa exercer impactos sobre o clima

<Not Applicable>

C12.3a

(C12.3a) Sobre qual política, lei ou regulamentação que pode exercer um impacto sobre o clima a organização esteve diretamente engajada com os formuladores de políticas públicas no ano de reporte?

Foco em uma política, lei ou regulamentação que possa exercer um impacto sobre o clima

Outro, especifique (Energy efficiency)

Especifique a política, a lei ou a regulamentação sobre a qual a organização se engaja com formuladores de políticas públicas

JBS, through its European subsidiary Pilgrim's Moypark, actively engages directly with policymakers. Environmental issues and awareness are very effective in Europe, which requires the Company to narrow its actions in relation to the risks and opportunities of its business. For this energy efficiency issue, Pilgrim's Moypark is supporting UK energy tax reform.

Abrangência geográfica da política, lei ou regulamentação

Nacional

País/região a que a política, lei ou regulamentação se aplica

Reino Unido da Grã-Bretanha e Irlanda do Norte

A posição da organização com relação à política, à lei ou à regulamentação

Apoio com grandes exceções

Descrição do engajamento com formuladores de políticas públicas

Consultation responses directly and through lobby bodies CBI (Confederation of British Industry) and BPC (British Polling Council).

Detalhes das exceções (se aplicável) e da abordagem alternativa da política, lei ou regulamentação proposta pela organização

A organização avaliou se seu engajamento está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

Foco em uma política, lei ou regulamentação que possa exercer um impacto sobre o clima

Outro, especifique (Energy efficiency)

Especifique a política, a lei ou a regulamentação sobre a qual a organização se engaja com formuladores de políticas públicas

Review of the Energy Saving Opportunity Scheme (ESOS). Provide an industry perspective on the consultation document.

Abrangência geográfica da política, lei ou regulamentação

Nacional

País/região a que a política, lei ou regulamentação se aplica

Reino Unido da Grã-Bretanha e Irlanda do Norte

A posição da organização com relação à política, à lei ou à regulamentação

Apoio com pequenas exceções

Descrição do engajamento com formuladores de políticas públicas

Energy Saving Opportunity Scheme (ESOS) consultation response.

Detalhes das exceções (se aplicável) e da abordagem alternativa da política, lei ou regulamentação proposta pela organização

A organização avaliou se seu engajamento está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

Foco em uma política, lei ou regulamentação que possa exercer um impacto sobre o clima

Outro, especifique (Cap and trade)

Especifique a política, a lei ou a regulamentação sobre a qual a organização se engaja com formuladores de políticas públicas

EU ETS reform. Provide an industry perspective on the consultation document.

Abrangência geográfica da política, lei ou regulamentação

Regional

País/região a que a política, lei ou regulamentação se aplica

França

Alemanha

Itália

Holanda

Reino Unido da Grã-Bretanha e Irlanda do Norte

A posição da organização com relação à política, à lei ou à regulamentação

Apoio com pequenas exceções

Descrição do engajamento com formuladores de políticas públicas

EU ETS Consultation response.

Detalhes das exceções (se aplicável) e da abordagem alternativa da política, lei ou regulamentação proposta pela organização

A organização avaliou se seu engajamento está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

Foco em uma política, lei ou regulamentação que possa exercer um impacto sobre o clima

Outro, especifique (Cap and trade)

Especifique a política, a lei ou a regulamentação sobre a qual a organização se engaja com formuladores de políticas públicas

Review of the Climate Change Agreement (CCA). Provide an industry perspective on the consultation document.

Abrangência geográfica da política, lei ou regulamentação

Nacional

País/região a que a política, lei ou regulamentação se aplica

Reino Unido da Grã-Bretanha e Irlanda do Norte

A posição da organização com relação à política, à lei ou à regulamentação

Oposição

Descrição do engajamento com formuladores de políticas públicas

Climate Change Agreement (CCA) consultation response.

Detalhes das exceções (se aplicável) e da abordagem alternativa da política, lei ou regulamentação proposta pela organização

A organização avaliou se seu engajamento está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

Foco em uma política, lei ou regulamentação que possa exercer um impacto sobre o clima

Taxação de carbono

Especifique a política, a lei ou a regulamentação sobre a qual a organização se engaja com formuladores de políticas públicas

Reform of the Carbon Reduction Commitment (CRC) scheme. Provide an industry perspective on the consultation document.

Abrangência geográfica da política, lei ou regulamentação

Nacional

País/região a que a política, lei ou regulamentação se aplica

Reino Unido da Grã-Bretanha e Irlanda do Norte

A posição da organização com relação à política, à lei ou à regulamentação

Apoio com pequenas exceções

Descrição do engajamento com formuladores de políticas públicas

Carbon Reduction Commitment (CRC) simplification consultation response.

Detalhes das exceções (se aplicável) e da abordagem alternativa da política, lei ou regulamentação proposta pela organização

A organização avaliou se seu engajamento está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

Foco em uma política, lei ou regulamentação que possa exercer um impacto sobre o clima

Taxação de carbono

Especifique a política, a lei ou a regulamentação sobre a qual a organização se engaja com formuladores de políticas públicas

Elimination of the Carbon Reduction Commitment (CRC) scheme, aggregation of several policy instruments into a single instrument. Provide an industry perspective on the consultation document.

Abrangência geográfica da política, lei ou regulamentação

Nacional

País/região a que a política, lei ou regulamentação se aplica

Reino Unido da Grã-Bretanha e Irlanda do Norte

A posição da organização com relação à política, à lei ou à regulamentação

Apoio com pequenas exceções

Descrição do engajamento com formuladores de políticas públicas

Streamlined Energy & Carbon Reporting (SECR)

Detalhes das exceções (se aplicável) e da abordagem alternativa da política, lei ou regulamentação proposta pela organização**A organização avaliou se seu engajamento está alinhado com os objetivos do Acordo de Paris?**

Sim, avaliamos, e está em alinhamento

C12.3b**(C12.3b) Dê detalhes sobre as associações profissionais com que a organização se engaja com probabilidade de adotar uma posição com relação a alguma política, lei ou regulamentação que possa exercer impactos sobre o clima.****Associação comercial**

Outro, especifique (U.S. Roundtable for Sustainable Beef (USRSB))

A posição da organização em relação às mudanças climáticas é consistente com a dessas associações?

