

Welcome to your CDP Water Security Questionnaire 2020

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

JBS is the largest animal protein company and second largest food company in the world. 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 15 countries and over 400 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 over 240,000 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.

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, Plumrose, Primo, Seara and Swift. JBS also launched an entire line of plant-based products in Brazil called Incrível Seara and the Ozo brand in US. In Australia, under PRIMO brand, launched a flexitarian sausage. Company operations in the United States, Australia, Canada, Mexico, Puerto Rico, New Zealand, the United Kingdom and Mainland Europe are controlled by JBS USA, which includes the JBS USA Beef, JBS USA Pork and Pilgrim's Pride Corporation (holder of the Moy Park and Tulip operations) business units. In Brazil, the Company develops beef, poultry, pork and prepared food businesses, split among the Friboi and Seara main brands.

In 2019, JBS's net revenue was R\$204.5 billion, equivalent to US\$ 49.7 billion. This is 13% higher than 2018.

More information can be found in the official JBS website (<https://jbs.com.br/en/>) and in the JBS 2019 Annual and Sustainability Report (<https://jbs.com.br/wp-content/uploads/2020/05/ras-jbs-2019-eng-final.pdf>).

W-FB0.1a

(W-FB0.1a) Which activities in the food, beverage, and tobacco sector does your organization engage in?

Processing/Manufacturing

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	January 1, 2019	December 31, 2019

W0.3

(W0.3) Select the countries/areas for which you will be supplying data.

Brazil

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

BRL

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
<p>Units outside Brazil were not included in the questionnaire</p>	<p>JBS is continuously working to integrate the data of all its units. In the end of 2017 the sustainability software “Credit360”, tool that allows monitoring of water withdrawals, management of sustainability indicators and monitoring of the units efficiency, started to operate in all JBS’s units, including units outside Brazil. The integration is a continual improvement process. With the advance of the global mapping in the next years, JBS will be able to report information about the units outside Brazil. The integration is a continual improvement process and still going on. In 2019, Pilgrim's acquired Tulip Limited, one of the largest pork and prepared foods companies in the United Kingdom. With the advance of the global mapping in the next years, JBS will be able to report information about the units outside Brazil.</p> <p>Despite the exclusion of JBS USA from JBS 'CDP Water, water use and water quality are priorities at JBS USA and critical pillars in our sustainability program. We embrace our responsibility to reduce water use and strive to improve our water-stewardship efforts by monitoring use at each JBS USA facility and prioritizing usage reductions, while preserving our high standards for food safety and sanitary conditions. We are also aware that some JBS USA facilities are located in water-stressed areas and require a more strategic focus to ensure proper water management. Water quality is also an important priority for us, and we continuously work to make sure that all wastewater we discharge meets or exceeds all regulatory and internal quality standards.</p> <p>All facilities (JBS USA and JBS Brasil) invests capital annually to make sure that goals are achieved, and local challenges are appropriately addressed.</p>

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Vital	<p>Conservation of natural resources is essential to ensure the sustainability of JBS business. The Materiality Matrix showed that Water is one fundamental aspect that is material to JBS' global sustainability priorities.</p> <p>In the current scenario and in the future scenario, water quality and quantity are vital to JBS business continuity due to its importance to both operations in the industrial process and value chain.</p> <p>Water shortage is a concern for JBS, since it affects the animal watering, influences on the availability of soybean, corn and on the growth of pasture, which are used to produce the animal feed by JBS's. Droughts also affect the availability of electricity since most of the energy generated in Brazil comes from Hydroelectric power plants, increasing the energy price and the probability of blackouts. In addition, poor water quality or lack of availability can cause disruptions to our operations or block sales of products to markets, affecting operating costs.</p> <p>Water management is not just a critical issue for JBS and food industry sustainability: it is a basic element of the production chain and essential for animal and vegetable development and for ensuring product and process sanitary standards as well as facility, equipment and utensil cleaning.</p> <p>As such, sustainable water usage is a priority at all Company units as is development of projects and strategies to maximize efficient water usage and reuse and minimize the need</p>

			to develop new water sources.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	<p>The food industry has sanitation standard operating procedures that limit water reuse. Nevertheless, this practice is important to the company currently and in the future since it helps manage a vital resource to both production and the value chain. First, the reuse of water in JBS can occur during the production process, such as the cooling of sausage’s production, which currently uses tanks that allow the reuse of water in the process. The reuse also takes place out of the industrial process, since the treated wastewater is used to clean patios and external areas. Regarding the value chain, It is known that water availability depends on the management of the river basin and that comprises all users of this resource, including JBS suppliers. The reuse of wastewater is one of the actions that provides support to water management, reducing the need to increase water withdrawal and treatment. Water reuse has great relevance in the future, through new technologies and regulatory alterations for food industries.</p> <p>A sustainable alternative for treated effluents is fertigation for agricultural crops. The effluent, which has nutrients that serve as fertilizer for soil, receives chemical and biological treatment and is destined for fertigation of pastures, and other crops, rather than being discarded.</p> <p>Water reuse and recycling initiatives represent the greatest opportunity for the economy of this resource. Therefore, there is a major effort by the Company to reuse water at JBS facilities, based on a great effort to identify opportunities for reuse and development of work groups to facilitate the expansion of projects in its various units.</p> <p>As a result of these work, over 1,9 million liters of water were reused in JBS Brazil in 2019, accounting for approximately 3% of water captured. This allows the company to promote lower water abstraction, reducing the environmental impacts inherent to the industrial process.</p>

W-FB1.1a

(W-FB1.1a) Which water-intensive agricultural commodities that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.

Agricultural commodities	% of revenue dependent on these agricultural commodities	Produced and/or sourced	Please explain
Other, please specify Cattle products	41-60	Produced	In Brazil, the Company has 39 processing units, 5 livestock feedlots and 1 logistics terminal. Concerning leather, JBS Couros has 15 processing units and 1 distribution center, making livestock products a significant part of JBS 'revenue and responsible for a large part of our total water demand. The management of water resources is at the base of the JBS production chain and its sustainable use is a priority. The resource is considered essential to guarantee the sanitary standards of processes and products, such as cleaning areas, equipment and utensils in the operation.
Other, please specify Pork products	Less than 10%	Produced	In Brazil, the Company has 8 pork processing units. JBS is the second largest producer and exporter of poultry and pork products, which is why they are so important to our revenue. Water resources management is a fundamental element for the food sector, and it is the base of its productive chain and essential for pork breeding. The resource is considered essential to guarantee the sanitary standards of processes and products, such as cleaning areas, equipment and utensils in the operation.
Other, please specify Poultry products	21-40	Produced	In Brazil, the Company has 30 poultry processing units and 11 prepared foods units. JBS is the second largest producer and exporter of poultry and pork products, which is why they are so important to our revenue. Water resources management is a fundamental element for the food sector, and it is the base of its productive chain and essential for poultry breeding. The resource is considered essential to guarantee the sanitary standards of processes and products, such as cleaning areas, equipment and utensils in the operation.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	<p>All facilities monitor the volume of water withdrawals in a continuous and individualized way. The monitoring is carried out at the withdrawals points, which have measuring equipment (hydrometers), the data of each unit are reviewed and reported to the corporate team daily to verify compliance with established targets, as well as propose projects to reduce water consumption which enable the decision-making process to increase the efficiency of JBS. Water withdrawals volume data are also reported monthly in a computerized corporate software (Credit 360). In Brazil, water withdrawals are regulated by Federal or State Legislation, so all sources of funding from JBS have authorizations that determine the period, volume and source of water to be captured.</p> <p>In 2019, water withdrawals data were audited by SGS according to standards established by GRI.</p> <p>The term “facilities” refers to all operational units (poultry and pork farms, slaughter units, distribution centers and animal feed factories).</p>
Water withdrawals – volumes by source	100%	<p>All facilities monitor, through hydrometers, the water volume per source at the withdrawal’s points. The data of each unit are reviewed and reported to the corporate team daily. Data are consolidated and reported monthly within the system Credit360, which allows management and performance evaluation of the company’s global sustainability indicators. The data are also annually reported in the sustainability report.</p> <p>The water used is also control by production intensity in line with annual water usage guidelines. This aspect is strategic to JBS’s production, since each source has a peculiarity of availability, quality and cost. Thus, monitoring water volume withdrawals by source enables the company to identify critical points and to assess the possibility of water source alteration.</p> <p>In Brazil, water withdrawals is regulated by Federal or State Legislation, so all sources of</p>