Consistente

A organização influenciou, ou está tentando influenciar, a posição dessas associações?

Promovemos publicamente a posição atual da associação

Declare a posição da associação comercial com relação às mudanças climáticas, explique de que modo a posição da organização difere e como a organização está tentando influenciar a posição da associação (se aplicável)

The USRSB is a multi-stakeholder initiative developed to advance, support and communicate continuous improvement in the sustainability of the U.S. beef value chain. The USRSB achieves this through leadership, innovation, multi-stakeholder engagement, and collaboration. The USRSB's vision is that the U.S. beef value chain is the trusted global leader in sustainability, including from a climate change perspective.

Valor do financiamento que a organização forneceu a esta associação comercial no ano de reporte, se aplicável (na moeda selecionada em C0.4) (opcional)**Descreva o objetivo do financiamento da organização**

<Not Applicable>

A organização avaliou se seu engajamento com esta associação comercial está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

Associação comercial

Outro, especifique (Brazilian Roundtable on Sustainable Livestock (BRSL))

A posição da organização em relação às mudanças climáticas é consistente com a dessas associações?

Consistente

A organização influenciou, ou está tentando influenciar, a posição dessas associações?

Promovemos publicamente a posição atual da associação

Declare a posição da associação comercial com relação às mudanças climáticas, explique de que modo a posição da organização difere e como a organização está tentando influenciar a posição da associação (se aplicável)

JBS is a founding member of the Brazilian Roundtable on Sustainable Livestock (BRSL). Together with BRSL the Company is committed to the sustainable development of livestock, through the articulation with the supply chain, the dissemination of information and support for continuous improvement, seeking a balance between the economic, social and environmental pillars and developing sustainable livestock. BRSL's approach consists on practical tools, applicable to the Brazilian scenario that developed and assessed with indicators, which are oriented on the principles of transparency and dialogue to promote their development. Some works developed is the Guide to Sustainable Livestock Indicators (GIPS - Guia de Indicadores), the Sustainable livestock initiatives Map (MIPS) and handbook of sustainable livestock practices (MPPS).

BRSL is composed by different sectors of the industry and from the value chain, such as producers, industries, research centers, NGOs, civil society, retail and restaurants. As part of the Board of the Roundtable, JBS creates technical working groups and guides their scope of work. It is through these working groups that most of the activities are accomplished. Recently, JBS participated in a pioneering sectorial initiative which seeks to strengthen sustainability within the cattle chain. The Company promoted meetings with about 150 ranchers in order to present the facilities and benefits of a new tool that will measure and indicate opportunities for continuous improvement related to the management and sustainability of properties in region. The initiative occurred in the municipalities of Novo Repartimento, Marabá and Itupiranga, in Pará. The initiative was developed in by BRSL and will be applied in partnership with Solidaridad Brasil, an international organization that works to promote socially inclusive, environmentally responsible and economically viable value chains.

Valor do financiamento que a organização forneceu a esta associação comercial no ano de reporte, se aplicável (na moeda selecionada em C0.4) (opcional)**Descreva o objetivo do financiamento da organização**

<Not Applicable>

A organização avaliou se seu engajamento com esta associação comercial está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

Associação comercial

Outro, especifique (Global Roundtable for Sustainable Beef (GRSB))

A posição da organização em relação às mudanças climáticas é consistente com a dessas associações?

Consistente

A organização influenciou, ou está tentando influenciar, a posição dessas associações?

Promovemos publicamente a posição atual da associação

Declare a posição da associação comercial com relação às mudanças climáticas, explique de que modo a posição da organização difere e como a organização está tentando influenciar a posição da associação (se aplicável)

Global Roundtable for Sustainable Beef (GRSB) is a global, multi-stakeholder initiative developed to advance continuous improvement in sustainability of the global beef value chain through leadership, science and multi-stakeholder engagement and collaboration. The GRSB envisions a world in which all aspects of the beef value chain are sustainable responsible, especially from a climate change perspective. JBS is a founding member, past executive committee member, past board of directors' member and

past President. The committee conducts the internal business of the roundtable to ensure members remain active in the operation of the organization. This is an important feature of a membership organization and it is essential that members maintain interest and involvement in the committees.

Valor do financiamento que a organização forneceu a esta associação comercial no ano de reporte, se aplicável (na moeda selecionada em C0.4) (opcional)

Descreva o objetivo do financiamento da organização

<Not Applicable>

A organização avaliou se seu engajamento com esta associação comercial está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

Associação comercial

Outro, especifique (U.S. Roundtable for Sustainable Poultry and Eggs (US-RSPE))

A posição da organização em relação às mudanças climáticas é consistente com a dessas associações?

Consistente

A organização influenciou, ou está tentando influenciar, a posição dessas associações?

Promovemos publicamente a posição atual da associação

Declare a posição da associação comercial com relação às mudanças climáticas, explique de que modo a posição da organização difere e como a organização está tentando influenciar a posição da associação (se aplicável)

The US-RSPE was launched in 2019 and is the nation's multi-stakeholder sustainability initiative for the U.S. poultry and egg value chain. The US-RSPE has the ability to bring together a broad group of diverse stakeholders, who can collaboratively focus and accelerate continuous improvement in the entire poultry and egg value chain. Together, they hope to continually advance the U.S. as a global leader in responsibly produced poultry and eggs. The US-RSPE's three focal points are to help define the scope and goals of the organization and the efforts to continuously improve poultry and egg sustainability:

- (1) Environmental: Air quality, by-products, energy use, GHG emissions, land use, nutrient management, solid waste, water quality and water use;
- (2) Social: Community relations, employee relations, employee retention, employee safety, food security and grower relations;
- (3) Economic: Legal compliance, profitability, consumer confidence and industry structure.

Pilgrim's is a founding member and board of directors' member. The members of the roundtable main scope are to define sustainability in a way that is meaningful for stakeholders across the entire poultry and egg value chain - from farm to fork, address emerging issues facing poultry and egg sustainability stakeholders, define and measure progress in the poultry and egg sustainability continuous improvement journey and collaborate with the entire poultry and egg value chain to increase trust and transparency that allows consumers to make informed decisions.

Valor do financiamento que a organização forneceu a esta associação comercial no ano de reporte, se aplicável (na moeda selecionada em C0.4) (opcional)

Descreva o objetivo do financiamento da organização

<Not Applicable>

A organização avaliou se seu engajamento com esta associação comercial está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

Associação comercial

Outro, especifique (British Poultry Council lobbying for economically effective Sector Energy & Emissions Policy & Targets)

A posição da organização em relação às mudanças climáticas é consistente com a dessas associações?

Consistente

A organização influenciou, ou está tentando influenciar, a posição dessas associações?

Promovemos publicamente a posição atual da associação

Declare a posição da associação comercial com relação às mudanças climáticas, explique de que modo a posição da organização difere e como a organização está tentando influenciar a posição da associação (se aplicável)

Reduzir o potencial de mudança climática é parte integrante das atividades das empresas membros do British Poultry Council e faz parte do pilar "ambiente" da produção sustentável de alimentos. O BPC opera um Acordo de Mudanças Climáticas (CCA), que inclui metas para a redução do uso de energia. As empresas membros do BPC são obrigadas a fazer parte do CCA para suas fazendas e plantas de processamento. Nossos membros também fazem parte das regulamentações de licenciamento ambiental, pelas quais as emissões, incluindo o odor, são monitoradas, controladas e reduzidas.

Valor do financiamento que a organização forneceu a esta associação comercial no ano de reporte, se aplicável (na moeda selecionada em C0.4) (opcional)

Descreva o objetivo do financiamento da organização

<Not Applicable>

A organização avaliou se seu engajamento com esta associação comercial está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

C12.3c

(C12.3c) Dê detalhes sobre o financiamento que a organização forneceu no ano de reporte a outras organizações cujas atividades podem influenciar uma política, uma lei ou uma regulamentação que possa exercer um impacto sobre o clima.

Tipo de organização

Organização Não Governamental (ONG) ou organização beneficente

Declare a organização à qual o financiamento foi fornecido

CEBDS Conselho Empresarial Brasileiro para o Desenvolvimento Sustentável

Valor do financiamento que a organização forneceu a esta organização no ano de reporte (na moeda selecionada em C0.4)

97953

Descreva o objetivo deste financiamento e como ele pode influenciar uma política, uma lei ou uma regulamentação que possa exercer impacto sobre o clima

Companies need to adapt to new challenges, whether from an ethical or a pragmatic point of view. The role of the Energy and Climate Change Thematic Chamber is to facilitate this process, helping companies to seize new market opportunities and minimize their risks.

Objectives of CT Energy and Climate Change:

- Offer a secure platform for CEBDS companies to come together to exchange knowledge, experience and best practices; to facilitate partnerships and undertake initiatives aimed at practicing climate responsibility;
- Provide information, guidance, products and tools that help CEBDS companies to implement, measure and communicate efforts related to tackling the climate issue;
- Increase the dialogue between the public and private sectors in the construction of a common agenda on climate change, energy efficiency and in the search for increasing the share of renewable energies in the energy matrix;
- Proactively represent the vision of CEBDS companies on issues related to energy and climate change, in debates and public policy formulation with governments and other interest groups;
- Disseminate best practices, demonstrating the contribution of CEBDS companies to the mitigation of the global warming phenomenon in a simple and understandable way;
- Catalyze the changes necessary to tackle the climate issue, encouraging Brazilian companies to contribute to reversing the phenomenon of global warming.

A organização avaliou se este financiamento está alinhado com os objetivos do Acordo de Paris?

Sim, avaliamos, e está em alinhamento

C12.4

(C12.4) Além da resposta ao CDP, a organização publicou alguma informação sobre sua resposta às mudanças climáticas e seu desempenho em emissões de GEEs no ano de reporte? Em caso afirmativo, anexe as publicações.

Publicação

Nos relatórios tradicionais

Status

Completo

Anexar o documento

JBS -relatorio-anual-e-de-sustentabilidade-2021.pdf

Página/seção de referência

All document

Elementos do conteúdo

Governança

Estratégia

Riscos e oportunidades

Valores de emissões

Metas de emissões

Comentários

Document available at: <https://jbs.com.br/wp-content/uploads/2022/07/-relatorio-anual-e-de-sustentabilidade-2021.pdf>

Publicação

Em comunicações voluntárias

Status

Em andamento – ano anterior anexado

Anexar o documento

jbs-s-a.pdf

Página/seção de referência

All document

Elementos do conteúdo

Valores de emissões

Comentários

Information about 2021 is available at: <https://registropublicodeemissoes.fgv.br/participantes/475>

Publicação

Em comunicações voluntárias

Status

Completo

Anexar o documento

ICO2Dia_25-07-22.xlsx

Página/seção de referência

Line 35

Elementos do conteúdo

Valores de emissões

Comentários

Information available at: http://www.b3.com.br/pt_br/market-data-e-indices/indices/indices-de-sustentabilidade/indice-carbono-eficiente-ico2-composicao-da-carteira.htm

Publicação

Nos relatórios tradicionais

Status

Completo

Anexar o documento

JBS Sustainability-Linked Bond _ Second Party Opinion (SPO).pdf

Página/seção de referência

All document

Elementos do conteúdo

Estratégia

Comentários

<https://api.mziq.com/mzfilemanager/v2/d/043a77e1-0127-4502-bc5b-21427b991b22/fdcd3404-3d8c-41db-63a2-db387d7ce6a5?origin=1>

C13. Outros impactos de gestão da terra

C-AC13.1/C-FB13.1/C-PF13.1

(C-AC13.1/C-FB13.1/C-PF13.1) É possível informar se alguma das práticas de manejo implementadas em terras próprias divulgadas em C-AC4.4a/C-FB4.4a/C-PF4.4a tem outros impactos além da mitigação/adaptação às mudanças climáticas?

Sim

C-AC13.1a/C-FB13.1a/C-PF13.1a

(C-AC13.1a/C-FB13.1a/C-PF13.1a) Dê detalhes sobre as práticas de gestão que tiverem outros impactos além da mitigação/adaptação às mudanças climáticas e sobre sua resposta gerencial.

Número de referência da prática de manejo

MP1

Efeito geral

Positivo

Quais das seguintes opções sofreram impactos?

Biodiversidade

Solo

Água

Outro, especifique (Cost)

Descrição do impacto

Waste management for the production of fertilizers through aerobic composting generates positive impacts in cost, soil quality, biodiversity, water and climate change. The activity avoids the disposal in landfill and provides revenue through the fertilizer sale. Moreover, the fertilizer improves the soil quality and biodiversity. Other impact: GHG emissions reduction.