		funding from JBS have authorizations that determine the period, volume and source of water to be captured.
Water withdrawals quality	100%	<p>The water withdrawals quality in food industries is essential and regulated by a series of health standards in order to ensure, in a comprehensive way, the sanitary standards of industrial processes and all food safety to consumers.</p> <p>Therefore, in all facilities are conducted inspections and routine laboratory tests (hourly and daily) of the water used, monitoring water quality, storage facilities and water treatment, since is vital to the company to keep the quality water standards, assuring the safety of the society, employees and customers. The parameters monitored are also reported in a computerized corporate software (Credit360), which allows management and performance evaluation of the company's global sustainability indicators.</p> <p>The Ministry of Health of the Brazilian government defines the parameters and periodicity of the monitoring of water quality.</p>
Water discharges – total volumes	100%	<p>All facilities monitor the volume of water discharge (treated industrial wastewater) continuously and individually. Monitoring is accomplished by measuring equipment (hydrometers), the data of each unit are reviewed and reported to corporate staff daily. By constantly monitoring water discharge volumes it enables the company to follow up the wastewater treatment and thus to propose actions that aim rising its efficiency.</p> <p>The data are also reported in a corporate system (Credit360), which allows management and performance evaluation of the company's global sustainability indicators.</p> <p>In Brazil, the water discharge is regulated by Federal or State Legislation, so all water sources discharge from JBS have authorizations that determine the period, volume and the water discharge destination.</p>
Water discharges – volumes by destination	100%	<p>All facilities monitor the volume of water discharge (treated industrial wastewater) continuously and individually. Monitoring is accomplished by measuring equipment (hydrometers), the data of each unit are reviewed and reported to corporate staff daily. The data are also reported in a corporate system (Credit360), which allows management and performance evaluation of the</p>

		<p>company's global sustainability indicators.</p> <p>In Brazil, the water discharge is regulated by Federal or State Legislation, so all water sources discharge from JBS have authorizations that determine the period, volume and the water discharge destination.</p>
Water discharges – volumes by treatment method	100%	<p>Plants have modern treatment stations to collect and appropriately treat the effluent liquid produced by its production processes, complying with legal regulations. All the wastewater from JBS operations is transported to the Company's own treatment stations or public treatment systems. The Company is constantly monitoring wastewater treatment station performance and local government agencies constantly monitor compliance with legally required physical and chemical standards.</p> <p>All facilities monitor the volume of water discharge (treated industrial wastewater) continuously and individually. Monitoring is accomplished by measuring equipment (hydrometers), the data of each unit are reviewed and reported to corporate staff daily. The data are also reported in a corporate system (Credit360), which allows management and performance evaluation of the company's global sustainability indicators.</p>
Water discharge quality – by standard effluent parameters	100%	<p>To maintain the treatment efficiency and meet the environmental standards, JBS has specific operational procedures and internal controls for wastewater treatment.</p> <p>The parameters of the untreated effluent and treated effluent are monitored by laboratory analysis.</p> <p>In Brazil, the water discharge is regulated by Federal or State Legislation, so all sources of water discharge from JBS have authorizations that determine the period, volume and source of water discharge. In addition, physical, chemical and biological parameters are constantly analysed (by external laboratories) to measure and ensure the required quality of the treated effluent that will be destined for a safe source. All units monitor various effluent parameters in a continuous manner and these data are reviewed and reported to the corporate team daily.</p> <p>The data are also reported in a corporate system (Credit360), which allows management and performance evaluation of the company's global sustainability indicators.</p>

Water discharge quality – temperature	100%	<p>To maintain the treatment efficiency and meet the environmental standards, JBS has specific operational procedures and internal controls for wastewater treatment. Measurement is performed in accordance with legal requirements of each location where the company operates. JBS wastewater is discharged approximately at ambient temperature in specify lagoons wastewater treatment. This process also enables the adaptation of the temperature to the environment.</p> <p>All facilities monitor water temperature in a continuous manner and these data are reviewed and reported to the corporate team daily. The data are also reported in a corporate system (Credit360), which allows management and performance evaluation of the company's global sustainability indicators.</p>
Water consumption – total volume	100%	<p>All units monitor the water consumption volume in a continuous and individualized way. The monitoring data of each unit are reviewed and reported to the corporate team daily that checks if the established goals have been met.</p> <p>The consumed water volume is also reported in a business system (Credit360), which enables the management and evaluation of performance of the global indicators of the company's sustainability.</p>
Water recycled/reused	100%	<p>Essentially, all units' reuse water in the industrial process. The food industry has sanitation standard operating procedures that limit water reuse. Nevertheless, this practice is important to the company since it helps manage a vital resource to both production and the value chain.</p> <p>The reuse of water in JBS can occur during the production process and place out of the industrial process, since the treated wastewater is used to clean patios and external areas. All units monitor the water reused volume directly at the collection points of destined to the treatment for later reuse. The data of each unit are reviewed and reported to the corporate team daily. The data are also reported in a corporate system (Credit360), which enables the management and performance evaluation of Company's Global Sustainability Indicators.</p>

<p>The provision of fully-functioning, safely managed WASH services to all workers</p>	<p>100%</p>	<p>In all JBS units there is a water quality control for the production process and for potable water, since is vital to the company to keep the quality standards for water, assuring the safety of the employees.</p> <p>The water used for personal hygiene is provided in accordance with the quality standards defined by ANVISA. A systematic assessment is carried out to check the quality of potable water provided for human consumption. The monitoring is accomplished through daily measurement.</p>
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W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
<p>Total withdrawals</p>	<p>70,831.02</p>	<p>About the same</p>	<p>JBS uses a sustainability Credit360 software manage its sustainability indicators, monitoring monthly water withdrawals in all its units. In Brazil, the monitoring is aligned with the Sustainable Water Management Program (PGSA) that monitors water shortages risk and water use. The comparison with the previous year, classified as "About the Same" refers to the low indicator variation (1-10%). JBS obtained an increase in its water intensity indicator (volume of water per ton of product) by 8,3%. The main reason for the increase is the demand from the Brazilian sanitary regulation agency to enhance the cleaning frequency. It is what was applied for the food company sector.</p> <p>The future variations in water withdrawals are likely to be small, because although there may be an increase in production, the company has been constantly working to reduce its water consumption per ton of product.</p>