Foi implementada alguma resposta a esses impactos?

Sim

Descrição da(s) resposta(s)

We implement measures to maximize positive impacts. With the opening of a business unit called Campo Forte, in Guaíçara, in the interior of São Paulo, JBS became the first company in Brazil to use organic waste generated in its factories to produce fertilizers. Solid organic, organomineral and special fertilizers will be produced. This project is in line with JBS' circular economy strategy. With its Net Zero commitment, the Company will invest US\$1 billion, by 2030, in projects to decarbonize all operations and will allocate US\$100 million to research to develop solutions to reduce emissions, such as improving regenerative agricultural practices, intensification of soil carbon sequestration and technologies aimed at supplier farms.

Número de referência da prática de manejo

MP2

Efeito geral

Positivo

Quais das seguintes opções sofreram impactos?

Biodiversidade

Solo

Descrição do impacto

The reforestation of degraded lands means an improvement in the quality of the soil, allowing the development of crop and livestock integration and improving the biodiversity around the reforestation area.

Foi implementada alguma resposta a esses impactos?

Não

Descrição da(s) resposta(s)

Since there are only positive impacts, there is no need for implementation of any response regarding the detailed impacts.

C-AC13.2/C-FB13.2/C-PF13.2

(C-AC13.2/C-FB13.2/C-PF13.2) É de conhecimento da organização se alguma das práticas de gestão mencionadas em C-AC12.2a/C-FB12.2a/C-PF12.2a que foram implementadas pelos fornecedores têm outros impactos além da mitigação/adaptação às mudanças climáticas?

Sim

C-AC13.2a/C-FB13.2a/C-PF13.2a

(C-AC13.2a/C-FB13.2a/C-PF13.2a) Dê detalhes das práticas de gestão implementadas pelos fornecedores que tiverem outros impactos além da mitigação/adaptação às mudanças climáticas.

Número de referência da prática de manejo

MP1

Efeito geral

Positivo

Quais das seguintes opções sofreram impactos?

Biodiversidade

Solo

Água

Produtividade

Outro, especifique (Cost)

Descrição dos impactos

The socio-environmental monitoring system aims to reduce deforestation in the Amazon Biome, consequently reducing carbon emissions. JBS has had a geospatial monitoring system for over ten years, in line with its Responsible Purchasing Policy for raw materials in the beef chain. Monitoring includes more than 860,000 square kilometers of area (or 86 million hectares, equivalent to the sum of the territories of France and Germany), and evaluates more than 80,000 potential direct supply farms every day. Based on this system, around 14,000 properties have already been suspended for failing to comply with JBS's Responsible Purchasing of Raw Materials Policy. Other Impacts: Reduction of GHG emissions and positive social impact (combating slave/child labor).

Foi implementada alguma resposta a esses impactos?

Sim

Descrição da(s) resposta(s)

We implement measures to maximize positive impacts. In 2021, JBS announced the commitment to be Net Zero by 2040, that is, to bring the net balance of greenhouse gas emissions to zero. The Company will invest US\$1 billion by 2030 to decarbonize its operations, allocating US\$100 million to research and development.

A key point of this journey is zero tolerance for illegal deforestation. In 2021, JBS implemented the Transparent Livestock Platform, which uses blockchain technology to overcome the sectoral challenge of extending this monitoring to suppliers' suppliers. By the end of 2025, the Company will be able to ensure compliance throughout its entire chain. As of January 1, 2026, 100% of direct suppliers will be required to integrate the Platform. In 2021, 14.6% of the cattle processed by the Company were already included in the Platform.

But it is not enough to block those suppliers that have registered nonconformities. The definitive solution also involves supporting farmers to improve their production practices. To this end, JBS has set up 15 Green Offices throughout Brazil, which so far have managed to provide technical support to more than 2,000 direct and indirect producers. In addition, the program includes easy access to credit via partner financial institutions.

C15. Biodiversidade

C15.1

(C15.1) Existe supervisão por parte do conselho e/ou responsabilidade por parte da gerência executiva de temas relacionados à biodiversidade na organização?

	Supervisão por parte do conselho e/ou responsabilidade por parte da gerência executiva por questões relacionadas à biodiversidade	Descrição da supervisão e dos objetivos relacionados à biodiversidade	Escopo da supervisão por parte do conselho
Linha 1	Sim, tanto supervisão por parte do conselho quanto responsabilidade por parte da gerência executiva	The Social and Environmental Responsibility Committee guides the Board of Directors in relation to the risks and opportunities existing in sustainability and social and environmental responsibility actions. It is responsible for taking care of and connecting all matters related to the subject in the company's business, in its global aspects, such as: identification, approach and treatment of critical matters that result in risks or impact on the business; monitoring and implementation of specific policies, strategies and actions; and evaluation of investment proposals in sustainability and socio-environmental responsibility. In the day-to-day operations of the Company, management is carried out by the environmental managers of each business and there are several practices implemented with the objective of ensuring biodiversity. Seara's agricultural production system, for example, is predominantly integrated. In this system, 100% of rural properties guarantee compliance with the country's forest code, which requires the preservation of a legal reserve on the properties. In this way, it favors the local biodiversity of the forests. The topic is also addressed through initiatives such as Jaguar Conservation, JBS Fund for the Amazon and Fire Fighting in the Pantanal.	<Not Applicable>

C15.2

(C15.2) A organização assumiu algum compromisso público e/ou endossou alguma iniciativa relacionada à biodiversidade?

	Indique se a organização assumiu algum compromisso público ou endossou alguma iniciativa relacionada à biodiversidade	Compromissos públicos relacionados à biodiversidade	Iniciativas endossadas
Linha 1	Sim, assumimos compromissos públicos e endossamos publicamente iniciativas relacionadas à biodiversidade	Compromisso de não realizar explorações nem desenvolvimentos em áreas protegidas legalmente designadas Compromisso de respeitar áreas protegidas legalmente designadas Compromisso de evitar impactos negativos para espécies ameaçadas e protegidas	ODS Outro, especifique (JBS endorsed the creation of the JBS Fund for the Amazon and has a partnership with the Instituto Onça-Pintada.)