Total discharges	58,527.62	About the same	JBS uses a sustainability Credit360 software manage its sustainability indicators, monitoring monthly water withdrawals in all its units. In Brazil, the monitoring is aligned with the Sustainable Water Management Program (PGSA) that monitors water shortages risk and water use. The comparison with the previous year, classified as "About the Same" refers to the low indicator variation (1-10%). JBS obtained an increase in its water intensity indicator (volume of water per ton of product) by 6%. The main reason for the increase is the demand from the Brazilian sanitary regulation agency to enhance the cleaning frequency. It is what was applied for the food company sector. The future variations in water discharges are likely to be small, because although there may be an increase in production, the company has been constantly working to reduce its water consumption per ton of product.
Total consumption	12,303.41	Higher	JBS uses a sustainability Credit360 software manage its sustainability indicators, monitoring monthly water withdrawals in all its units. In Brazil, the monitoring is aligned with the Sustainable Water Management Program (PGSA) that monitors water shortages risk and water use. The comparison with the previous year, classified as "Higher" refers to the indicator variation (11-40%). JBS obtained an increase in its water total consumption by 23.89% (absolute volume). The main reason for the increase is that a larger portion of water stopped being discarded and started to be reused. The future variations in water consumption are likely to be small, because although there may be an increase in production, the company has been constantly working to reduce its water consumption per ton of product.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	11-25	About the same	Other, please specify	The greatest reference in the Company for management of areas with water stress is the Sustainable Water Management Program (PGSA). In

				<p>PGSA attempts to identify critical areas</p>	<p>order to increase efficiency and avoid shortages, the PSGA attempts to identify critical areas and prioritize facilities and hydrographic microbasins to mitigate the risk of shortfalls and increase usage efficiency, in addition to measuring water-related financial impacts and providing strategic tools and methodologies to support investment decisions.</p> <p>The PGSA development is guided by a specific study which was conducted by an environmental consultancy based on the best practice for water management: Global Water Footprint Assessment Standard, AWS International Water Stewardship Standard and ISO 14.040:2014 (Environmental management – Water footprint).</p> <p>The PGSA has been implemented for over 100 JBS processing facilities in the north and south of Brazil, including almost every major hydrographic basin in the country. It is a component in the water management procedures at the company’s various businesses, including food (beef, pork, poultry and processed products), leather processing, hygiene and cleaning, biofuel, collagen and other product manufacturing processes.</p> <p>The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the unit’s exposure to shortage risk.</p>
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W-FB1.2e

(W-FB1.2e) For each commodity reported in question W-FB1.1a, do you know the proportion that is produced/sourced from areas with water stress?

Agricultural commodities	The proportion of this commodity produced in areas with water stress is known	The proportion of this commodity sourced from areas with water stress is known	Please explain
Other commodities from W-FB1.1a, please specify Cattle products	Yes	Not applicable	Water resources management is not only a fundamental element for the sustainability of the food sector and the JBS, it is at the base of its productive chain and essential for cattle breeding. In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, it established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by environmental managers, responsible for their respective operational facility to deal specifically with water issues, enhancing water management. The program identified the critical facilities by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each facility, making it possible to prioritize actions such as investment allocation and targets setting to reduce the facilities exposure to shortage risk. This method was selected due to its capacity to integrate external and internal issues, such as water stressed basin and the water shortage exposure of the facility. By Credit360 system, JBS can quantify the percentage of the production that comes from these water stress areas identified and monitor if there is any unit that is facing challenges with water availability and set actions plans if necessary.
Other commodities from W-FB1.1a, please specify Pork products	Yes	Not applicable	Water resources management is not only a fundamental element for the sustainability of the food sector and the JBS, it is at the base of its productive chain and essential for pork breeding. In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, it established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by

			<p>environmental managers, responsible for their respective operational facility to deal specifically with water issues, enhancing water management. The program identified the critical facilities by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each facility, making it possible to prioritize actions such as investment allocation and targets setting to reduce the facilities exposure to shortage risk. This method was selected due to its capacity to integrate external and internal issues, such as water stressed basin and the water shortage exposure of the facility. By Credit360 system, JBS can quantify the percentage of the production that comes from these water stress areas identified and monitor if there is any unit that is facing challenges with water availability and set actions plans if necessary.</p>
<p>Other commodities from W-FB1.1a, please specify Poultry products</p>	<p>Yes</p>	<p>Not applicable</p>	<p>Water resources management is not only a fundamental element for the sustainability of the food sector and the JBS, it is at the base of its productive chain and essential for poultry breeding.</p> <p>In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, it established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by environmental managers, responsible for their respective operational facility to deal specifically with water issues, enhancing water management. The program identified the critical facilities by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each facility, making it possible to prioritize actions such as investment allocation and targets setting to reduce the facilities exposure to shortage risk. This method was selected due to its capacity to integrate external and internal issues, such as water stressed basin and the water shortage exposure of the facility. By Credit360 system, JBS can quantify the percentage of the production that comes from these water stress areas</p>

		identified and monitor if there is any unit that is facing challenges with water availability and set actions plans if necessary.
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W-FB1.2f

(W-FB1.2f) What proportion of the produced agricultural commodities reported in W-FB1.1a originate from areas with water stress?

Agricultural commodities	% of total agricultural commodity produced in areas with water stress	Please explain
Other produced commodities from W-FB1.2e, please specify Cattle products	1-10	<p>The percentage refers to the cattle products produced in tons (slaughtering and processing of beef, processing and tanning of bovine leather) in water stress areas over the total amount of commodities produced in tons (cattle, poultry and pork products). The percentage is in the same range as the previous year, because JBS identified the same risk units this year, which were calculated based on an internal methodology at JBS (PGSA).</p> <p>This methodology was developed due to the increased concern for water scarcity and its relevance in constraining JBS's growth. This metrics is important to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, working to mitigate the risk of shortages and increase efficiency in use.</p> <p>In the coming years, JBS will update its materiality matrix and move forward with its Global Sustainability Strategy in order to achieve its water reduction goals. In the same effort, about water management, JBS will update its water risk analysis and conduct an analysis of the climate scenario study that analyzes the impacts on water availability.</p>
Other produced commodities from W-FB1.2e, please specify Pork products	1-10	<p>The percentage refers to the pork products produced in tons (fresh and processed) in water stress areas over the total amount of commodities produced in tons (cattle, poultry and pork products). The percentage is in the same range as the previous year, because JBS identified the same risk units this year, which were calculated based on an internal methodology at JBS (PGSA).</p> <p>This methodology was developed due to the increased concern for water scarcity and its relevance</p>

		<p>in constraining JBS’s growth. This metrics is important to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, working to mitigate the risk of shortages and increase efficiency in use.</p> <p>In the coming years, JBS will update its materiality matrix and move forward with its Global Sustainability Strategy in order to achieve its water reduction goals. In the same effort, with regard to water management, JBS will update its water risk analysis and conduct an analysis of the climate scenario study that analyzes the impacts on water availability.</p>
<p>Other produced commodities from W-FB1.2e, please specify Poultry products</p>	<p>1-10</p>	<p>The percentage refers to the poultry products produced in tons (fresh and processed) in water stress areas over the total amount of commodities produced in tons (cattle, poultry and pork products). The percentage is in the same range as the previous year, because JBS identified the same risk units this year, which were calculated based on an internal methodology at JBS (PGSA). This methodology was developed due to the increased concern for water scarcity and its relevance in constraining JBS’s growth. This metris is important to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, working to mitigate the risk of shortages and increase efficiency in use.</p> <p>In the coming years, JBS will update its materiality matrix and move forward with its Global Sustainability Strategy in order to achieve its water reduction goals. In the same effort, with regard to water management, JBS will update its water risk analysis and conduct an analysis of the climate scenario study that analyzes the impacts on water availability.</p>

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
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Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	39,593.58	About the same	<p>The surface water is relevant because represents 55% of the total water withdrawal. The volume comprises surface sources (rivers, lakes) and rainwater, which are monitored daily.</p> <p>All Facilities monitor water withdrawals by source, since it enables the company to identify critical points and to assess the possibility of water source alteration. The volume is just 10% higher (not significant for JBS), compared to last year, due to higher production volume and demand from the Brazilian sanitary regulation agency to enhance the factory cleaning frequency.</p>
Brackish surface water/Seawater				JBS does not withdraw water from Brackish surface or from the sea.
Groundwater – renewable	Relevant	28,363.5	About the same	<p>The groundwater is relevant because represents 40% of the total water withdrawal. The volume comprises Groundwater, which is monitored daily.</p> <p>All Facilities monitor water withdrawals by source, since it enables the company to identify critical points and to assess the possibility of water source alteration. The volume is just 11% higher (not significant for JBS), compared to last year, due to higher production volume and demand from the Brazilian sanitary regulation agency to enhance the factory cleaning frequency.</p>
Groundwater – non-renewable				JBS does not withdraw water from non-renewable groundwater.
Produced/Entrained water				This use does not apply to JBS.
Third party sources	Relevant	2,873.94	Higher	The third-party sources are important important during periods of drought, in which JBS uses the purchase of “third party sources” to supply the water demand or in to attend a facility higher demand of water. Even though, this source represents a small portion of the total (among 4%). This amount water purchased from specialized public or

			<p>private systems, which are monitored daily.</p> <p>All Facilities monitor water withdrawals by source, since it enables the company to identify critical points and to assess the possibility of water source alteration. The volume is 29% higher compared to last year due to increased production of plants that use third-party sources of water or due the demand of government to increase the frequency of hygienization in the plants.</p>
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W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	52,676.03	About the same	The surface disposal is relevant because it represents 90% of the total wastewater discharged, and JBS ensures that this effluent returns to the environment with quality and safe form because all facilities have the control of water discharge due to flow rate measurements and also have a wastewater treatment plant at its own facilities, meeting the legal requirements for wastewater discharge. The discharged volume is calculated at the end of the wastewater treatment. In 2019, the volume was less than 10% higher compared to 2018 in proportion to the increase in production in the period.
Brackish surface water/seawater				JBS does not discharge water in Brackish surface or the sea.
Groundwater	Relevant	5,421.65	About the same	Groundwater is relevant because represents over than 9% of the total wastewater discharged. This amount refers to the water used in processing that is treated and reused as fertilizer in pastures, replacing the use of fertilizers. There were no

				significant changes in the amount of water discharged in groundwater, only an increase of 2%, common between one year and another.
Third-party destinations	Relevant	429.93	About the same	The water discharge to third parties represents less than 1% of the total of the discharged sources. All facilities have the control of water discharge due to flow rate measurements. The amount discharged reported in third-party destination comprise the Wastewater sent to the public sewer system. There were no significant changes in the amount of water discharged in the public sewer system compared to last year, only an increase of 4%, common between one year and another.

W-FB1.3

(W-FB1.3) Do you collect/calculate water intensity for each commodity reported in question W-FB1.1a?

Agricultural commodities	Water intensity information for this produced commodity is collected/calculated	Water intensity information for this sourced commodity is collected/calculated	Please explain
Other commodities from W-FB1.1a, please specify Cattle products	Yes	Not applicable	To calculate the water intensity of our products, we use the "total water withdrawn" in all our operations (calculated on internal meters) and our "production" in tons. We control these detailed data by factory, which are reviewed by environmental professionals and reported on the Credit360 system on a monthly basis, thus calculating how much water is being consumed per ton of product. Both data referring to the year 2019 (water withdrawal and production) were audited by the audit firm SGS, according to the GRI methodology. This parameter is used to monitor performance and efficiency, as well as to define short- and long-term goals.

Other commodities from W-FB1.1a, please specify Poultry products	Yes	Not applicable	To calculate the water intensity of our products, we use the "total water withdrawn" in all our operations (calculated on internal meters) and our "production" in tons. We control these detailed data by factory, which are reviewed by environmental professionals and reported on the Credit360 system on a monthly basis, thus calculating how much water is being consumed per ton of product. Both data referring to the year 2019 (water withdrawal and production) were audited by the audit firm SGS, according to the GRI methodology. This parameter is used to monitor performance and efficiency, as well as to define short- and long-term goals.
Other commodities from W-FB1.1a, please specify Pork products	Yes	Not applicable	To calculate the water intensity of our products, we use the "total water withdrawn" in all our operations (calculated on internal meters) and our "production" in tons. We control these detailed data by factory, which are reviewed by environmental professionals and reported on the Credit360 system on a monthly basis, thus calculating how much water is being consumed per ton of product. Both data referring to the year 2019 (water withdrawal and production) were audited by the audit firm SGS, according to the GRI methodology. This parameter is used to monitor performance and efficiency, as well as to define short- and long-term goals.

W-FB1.3a

(W-FB1.3a) Provide water intensity information for each of the agricultural commodities identified in W-FB1.3 that you produce.

Agricultural commodity

Other produced commodities from W-FB1.3, please specify

Cattle products

Water intensity value (m3)

10.42

Numerator: water aspect

Total water withdrawals

Denominator

Tons

Comparison with previous reporting year

Lower

Please explain

All units of the JBS monitor daily the water intensity indicators (m³/ton of final product). Although the water withdrawal absolute volume increased, there was a slight reduction (3%) regarding the intensity indicator, due to greater efficiency in water use (structural and behavioral change). Based on these indicators, it is possible to identify the performance of each unit, identifying best practices and opportunities for improvement in low performance units, and generating historical data for the definition of the next goals. In 2019, were developed numerous projects that allowed the increase of the volume of reuse water. The company is committed to the goal of reducing water intensity in 13% until 2025 for Brazil operations compared to the average base year 2014-2015

JBS constantly encourages its employees to develop and share ideas and projects that bring environmental and economic benefits. JBS Brazil invested 86% more than 2018 in efficiency water improvements.

Agricultural commodity

Other produced commodities from W-FB1.3, please specify

Poultry products

Water intensity value (m3)

12.38

Numerator: water aspect

Total water withdrawals

Denominator

Tons

Comparison with previous reporting year

Higher

Please explain

All units of the JBS monitor daily the water intensity indicators (m³/ton of final product). Regarding the indicator, there was an increase (22%) in consequence of the demand from the Brazilian sanitary regulation agency, applied for the food company sector, to enhance the cleaning frequency. Based on these indicators, it is possible to identify the performance of each unit, identifying best practices and opportunities for improvement in low performance units, and generating historical data for the definition of the next goals. The company is committed to the goal of reducing water intensity by 13% until 2025 for Brazil operations compared to the average base year 2014-2015. To achieve the goal, JBS constantly encourages its employees to develop and share ideas and projects that bring environmental and economic benefits and invests financially in improvements and eco-efficiency related to water. JBS Brazil invested 86% more than 2018 in efficiency water improvements.

Agricultural commodity

Other produced commodities from W-FB1.3, please specify

Pork products

Water intensity value (m3)

5.71

Numerator: water aspect

Total water withdrawals

Denominator

Tons

Comparison with previous reporting year

About the same

Please explain

All units of the JBS monitor daily the water intensity indicators (m³/ton of final product). Regarding the indicator, the value is about the same in relation to 2018, only 7% higher due to demand from the Brazilian sanitary regulation agency to enhance the cleaning frequency. Based on these indicators, it is possible to identify the performance of each unit, identifying best practices and opportunities for improvement in low performance units, and generating historical data for the definition of the next goals. The company is committed to the goal of reducing water intensity by 13% until 2025 in Brazil operations, compared to the average base year 2014-2015. To achieve the goal, JBS constantly encourages its employees to develop and share ideas and projects that bring environmental and economic benefits and invests financially in improvements and eco-efficiency related to water.

JBS Brazil invested 86% more than 2018 in efficiency water improvements.

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

Yes, our suppliers

W1.4a

(W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?

Row 1

% of suppliers by number

76-100

% of total procurement spend

76-100

Rationale for this coverage

In the pork and poultry supply chain 100% of integrated producers receive visits and technical assistance from the Company in which it can help its suppliers to improve water management. During the supply process, checklists are applied to identify what is the water source in the farm and the quality of the its water.