C15.3

(C15.3) A organização avalia o impacto da sua cadeia de valor para a biodiversidade?

	A organização avalia o impacto da sua cadeia de valor para a biodiversidade?	Portfólio
Linha 1	Sim, avaliamos os impactos para a biodiversidade na nossa cadeia de valor tanto <i>upstream</i> quanto <i>downstream</i>	<Not Applicable>

C15.4

(C15.4) Quais ações a organização adotou no ano de reporte para progredir com seus compromissos relacionados à biodiversidade?

	A organização adotou alguma ação no período de reporte para progredir com seus compromissos relacionados à biodiversidade?	Tipo de ação adotada para o progresso dos compromissos relacionados à biodiversidade
Linha 1	Sim, estamos adotando ações para progredir com nossos compromissos relacionados à biodiversidade	Proteção do solo/água Gestão do solo/água Gestão das espécies

C15.5

(C15.5) A organização usa indicadores de biodiversidade para monitorar o desempenho em suas atividades?

	A organização usa indicadores para monitorar o desempenho em biodiversidade?	Indicadores utilizados para monitorar o desempenho em biodiversidade
Linha 1	Não	Selecione

C15.6

(C15.6) Além da resposta ao CDP, a organização publicou alguma informação sobre sua resposta a questões relacionadas à biodiversidade para este ano de reporte? Em caso afirmativo, anexe as publicações.

Tipo de reporte	Elementos do conteúdo	Anexe o documento e indique em que parte dele se encontram as informações de biodiversidade relevantes
Em um relatório de sustentabilidade voluntário ou outras comunicações voluntárias	Conteúdo dos compromissos ou das políticas relacionados à biodiversidade Impactos para a biodiversidade	Sustainability Report 2021. Relevant information on pages 16 and 76. -relatorio-anual-e-de-sustentabilidade-2021.pdf
Em um relatório de sustentabilidade voluntário ou outras comunicações voluntárias	Conteúdo dos compromissos ou das políticas relacionados à biodiversidade Impactos para a biodiversidade	JBS's NetZero Commitment provides for compliance measures and measures to combat deforestation, with direct positive impacts on the biodiversity of the monitored regions. Relevant informations at: https://jbs.com.br/netzero/en/strategies/Carta-Compromisso-JBS-Net-Zero-2040.pdf

C16. Aprovação

C-FI

(W-FI) Use este campo para apresentar informações ou contextos adicionais que a organização considera relevantes para sua resposta. Observe que este campo é opcional e não é pontuado.

C16.1

(C16.1) Dê detalhes sobre a pessoa que assinou (aprovou) a resposta sobre mudanças climáticas ao CDP.

	Cargo	Categoria de trabalho correspondente
Linha 1	Sustainability Director	Diretor de Sustentabilidade (CSO)

SC. Módulo do Programa Supply Chain

SC0.0

(SC0.0) Se preferir, faça uma introdução separada para este módulo.

JBS is the largest animal protein company and second largest food company in the world (the largest food company in the world in terms of revenue). Because of its global production platform diversified by geographic location and protein types, the Company has greater access to raw materials. Working to process animal protein and value-added products in the beef, pork, lamb and poultry segments, the Company also operates related businesses, such as leather, biodiesel, personal care and cleaning, solid waste management solutions, and metal packaging.

With locations in more than 20 countries and over 500 production units and commercial offices on five continents (the Americas, Asia, Europe, Africa and Oceania), JBS serves around 275,000 customers, in over 190 countries, ranging from supermarket chains to small retailers, wholesale clubs and food service companies.

With around 250,000 team members, the same sustainability (economic, social and environmental), innovation, quality and food safety guidelines are followed in every region, adopting best practices based on the Company's mission and values and a focus on operational excellence, as well as the establishment of better relationships with partners, customers, employees and society, the satisfaction of its shareholders and the commitment to social and environmental responsibility issues. For example: in March 2021, JBS announced a commitment to achieve net zero greenhouse gas emissions by 2040, reducing its direct and indirect emissions (scopes 1, 2 and 3) and offsetting all residual emissions. In addition, we issued US\$3 billion in Sustainability Linked Bonds (SLB) at JBS S.A. and PPC, linked to KPIs of 30% reduction in greenhouse gas emissions from scopes 1 and 2 by 2030, in addition to R\$ 1 billion in bonds linked to sustainability in Brazil.

The Net Zero 2040 commitment was formally accepted by the Science-Based Targets initiative (SBTi), which establishes and promotes best practices in defining science-based targets. JBS will provide a detailed roadmap through 2023 that enables targets consistent with the criteria established by the SBTi to limit global temperature rise to 1.5°C compared to pre-industrial levels. Internally, the Company structured a working group (WG) with the participation of focal points from all businesses (Brazil, USA, Canada, Mexico, Europe, Australia/New Zealand) to identify solutions that reduce greenhouse gas emissions and can generate value. The group holds periodic meetings to exchange experiences and search for common projects. In Brazil, six other WGs were also created to identify and analyze proposals for Brazilian operations. They are: WG Agro, WG Origination, WG Engineering & Energy, WG Environment, WG R&D, Innovation and Circular Economy, and WG Logistics. The coordination and consolidation of all these initiatives is the responsibility of a new function created within the Company, that of PMO Global, reporting directly to the Global CEO of JBS.

To work on the construction of this roadmap, JBS has the support of two nationally and internationally recognized consultancies for their work on sustainability, who are collaborating with the Company's internal areas to identify project opportunities, define clear KPIs and build science-based goals and action plans.

It is also worth noting that in April 2021, JBS started the operations of the Plataforma Pecúária Transparente ("Transparent Livestock Platform"), which, through blockchain technology, extends socio-environmental monitoring to the suppliers of its livestock suppliers. By the end of 2025, 100% of JBS' cattle suppliers will be part of the program. JBS is advancing in the assistance and inclusion of producers who seek to adapt the socio-environmental situation of their properties. The company already has 15 green offices offering environmental, legal and technical advice.

JBS has a widely diversified product portfolio, from fresh and frozen meats to ready to-eat (prepared) dishes, with leading brands that are recognized for excellence and innovation in-market, such as Friboi, Just Bare, Pilgrim's, Primo, Seara and Swift. JBS also launched an entire line of plant-based products in Brazil called Incrive! and the Ozo brand in US. In Australia, under PRIMO brand, launched a flexitarian sausage.