All visits are done by around 500 extension agents and veterinarians who make technical tours to guarantee that all suppliers adopt practices and structures suited to production and in compliance with necessary environmental laws, covering themes such as water management.

For cattle suppliers, JBS made progress in its Supply Chain Protocol certifying compliance with criteria that assure food safety and meet the highest standards of customers and consumers. Through this initiative, the Company brings together strict protocols on topics such as animal welfare, traceability, sustainability, operation, production, quality, industrialization and marketing.

Impact of the engagement and measures of success

Poultry and Pork: Through 500 field technicians, JBS guide the responsible production management, meeting the quality standards and in line with the principles of animal welfare.

Cattle: Concerning Supply Chain Protocol, all Brazil units operate according to the guidelines of the Protocol and undergo annual external audits, performed by the Brazilian Certification System. In 2019, all Friboi units passed and kept their seals.

For both commodities are requested information from the total volume of water withdrawal and environmental conditions of the withdrawal point. For JBS, the information is very important as it is fully integrated with JBS 'objectives, strategies and business plan, as well as our responsibility to produce sustainable, safe and quality food.

To improve its management JBS actively participates in the Sustainable Livestock Indicators Guide (GIPS), aiming to measure and improve meat production in the sustainable practices, covering themes such as efficient water use.

Comment

W1.4b

(W1.4b) Provide details of any other water-related supplier engagement activity.

Type of engagement

Incentivizing for improved water management and stewardship

Details of engagement

Water management and stewardship is integrated into supplier evaluation processes

% of suppliers by number

1-25

% of total procurement spend

1-25

Rationale for the coverage of your engagement

As suppliers are an integral and important part of the value chain, the Company has developed several initiatives to build even closer ties with them based on trust, respect, ethics and transparency. One of these projects is the partnership with the Araguaia League. In 2019, Friboi entered into a partnership with the Araguaia League, whose members include around 60 livestock producers in the state of Mato Grosso. The producers were selected for their efforts to increase productivity and sustainable intensification in beef cattle. The goal is to promote sustainable livestock development in the region, with the support of local producers, protecting and recovering natural resources like forests and as consequence the water sources.

Impact of the engagement and measures of success

The Araguaia League organizes the producers, while Friboi subsidizes the hiring of specialized consultancies in property management for the intensification of its pastures, ensuring better productivity per area and reducing the need for new areas of pastures, which contributes to the preservation of vegetation, water resources and local biodiversity. With this, livestock farmers are better able to invest, increase their productivity indicators, improve the quality of their animals and, mainly, collaborate with the sustainability of production.

The partnership with Friboi strengthens sustainable meat production in the Cerrado by responding to the demand of relevant players seeking products with strong social and environmental responsibility. The actions of the program have the horizon of three years to present results. The project aims to transform the region, one of the biggest cattle producers in the country, within a global parameter of good production practices.

Comment

It is expected that 10 new farms will participate in the program next year; and another 10 in 2022

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

Yes

W2.1a

(W2.1a) Describe the water-related detrimental impacts experienced by your organization, your response, and the total financial impact.

Country/Area & River basin

Brazil

Parana

Type of impact driver & Primary impact driver

Physical

Drought

Primary impact

Increased operating costs

Description of impact

With the drought, JBS had to buy water from third parties, and increased its production cost. Despite this, the impact was not substantial because the cost was proportionally low in relation to the cost of production, and there was no need to interrupt production.

Primary response

Secure alternative water supply

Total financial impact

161,401

Description of response

The cost is associated with the need to purchase water from third-party sources, since the sources of water abstraction were interrupted or the volumes were insufficient for operations.

Country/Area & River basin

Brazil

Tocantins

Type of impact driver & Primary impact driver

Physical

Drought

Primary impact

Increased operating costs

Description of impact

With the drought, JBS had to buy water from third parties, and increased its production cost. Despite this, the impact was not substantial because the cost was proportionally low in relation to the cost of production, and there was no need to interrupt production.

Primary response

Secure alternative water supply

Total financial impact

1,100,000

Description of response

The cost is associated with the need to purchase water from third-party sources, since the sources of water abstraction were interrupted or the volumes were insufficient for operations.

Country/Area & River basin

Brazil
Amazonas

Type of impact driver & Primary impact driver

Physical
Drought

Primary impact

Increased operating costs

Description of impact

With the drought, JBS had to change the water withdrawal point to guarantee the water demand of the facilities, but this change generated an increase in the energy cost. Despite this, the impact was not substantial because the cost was proportionally low in relation to the cost of production, and there was no need to interrupt production.

Primary response

Improve maintenance of infrastructure

Total financial impact

70,370.63

Description of response

The reported amount refers to the total expense to make a change in the water withdrawal point.

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

No

W3. Procedures

W-FB3.1

(W-FB3.1) How does your organization identify and classify potential water pollutants associated with its food, beverage, and tobacco sector activities that could have a detrimental impact on water ecosystems or human health?

The JBS business strategy is predicated on quality excellence and food safety. All JBS facilities have modern treatment stations to appropriately treat the effluent liquid produced by its production processes, complying with legal regulations. Due to the nature of JBS's operations, the company is legally obliged to monitor the quality of effluents it releases to the environment.

All wastewater from JBS operations is transported to the Company's own treatment stations or to the public treatment systems. The JBS internal requirements for efficiency performance in physical, chemical and biological parameters are higher than those required by applicable legislation - in order to ensure compliance with legal requirements and the protection of water resources. The effluents from all units undergo appropriate treatment before final discharge and their samples are examined in laboratories, and the results are submitted to regulatory bodies and reported in the Credit360 monthly.

The local government agencies constantly monitor compliance with legally required physical and chemical standards. The main parameters analyzed that could eventually cause direct or indirect impact are: COD, BOD, pH, Nitrogen, temperature, TSS, among others. To reduce the volume and guarantee the quality of the effluents produced, JBS invests in procedures to reduce the organic load in the effluents through well-dimensioned treatment systems that guarantee high efficiency. JBS also invests in flotation systems and anaerobic lagoons to help reduce emissions from effluents. In 2019, over R\$ 18.2 million was invested in modernizing and improving effluent treatment efficiency.

In the value chain, the livestock activities (manure and slurries production in pork suppliers for example) if not managed and treated appropriately can compromise water bodies. To support the management of impacts in the poultry and pork supply chain, JBS conducts technical visits to suppliers to ensure that everyone adopts practices and structures suitable for production and in compliance with the necessary environmental laws, addressing

issues such as wastewater management. To improve the management of livestock suppliers, JBS participated in the construction of the Sustainable Livestock Indicators Guide (GIPS), developed by the Brazilian Roundtable on Sustainable Livestock (GTPS).

W-FB3.1a

(W-FB3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your food, beverage, and tobacco sector activities.

Potential water pollutant

Wastewater and sludge with high organic or suspended solids content

Activity/value chain stage

Manufacturing – direct operations

Description of water pollutant and potential impacts

The activities in the industrial processes of slaughter and processing of the cattle, pork and poultry products can generate organic pollutants, and a high organic load concentration. Without the due treatment can generate alterations in the water quality, causing eutrophication, oxygen reduction and species mortality, being harmful to aquatic ecosystems. If discarded in waters used for human consumption, the consequences can result in diseases such as cholera, dysentery, among others

Management procedures

Waste water management
Follow regulation standards

Please explain

All JBS facilities have modern treatment stations to collect and appropriately treat the effluent liquid produced by its production processes, complying with legal regulations. In 2019, the Company invested over R\$ 18.2 million modernizing and improving effluent efficiency. All of the wastewater from JBS operations is transported to the Company's own treatment stations or to the public treatment systems. The Company is constantly monitoring wastewater treatment station performance and local government agencies constantly monitor compliance with legally required physical and chemical standards. The JBS internal requirements for efficiency performance in physical, chemical and

biological parameters are higher than those required by applicable legislation - in order to ensure compliance with legal requirements and the protection of water resources.