JBS has the following structure: 1. JBS Brasil, which includes Friboi, Swift, JBS Couros and Novos Negócios; 2. Seara; 3. JBS USA Beef (JBS USA Beef, JBS Canada, JBS USA Retail Ready, JBS USA Carriers and JBS Australia); 4. JBS USA Pork (JBS USA Pork, JBS USA Live Pork, Swift Prepared Foods and JBS USA Retail Ready); 5. PPC (Pilgrim's); and 6. Rigamonti.

In 2021, JBS's net revenue was R\$ 350,7 billion.

More information can be found in the official JBS website (<https://jbs.com.br/en/>) and in the JBS 2021 Annual and Sustainability Report (<https://jbs.com.br/sustentabilidade/ras/relatorios/>).

SC0.1

(SC0.1) Qual é a receita anual da empresa para o período de reporte declarado?

	Receita anual
Linha 1	350695560000

SC1.1

(SC1.1) Aloque as emissões da organização para os clientes listados abaixo, de acordo com os bens e serviços que vendeu para eles neste período de reporte.

Membro solicitante

Johnson & Johnson

Escopo das emissões

Escopo 1

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS Hygiene and Cleaning's mass production for Johnson & Johnson, its representativeness and thus the proportional allocation of Scope 1 emissions from the unit.

Emissões em toneladas métricas de CO₂e

75

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: stationary and mobile combustion, fugitive emissions and waste.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

11633

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 1 business divisions of JBS (JBS Higiene & Limpeza) that supply to Johnson & Johnson. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: tCO2e/produced ton.

Membro solicitante

Johnson & Johnson

Escopo das emissões

Escopo 3

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS Hygiene and Cleaning's mass production for Johnson & Johnson, its representativeness and thus the proportional allocation of Scope 3 emissions from the unit.

Emissões em toneladas métricas de CO2e

235

Incerteza (±%)

30

Principais fontes de emissões

The categories considered were: purchased goods and services (category 1), capital goods (category 2), fuel-and-energy-related activities (category 3), upstream transportation and distribution (category 4), waste generated in operations (category 5), business travel (category 6) and employee commuting (category 7).

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

11633

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 3 business divisions of JBS (JBS Higiene & Limpeza) that supply to Johnson & Johnson. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: tCO2e/produced ton.

Membro solicitante

Restaurant Brands International

Escopo das emissões

Escopo 1

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using Friboi and Seara's mass production for RBI, its representativeness and thus the proportional allocation of Scope 1 emissions from the unit.

Emissões em toneladas métricas de CO2e

6375

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: stationary and mobile combustion, fugitive emissions and waste.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

19283

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 2 business divisions of JBS (Seara and Friboi) that supply to Restaurant Brands International (RBI). In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Restaurant Brands International

Escopo das emissões

Escopo 2

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using Friboi and Seara's mass production for RBI, its representativeness and thus the proportional allocation of Scope 2 emissions from the unit.

Emissões em toneladas métricas de CO2e

755

Incerteza (±%)

30

Principais fontes de emissões

The source considered was electricity purchased.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

19283

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 2 business divisions of JBS (Seara and Friboi) that supply to Restaurant Brands International (RBI). In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Restaurant Brands International

Escopo das emissões

Escopo 3

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using Friboi and Seara's mass production for RBI, its representativeness and thus the proportional allocation of Scope 3 emissions from the unit.

Emissões em toneladas métricas de CO2e

385787

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: purchased goods and services (category 1), capital goods (category 2), fuel-and-energy-related activities (category 3), upstream transportation and distribution (category 4), waste generated in operations (category 5), business travel (category 6), employee commuting (category 7), downstream transportation and distribution (category 9), processing of sold products (category 10) and end-of-life treatment of sold products (category 12).

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

19283

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 2 business divisions of JBS (Seara and Friboi) that supply to Restaurant Brands International (RBI). In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Arcos Dorados

Escopo das emissões

Escopo 1

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using Friboi, JBS Australia, Pilgrim's Mexico and Pilgrim's Europe 's mass production for McDonald's Corporate, its representativeness and thus the proportional allocation of Scope 1 emissions from the unit.

Emissões em toneladas métricas de CO2e

41643

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: stationary and mobile combustion, fugitive emissions and waste.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

112767

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 4 business divisions of JBS (Friboi, JBS Australia, Pilgrim's Mexico and Pilgrim's Europe) that supply to McDonald's Corporate. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Arcos Dorados

Escopo das emissões

Escopo 2

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using Friboi, JBS Australia, Pilgrim's Mexico and Pilgrim's Europe 's mass production for McDonald's Corporate, its representativeness and thus the proportional allocation of Scope 2 emissions from the unit.

Emissões em toneladas métricas de CO2e

9338

Incerteza (±%)

30

Principais fontes de emissões

The source considered was electricity purchased.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

112767

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 4 business divisions of JBS (Friboi, JBS Australia, Pilgrim's Mexico, Pilgrim's Europe) that supply to McDonald's Corporate. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO₂e/produced ton.

Membro solicitante

Arcos Dorados

Escopo das emissões

Escopo 3

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using Friboi, JBS Australia, Pilgrim's Mexico and Pilgrim's Europe 's mass production for McDonald's Corporate, its representativeness and thus the proportional allocation of Scope 3 emissions from the unit.

Emissões em toneladas métricas de CO₂e

101815

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: purchased goods and services (category 1), capital goods (category 2), fuel-and-energy-related activities (category 3), upstream transportation and distribution (category 4), waste generated in operations (category 5), business travel (category 6), employee commuting (category 7), downstream transportation and distribution (category 9), processing of sold products (category 10) and end-of-life treatment of sold products (category 12).

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

112767

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 4 business divisions of JBS (Friboi, JBS Australia, Pilgrim's Mexico, Pilgrim's Europe) that supply to McDonald's Corporate. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO₂e/produced ton.

Membro solicitante

Walmart, Inc.

Escopo das emissões

Escopo 1

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS USA Beef, JBS USA Case Ready, Swift Prepared Foods, Pilgrim's USA and Pilgrim's Puerto Rico 's mass production for Walmart North America, its representativeness and thus the proportional allocation of Scope 1 emissions from the unit.