The effluents from all units undergo appropriate treatment before final discharge and their samples are examined in laboratories, and the results are submitted to regulatory bodies and reported in the Credit360 monthly.

Potential water pollutant

Manure and slurries

Activity/value chain stage

Agriculture – supply chain

Description of water pollutant and potential impacts

The activities of livestock on farms can generate organic pollutants and a high organic load concentration. Without the due treatment can generate alterations in the water quality causing eutrophication, oxygen reduction and species mortality, being harmful to aquatic ecosystems. If discarded in waters used for human consumption, the consequences can result in diseases.

Management procedures

Animal waste management
Sustainable irrigation and drainage management

Please explain

All JBS pork supplier is obligated to install in their farms a wastewater treatment system in order to treat the manure generated in that operation. In the poultry farms, it is not necessary to install any kind of treatment since the manure produced is manage in order to contribute with the quality of the farm floor and not represent pollution risk to the environmental.

For cattle suppliers, since more than 75% of the livestock acquired are breed throughout their lives in pasture, their manure is absorbed by the pasture in the nature environment. To improve cattle suppliers' management JBS participated in the construction of the Sustainable Livestock Indicators Guide (GIPS), developed by the Brazilian Roundtable on Sustainable Livestock (GTPS). This group is developing a guidance for Sustainable Livestock indicators, aiming to account the sustainability in meat production. The tool contains themes such as Business

Management, Communities, Workers, Environment and Value Chain. In Criterion 4.2 of GIPS, it is approached the efficient use of water resources, water consumption, reuse, treatment and / or proper disposal and compliance with legal requirements.

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of an enterprise risk management framework

Frequency of assessment

More than once a year

How far into the future are risks considered?

3 to 6 years

Type of tools and methods used

Tools on the market

Enterprise Risk Management

Databases

Tools and methods used

WRI Aqueduct
Regional government databases
Other, please specify
Credit 360

Comment

The PGSA identifying the critical units using internal knowledge on the impacts of water shortage and the importance of water to these units' strategy, and identifying critical river basins using databases provided by Brazilian National Water Agency (ANA) to quantify the river basin water balance. In addition, JBS also monitors the risks with the help of Aqueduct provided by WRI and Credit360 to manage its sustainability KPIs indicators, monitoring monthly water withdrawals.

Supply chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed as part of an enterprise risk management framework

Frequency of assessment

More than once a year

How far into the future are risks considered?

3 to 6 years

Type of tools and methods used

Tools on the market
Databases

Tools and methods used

WRI Aqueduct
Regional government databases

Comment

In the pork and poultry supply chain 100% of integrated producers receive visits and technical assistance from the Company. Checklists are applied to identify the water source in the farm. The supplier is not allowed to supply to JBS if the farm couldn't guarantee free water demand to the animals. For cattle suppliers, JBS made progress in its Supply Chain Protocol certifying compliance. The Protocol follow with the suppliers, by third part audit, what is the source of water in the farm.

Other stages of the value chain

Coverage

None

Comment

W3.3b

(W3.3b) Which of the following contextual issues are considered in your organization’s water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Water management is not just a critical issue for JBS and food industry sustainability: it is a basic element of the production chain and essential for animal and vegetable development and for ensuring product and process sanitary standards as well as facility, equipment and utensil cleaning. As such, sustainable water usage is a priority at all Company units as is development of projects and strategies to maximize efficient water usage and reuse and minimize the need to develop new water sources. Thus, this resource is essential to the company’s operations. The evaluation of water supply source is mandatory: all units must measure and manage regularly the volume of water withdrawal, collection site, water consumption, and conduct analysis to monitor water quality. This issue is factored with the internal company Knowledge and environmental legislation methods. JBS uses a sustainability software named “Credit360” to manage its sustainability indicators, monitoring monthly water withdrawals in all its units. In Brazil, the monitoring is aligned with the Sustainable Water Management Program (PGSA) that monitors

		water shortage risk and water use, based also on WRI Aqueduct and Regional government databases such as the Brazilian National Water Agency (ANA).
Water quality at a basin/catchment level	Relevant, always included	<p>Water quality is vital to JBS business, since it affect directly on production cost. The water used in the production process has to meet quality standards, if the water source shows quality deficiency JBS must invest to adequate its treatment, or in extreme cases, there might be a need to close the operation - if there is no other source of locally available water. JBS has 22 laboratories for the official and microbiological analysis, to provide the food safety indicators ensuring its quality.</p> <p>All industrial units have Water Treatment Stations and have strict procedures for controlling and monitoring the quality of water for human consumption, considering the standard of potability and standards for food production, in accordance with the requirements set forth in regulatory and legislation. Water quality monitoring is performed daily and hourly and water must meet microbiological and chemical standards. For Wastewater discharge JBS must meet the management standards as well as the environmental agencies' requirements. Thus, JBS has specific operational procedures and internal controls for wastewater treatment, to ensure water quality in the basin.</p> <p>In order to measure the water withdrawal quality, the company collects the sample and performs physical, chemical and biological analyzes. The verification is performed periodically, in accordance with Brazilian sanitary standards, national and international market requirements, in addition to the standards required by the company. Until 2015, JBS Brazil exclusively used the sustainability software "Credit360" to manage its sustainability indicators, by monitoring monthly the water quality.</p>
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	<p>The water use can generate conflicts with the local community, other companies located at the same river basin and the government.</p> <p>The priority of water use is for human consumption; thus, it is important to JBS to manage the conflicts with local stakeholders. In Brazil, the watershed committees arbitrate conflicts over the water use, with the presence of environmental spoken-man and other members of the local society, companies and government. This discussion is covered by JBS's Regional Government databases, following the environmental legislation. JBS's Sustainable Water Management Program (PGSA) is responsible to keep track of changes in the regulatory framework in the watershed committee in Brazil. The company also counts on its Sustainability Committee to</p>

		advises the Board of Directors in a global perspective, including identification, addressing and treatment of critical issues that result in risks or impacts on business.
Implications of water on your key commodities/raw materials	Relevant, always included	<p>The company monthly tracks the water availability and its impacts on energy production and animal feed. Besides, Poultry and pork suppliers are monitored in order to guarantee that water is constantly available for those animals. The availability and cost of cattle for slaughter vary according to rainfall distribution; therefore, it is also one of the criteria evaluated by the company.</p> <p>The monitoring process uses government databases, internal knowledge, data from “SomarMetereologia” and climate data to formulate a strategic planning of purchase</p> <p>The Company has already conducted some Water Footprint study, based on the ISO 14046:2014 methodology, to improve water management and become even more effective in sustainable water use by assessing water consumption over the life cycle of cattle and chicken production. This way, it was possible to analyze direct and indirect use of water resources, i.e., the total volume of water used to manufacture the company’s products. With this methodology, JBS can target actions and investments by evaluating the entire cycle of water use, including in the production chain, which includes the production of raw material for animal feed, for example.</p>
Water-related regulatory frameworks	Relevant, always included	In some Brazilian states where JBS units are located, it is requested payment for water usage. These regulations are tracked by the company through participation in watershed committee, which disclose information about the river Basin management, and it is considered in JBS “Regional government databases” and “environmental legislation” method. JBS’s Sustainable Water Management Program (PGSA) is responsible to keep track of changes in the regulatory framework in the watershed committee in Brazil. Following guidelines from PGSA, the company intends to expand the local participation in River Basin Committees that are relevant to the company's operations.
Status of ecosystems and habitats	Relevant, always included	The Company has projects that consider the protection and preservation of the environment, knowing that forestry preservation is one of the aspects that ensure water supply availability/ quality. JBS supported projects which promotes sustainable practices; spring preservation to increase the productivity of farms in the Amazon region; to develop a new operating model that preserves natural resources and to bring financial benefits to the ranchers in the region. JBS also has a system for social and environmental monitoring of cattle suppliers, which is composed of two analysis processes that work in an integrated