Emissões em toneladas métricas de CO₂e

48965

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: stationary and mobile combustion, fugitive emissions and waste.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

330916

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 5 business divisions of JBS (JBS USA Beef, JBS USA Case Ready, Swift Prepared Foods, Pilgrim's USA and Pilgrim's Puerto Rico's) that supply to Walmart North America. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Walmart, Inc.

Escopo das emissões

Escopo 2

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS USA Beef, JBS USA Case Ready, Swift Prepared Foods, Pilgrim's USA and Pilgrim's Puerto Rico 's mass production for Walmart North America, its representativeness and thus the proportional allocation of Scope 2 emissions from the unit.

Emissões em toneladas métricas de CO2e

28324

Incerteza (±%)

30

Principais fontes de emissões

The source considered was electricity purchased.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

330916

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 5 business divisions of JBS (JBS USA Beef, JBS USA Case Ready, Swift Prepared Foods, Pilgrim's USA and Pilgrim's Puerto Rico's) that supply to Walmart North America. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Walmart, Inc.

Escopo das emissões

Escopo 3

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS USA Beef, JBS USA Case Ready, Swift Prepared Foods, Pilgrim's USA and Pilgrim's Puerto Rico 's mass production for Walmart North America, its representativeness and thus the proportional allocation of Scope 3 emissions from the unit.

Emissões em toneladas métricas de CO2e

4174

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: distribution (category 4), waste generated in operations (category 5) and business travel (category 6).

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

330916

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 5 business divisions of JBS (JBS USA Beef, JBS USA Case Ready, Swift Prepared Foods, Pilgrim's USA and Pilgrim's Puerto Rico's) that supply to Walmart North America. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Wal Mart de Mexico

Escopo das emissões

Escopo 1

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS USA Pork and Pilgrim's Mexico 's mass production for Walmart Mexico and Central America, its representativeness and thus the proportional allocation of Scope 1 emissions from the unit.

Emissões em toneladas métricas de CO2e

16963

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: stationary and mobile combustion, fugitive emissions and waste.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

69343

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 2 business divisions of JBS (JBS USA Pork and Pilgrim's Mexico) that supply to Walmart Mexico and Central America. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Wal Mart de Mexico

Escopo das emissões

Escopo 2

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS USA Pork and Pilgrim's Mexico 's mass production for Walmart Mexico and Central America, its representativeness and thus the proportional allocation of Scope 2 emissions from the unit.

Emissões em toneladas métricas de CO2e

13012

Incerteza (±%)

30

Principais fontes de emissões

The source considered was electricity purchased.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

69343

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 2 business divisions of JBS (JBS USA Pork and Pilgrim's Mexico) that supply to Walmart Mexico and Central America. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Wal Mart de Mexico

Escopo das emissões

Escopo 3

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS USA Pork and Pilgrim's Mexico 's mass production for McDonald's Corporate, its representativeness and thus the proportional allocation of Scope 3 emissions from the unit.

Emissões em toneladas métricas de CO2e

3887

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: distribution (category 4), waste generated in operations (category 5) and business travel (category 6).

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

69343

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 2 business divisions of JBS (JBS USA Pork and Pilgrim's Mexico's) that supply to Walmart Mexico and Central America. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Ahold Delhaize

Escopo das emissões

Escopo 1

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS USA Beef, JBS USA Pork, JBS USA Case Ready and Swift Prepared Food 's mass production for Ahold Delhaize, its representativeness and thus the proportional allocation of Scope 1 emissions from the unit.

Emissões em toneladas métricas de CO2e

65087

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: stationary and mobile combustion, fugitive emissions and waste.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

362484

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol

Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 4 business divisions of JBS (JBS USA Beef, JBS USA Pork, JBS USA Case Ready and Swift Prepared Food) that supply to Ahold Delhaize. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Ahold Delhaize

Escopo das emissões

Escopo 2

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS USA Beef, JBS USA Pork, JBS USA Case Ready and Swift Prepared Food's mass production for Ahold Delhaize, its representativeness and thus the proportional allocation of Scope 2 emissions from the unit.

Emissões em toneladas métricas de CO2e

17823

Incerteza (±%)

30

Principais fontes de emissões

The source considered was electricity purchased.

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

362484

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 4 business divisions of JBS (JBS USA Beef, JBS USA Pork, JBS USA Case Ready and Swift Prepared Food) that supply to Ahold Delhaize. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

Membro solicitante

Ahold Delhaize

Escopo das emissões

Escopo 3

Nível de alocação

Unidade de negócios (empresa subsidiária)

Detalhes do nível de alocação

The allocation was performed using JBS USA Beef, JBS USA Pork, JBS USA Case Ready and Swift Prepared Food's mass production for Ahold Delhaize, its representativeness and thus the proportional allocation of Scope 3 emissions from the unit.

Emissões em toneladas métricas de CO2e

0.001

Incerteza (±%)

30

Principais fontes de emissões

The sources considered were: distribution (category 4), waste generated in operations (category 5) and business travel (category 6).

Verificada(s)

Não

Método de alocação

Alocação com base na massa dos produtos adquiridos

Valor de mercado ou quantidade de bens/serviços fornecidos ao membro solicitante

362484

Unidade do valor de mercado ou da quantidade de bens/serviços fornecidos

Toneladas métricas

Explique como foi identificada a fonte de GEEs, incluindo as principais limitações a este processo e as suposições adotadas

The GHG emissions were calculated based on JBS's 2021 GHG emissions inventory, using the approach of reporting operational control and based on Brazil GHG Protocol Programme, "IPCC Guidelines for National Greenhouse Gas Inventories" (2006) and the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" (Revised Edition). It was considered the allocated GHG emissions from 4 business divisions of JBS (JBS USA Beef, JBS USA Pork, JBS USA Case Ready and Swift Prepared Food) that supply to Ahold Delhaize. In order to discriminate sources of direct and indirect emissions, promote transparency and be useful to different types of

organizations, types of policies related to climate change and business objectives, the Brazilian GHG Protocol defines three "scopes" (Scope 1, Scope 2 and Scope 3). Each scope can be subdivided into categories. Thus, the sources themselves are grouped into operational limits. The GHG emissions allocated to the Company were calculated considering the following ratio: CO2e/produced ton.

SC1.2

(SC1.2) Caso tenham sido utilizadas informações públicas para responder à pergunta SC1.1, forneça referências.