		<p>way. The first one works on a daily download of public agencies IBAMA and MTE dirty lists and a crosschecking of supplier's taxpayer numbers database against them (Regional government databases). The second process is run by a system that analyses cattle farms in the Brazilian Legal Amazon based on geographical information. It performs by daily geographic monitoring through the digital overlay of georeferenced maps of cattle supplier properties and deforestation maps published by National Space Research Institute (INPE) combined with official data from National Indigenous Foundation (FUNAI) and National Conservation Units System (SNUC). The suppliers, which do not comply with one or both processes, are automatically blocked in the Enterprise Resource Planning System (ERP) and no purchasing operations are made. Besides, independent audits annually performed and the results of the last three audits hit a compliance level greater than 99.9%.</p>
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Water quality is primordial to maintain JBS's production, due to the sanitation rules of the sector. The monitoring of water quality is presented in the operational process, and the consumption of water by its employees follows the standard for human consumption. The process is covered by the Internal company knowledge method and follows the current legislation requirements (Environmental legislation).
Other contextual issues, please specify		

W3.3c

(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Relevant, always included	Product quality depends directly on the quality of water used. Water scarcity affects directly the price of energy, animal feed (soy and corn) and could affect the quantity of products. All of the aforementioned aspects affect the price of JBS's final products and consequently its customers. JBS has incorporated the water risks associated with its customers in the development of new solutions for managing its water footprints and water risks analyses in their facilities, through the PGSA Program. The company has already conducted Water Footprint studies to some products through the ISO 14046:2014 methodology, aiming at analyzing the direct and indirect use of

		<p>water resources, that is, the total volume of fresh water used to manufacture its products. Annually, JBS engage with customers by providing information through CDP Supply Chain, detailing the company water management and its commitments.</p>
Employees	Relevant, always included	<p>Water Management and water reduction are directly associated with employees' action in such manner that they are awarded through bonuses due to fulfillment of targets. The bonus for Environment professionals is linked to the water use target, which is shared with other areas as well, like the Industrial Manager. This method helps engaging the company's employees in taking action to improve the water use.</p> <p>We work closely with our employees, raising awareness on water consumption. There are also ongoing communication campaigns that address the sustainable use of water for awareness, these training's are applied to all employees of the JBS units.</p> <p>The JBS water risk assessment analyses made by JBS as part of the PGSA mapped the units in water stress areas, where efforts to improve water management should be focused, such as improvement of water efficiency and investment in water reuse in procedures and operations. The PGSA also helps the company to understand the most vulnerable watersheds, not only for its operations, but also for its employees.</p> <p>About the risks, the water use by employees (hygiene and food) can pose a health risk as the development of diseases if the water quality is outside the standards. In addition, drought events also affect employees, as they often live near the units, using the same hydrographic basin.</p>
Investors	Relevant, always included	<p>Investors are one of the key stakeholders in the water risk assessments that JBS is exposed to. During the elaboration of JBS's Materiality Matrix there was a compilation of the internal and external views of material aspects for its businesses. This work showed that Water is one of the five aspects that is priority to the company. Water availability is related to financial risk, since it has the power to reduce production, shutdown units and consequently influence JBS's profit. Aiming to engage with investors and to meet their demands, the company answers several specific questionnaires, publishes CDP Water responses and disclosures annually specific data on "Annual and Sustainability report", and its JBS website, showing transparency in water management.</p>
Local communities	Relevant, always included	<p>Superficial water consumption and water discharge directly influence the local community, which can be located downstream or upstream. There is also the discussion for water competition. During scarcity periods, since the water is destined preferentially to human consumption, it is possible to have discussions that can affect the permission to withdraw water and the environmental agency can reduce JBS's permit or even cancel it. To</p>

		manage the water demand in order to guarantee water availability for JBS and communities, JBS is part of the local Watershed Committee Throughout the year, mainly during the Environmental Day and Water Day, the company performed environmental education actions with their employees (who often take the information to their families) as well as students from nearby public schools and with the local communities.
NGOs	Relevant, always included	<p>NGO was part in the group of stakeholders to elaborate the JBS’s Materiality Matrix, which was made by a compilation of the internal and external views of material aspects for its businesses. This work showed that Water is one of the five aspects that is priority are material to the company.</p> <p>JBS also answered several specific NGOs questionnaires, besides giving transparency to publish their CDP Water questionnaire responses as well as the JBS’s water management in its Annual and Sustainability Report and the JBS website. These questionnaires are used to evaluated demands and issues and are considered on the risk assessment. Public Authority representatives and civil society organizations compose Brazilian watershed committees. Water users and NGOs participate in these meetings and can influence the decisions that are taken in there. The committees’ discussion has to be taken into account in the water management planning. JBS also engages with NGOs by participating in basin committees, in the Working Group on Sustainable Livestock (GTPS) and in institutions such as the Roundtable for Sustainable Beef (GRSB) and their concerns are internally discussed and integrated into internal management when it is applicable.</p>
Other water users at a basin/catchment level	Relevant, always included	Public Authority representatives, civil society organizations and water users compose Brazilian watershed committees. JBS supports environmental education initiatives on the local river basin.
Regulators	Relevant, always included	JBS provides information of their management to the regulatory agencies periodically, and regulatory change can expose the company to regulatory risks. In Brazil, JBS implemented the Sustainable Water Management Program (PGSA) to promote the sustainable management of natural resources, this program intends to promote JBS’s units’ participation in watershed committees, so the company can study and develop local action in accordance with the river basin needs and regulatory changes.
River basin management authorities	Relevant, always included	The watershed committee is an important tool and authority in Brazilian river basin management and it is covered in JBS’s water assessment. The company implemented the Sustainable Water Management Program (PGSA) in Brazil to promote the sustainable management of natural resources. This program intends to promote JBS’s

		units' participation in watershed committees, so the company can study and develop local actions in accordance with the river basin needs and the unit needs.
Statutory special interest groups at a local level	Relevant, always included	<p>JBS supports initiatives on the local river basin in environmental education. It underpins environmental education development actions along with Prefectures / Education and Environmental Secretaries. In partnership with Getulio Vargas Foundation's initiative "Applied Life Cycle Assessment", JBS participated in a project for development of Life cycle assessment (water and carbon footprint) of two products: cattle rump cap (Picanha) and a whole chicken. This project was based on ISO 14046:2014 and will continue Water Footprint assessment – Water availability.</p> <p>JBS also is part of forums for assessment and discussion of water risk management at local, regional and national level, such as Working Group on Sustainable Livestock - GTPS and the Roundtable for Sustainable Beef - GRSB.</p>
Suppliers	Relevant, always included	<p>JBS's suppliers depend on water availability and drought periods are a risk for them. and drought periods are a risk for them. Poultry and Pork suppliers need to guarantee the animal welfare, and the water supply is one of the aspects evaluated by JBS in its periodical visits. Those aspects are taken into consideration in the water assessment. Integrated poultry and pork producers are considered key suppliers for Seara. Since JBS performs technical visits at Poultry and Pork suppliers, it is possible to interact and improve the management of water. Besides, Seara has been supporting the installation of cistern for collecting and storing rainwater and installed electric generators for its integrated partners, to ensure a regular supply of both water in the water risks regions. For cattle suppliers, JBS has implemented the Supply Chain Protocol certifying compliance with criteria that assure food safety and meet the highest standards of customers and consumers. The Protocol follow with the suppliers, by third part audit, what is the source of water in the farm.</p> <p>Furthermore, the company supported projects which promotes sustainable practices and preservation to increase the productivity of farms in the Amazon region, in order to develop a new operating model that preserves natural resources and brings financial benefits to the ranchers in the region.</p>
Water utilities at a local level	Relevant, always included	<p>The company interacts with other users (communities, companies and government) through representation in River Basin Committees and / or Technical Chambers.</p> <p>The Committees are composed by users, civil society, municipalities and government bodies. It is the most important instance of participation and integration of planning and actions in the area of water resources. The</p>