- JBS 2021 Annual and Sustainability Report (Portuguese version) – section: "Climate Change" – page 63. This report is also available in: <https://jbs.com.br/wp-content/uploads/2022/07/-relatorio-anual-e-de-sustentabilidade-2021.pdf>
- JBS USA 2020 Sustainability Report - section: "Energy and Emissions". This report is also available in: <https://sustainability.jbsfoodsgroup.com/>
- Pilgrims 2020 Sustainability Report – section: "Energy and Emissions". This reports is also available in: <https://sustainability.pilgrims.com/>
- GHG Protocol Brazilian Program. 2021 GHG Inventory Emissions are not publicly available by the deadline date of this questionnaire. 2020 GHG Inventory Emissions is available in <http://registropublicodeemissoes.com.br/participantes/475> (in Portuguese).

SC1.3

(SC1.3) Quais os desafios ao se fazer a alocação das emissões para diferentes clientes, e o que o ajudaria a superar esses desafios?

Desafios de alocação	Explique o que ajudaria a superar esses desafios
A diversidade de linhas de produtos faz com que a contabilização precisa para cada produto/linha de produto seja ineficiente em termos de custo	Due to diversity of product lines, it would be necessary additional financial and human resources for management and allocation of GHG emission data for every products.
A carteira de clientes é grande e diversificada demais para permitir o monitoramento preciso das emissões no nível dos clientes	Due to the diversity of customers, it would be necessary additional financial and human resources for management and allocation of GHG emission data by customer.

SC1.4

(SC1.4) A organização planeja desenvolver capacidades para alocar as emissões para seus clientes no futuro?

Sim

SC1.4a

(SC1.4a) Descreva como a organização planeja desenvolver suas capacidades.

JBS Brazil and the Getulio Vargas Foundation's Sustainability Study Center (FGVces) developed a project which the purpose was to understand and measure the environmental impacts of certain animal protein products and their value chains, incorporating Life Cycle Thinking (LCT), using the Life Cycle Assessment (LCA) technique with a specific Climate Change approach. This assessment presented that for product 1 the emissions from "use" phase corresponded to 21.8% of total emissions, and product 2 emissions from similar phase corresponded to 5.9% of total emissions. More information available in: <http://gvces.com.br/lcm-2017-gestao-do-ciclo-de-vida-de-produtos-no-centro-da-discussao-empresarial?locale=pt-br>

JBS Brazil intends to do the same study for other products of its portfolio in the coming years.

SC2.1

(SC2.1) Proponha eventuais projetos relativos às mudanças climáticas mutuamente benéficos no qual a organização pode colaborar com membros específicos do Programa Supply Chain do CDP.

Membro solicitante

Johnson & Johnson

Tipo de grupo de projetos

Redução das emissões da logística

Tipo de projeto

Otimização de rotas

Metas de emissões

Ações que reduziriam nossas próprias emissões e as de nossos clientes

Cronograma estimado para materializar as reduções de carbono

0-1 ano

Duração estimada da economia de CO2e

6390

Retorno financeiro estimado

0-1 ano

Detalhes da proposta

The Optimized Route program from JBS Transportadora aims to bring more efficiency to cargo transport, by optimizing the trips made by its own trucks and in partnership

with third parties, so that trucks that would return to factories empty then transport partner cargo. This means that the entire route back and forth is used 100%, contributing to reducing fuel use and consequent CO2 emissions.

Key Optimized Route results: reduced greenhouse gas emissions by 6,390 tCO2e, which is equal to the emissions generated annually by over 3,299 passenger vehicles; savings of over 6,5 million liters of diesel fuel and, lowered kilometers travelled by over 15 million.

Membro solicitante

Ahold Delhaize

Tipo de grupo de projetos

Redução das emissões da logística

Tipo de projeto

Otimização de rotas

Metas de emissões

Ações que reduziriam nossas próprias emissões e as de nossos clientes

Cronograma estimado para materializar as reduções de carbono

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Membro solicitante

Arcos Dorados

Tipo de grupo de projetos

Redução das emissões da logística

Tipo de projeto

Otimização de rotas

Metas de emissões

Ações que reduziriam nossas próprias emissões e as de nossos clientes

Cronograma estimado para materializar as reduções de carbono

0-1 ano

Duração estimada da economia de CO2e

6390

Retorno financeiro estimado

0-1 ano

Detalhes da proposta

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Membro solicitante

Restaurant Brands International

Tipo de grupo de projetos

Redução das emissões da logística

Tipo de projeto

Otimização de rotas

Metas de emissões

Ações que reduziriam nossas próprias emissões e as de nossos clientes

Cronograma estimado para materializar as reduções de carbono

0-1 ano

Duração estimada da economia de CO2e

6390

Retorno financeiro estimado

0-1 ano

Detalhes da proposta

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Membro solicitante

Walmart, Inc.

Tipo de grupo de projetos

Redução das emissões da logística

Tipo de projeto

Otimização de rotas

Metas de emissões

Ações que reduziriam nossas próprias emissões e as de nossos clientes

Cronograma estimado para materializar as reduções de carbono

0-1 ano

Duração estimada da economia de CO2e

6390

Retorno financeiro estimado

0-1 ano

Detalhes da proposta

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Membro solicitante

Wal Mart de Mexico

Tipo de grupo de projetos

Redução das emissões da logística

Tipo de projeto

Otimização de rotas

Metas de emissões

Ações que reduziriam nossas próprias emissões e as de nossos clientes

Cronograma estimado para materializar as reduções de carbono

0-1 ano

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6390

Retorno financeiro estimado

0-1 ano

Detalhes da proposta

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SC2.2

(SC2.2) As solicitações ou iniciativas de membros do Programa Supply Chain do CDP levaram a organização a tomar iniciativas de redução de emissões em nível organizacional?

Não

SC4.1

(SC4.1) Estão sendo apresentados dados no nível do produto para os bens ou serviços da organização?

Não, não apresentaremos dados

Enviar sua resposta

A resposta está sendo enviada em qual idioma?

Inglês

Confirme como a resposta deve ser gerenciada pelo CDP

	Compreendo que minha resposta será compartilhada com todas as partes interessadas solicitantes	Permissão da resposta
Selecione suas opções de envio	Sim	Não público

Confirme abaixo

Li e aceito os Termos aplicáveis