		<p>Committees are responsible for: promoting the debate on issues related to water resources; arbitrate conflicts related to water resources; to propose criteria and mechanisms to be used in charging for the use of water resources, and to suggest the amounts to be collected; monitor the implementation of the river basin water resources plan and suggest the steps necessary to achieve its goals; among others. In addition, JBS has third part water suppliers who are responsible for about 4% of the water used within the company. Water suppliers are an alternative water source in some regions and minimize the units' exposition to water risks in scarcity periods. It is essential to consider the possible suppliers in water risk assessment and in the contingency plan, to ensure water supply and production.</p>
<p>Other stakeholder, please specify</p>		

W3.3d

(W3.3d) Describe your organization’s process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

In order to be prepared to water risks as water scarcity and its consequences, JBS established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by corporate environmental managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical facilities by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk. The data used for the analysis are updated annually by the Credit 360 tool, which generates KPIs. JBS also uses other tools to manage water risks in direct operations such as WRI’s Aqueduct tool and qualitative and quantitative maps of water availability prepared by the Brazilian National Water Agency (ANA).

Based on the KPIs analyses and the Committee outputs the leadership can define the strategy to the business related to water management. The company has already conducted Water Footprint studies to some products through the ISO 14046:2014 methodology, aiming at analyzing the direct and indirect use of water resources, that is, the total volume of fresh water used to manufacture its products. The outputs from these project guided JBS into some actions plans, focused on JBS operations and its supply chain.

The president of the Water Committee is the JBS Director of Sustainability that is also member of the Sustainability Committee. He is in responsible to report the main sustainability concerns and strategy to the Sustainability Committee. Water-related risks and opportunities are fully integrated to these Committees.

The Sustainability Committee advises the Board of Directors in relation to sustainability risks and opportunities. 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. There are four members on the Committee which reports directly to the Board of Directors. The Board's Chairman also joined the Sustainability Committee in 2019.

The supply chain evaluation varies according to the supplier. Poultry and Pork suppliers receive technical visits, in order to interact and improve the management of water need to guarantee the animal welfare. Because of that, the water supply is one of the aspects evaluated by JBS in its periodical visits. Those aspects are taken into consideration in the water assessment. For cattle suppliers, JBS has implemented the Supply Chain Protocol certifying compliance with criteria that assure food safety and meet the highest standards of customers and consumers. The Protocol follow with the suppliers, by third part audit, what is the source of water in the farm.

JBS also addressed long term reduction goals. The Brazil operation set to reduce water-use intensity by 13% until 2025 based on 2014 and 2015 average baseline.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, both in direct operations and the rest of our value chain

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

The company recognizes its risk exposures due to water dependence on direct operations and on its value chain. The most important aspects that could cause a financial risk for JBS and its supply chain is the water availability and regulatory framework changes. Therefore, in order to manage the

financial and operation risks related to water use, JBS develops water risk assessments based on different scenarios and available tools, such as risk maps released by the Brazilian National Water Agency (ANA), Aqueduct (WRI) tool and the LCA - Life Cycle Analyses methodology, as well as the methodology set by the PGSA Program – this one is the most important evaluation tool for JBS which was developed customized to JBS scenario. The Sustainable Water Management Program (PGSA) implemented in Brazil evaluates each unit using two “Water Criticality Matrix”. The first matrix is based in the units’ internal information relating to the impacts of water shortage and the importance of water to these units’ strategy. The second matrix aims to identify critical river basins using a regional government database provided by Brazilian National Water Agency to quantify the river basin water balance. The combined matrices generate a water risk scoring for all units: the water criticality indicator.

The water criticality indicator is composed of two risk categories: occurrence risk (80%) and consequence severity (20%). The company has set a minimum score for the units to be considered exposed to water risk.

Once the risks are identified, the process follows a methodology issued by the Sustainability Committee seeking to assess and prioritize the risks and opportunities within the Company. The main steps are described below:

- (a) Description of risks and opportunities identified, the mapping process is performed by the Technical Team.
- (b) Analysis of mapped risks and opportunities and their prioritization. This step is based on business impact and likelihood of occurrence.
 - i) Each risk or opportunity is classified as consequence of its impact on business and its likelihood of occurrence. It is developed under three different scenarios: short, medium and long term.
 - ii) The Sustainability Committee focuses in the Action Plan on the short-term scenario with risks / opportunities classified as high impact to business and high probability of occurrence; or medium and high likelihood of occurrence; or high and medium probability impact. In these scenarios of medium and long term, only the risks/ opportunities classified with high business impact and high probability of occurrence are object of attention of the Sustainability Committee.
- (c) The risks have been studied to be transformed into opportunities.

Due to the water-risk management process adopted by the Company, JBS could show a progress related to financial impacts stewardship concerning water scarcity. Comparing the financial impacts caused by water issues, from 2019 to 2018 JBS had a decrease of 64% in the quantity of investments to mitigate the impacts generated. The units that faced negative impacts in 2019 represents 6% of JBS Brasil production and none of them interrupt their activities due to water stress problems.

In 2019, the Company invested more than R\$ 39 million on management and measurement initiatives to reduce water usage and reuse water worldwide and over R\$ 129 million modernizing and improving efficiency of wastewater treatment.

The water issues for the supply chain can also generate substantial financial impact. One of the main risks relates to the animal’s lives. In order to mitigate risks to the poultry and pork suppliers, producers receive technical visits and the water supply is one of the aspects evaluated by JBS in its periodical visits. Those aspects are considered in the supplier homologation process. For cattle suppliers, JBS has implemented the Supply Chain

Protocol certifying compliance with criteria that assure food safety and meet the highest standards of customers and consumers. The Protocol also checks, by third part audit, the source of water available in the supplier’s farms.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	28	1-25	In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS’s growth, it established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

Country/Area & River basin

- Brazil
- Amazonas

Number of facilities exposed to water risk

6

% company-wide facilities this represents

1-25

% company's total global revenue that could be affected

1-10

Comment

In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, was established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk.

Country/Area & River basin

Brazil

Other, please specify

East Atantic

Number of facilities exposed to water risk

2

% company-wide facilities this represents

Less than 1%

% company's total global revenue that could be affected

1-10



Comment

In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, was established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk.

Country/Area & River basin

Brazil

Other, please specify

Eastern Northeast Atlantic

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

% company's total global revenue that could be affected

Less than 1%

Comment

In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, was established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk.

Country/Area & River basin

Brazil

Other, please specify

Southeast Atlantic

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

% company's total global revenue that could be affected

Less than 1%

Comment

In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, was established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk.

Country/Area & River basin

Brazil

Other, please specify

South Atlantic

Number of facilities exposed to water risk

4

% company-wide facilities this represents

1-25

% company's total global revenue that could be affected

1-10

Comment

In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, was established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk.

Country/Area & River basin

Brazil

Parana

Number of facilities exposed to water risk

12

% company-wide facilities this represents

1-25

% company's total global revenue that could be affected

1-10

Comment

In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, was established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk.

Country/Area & River basin

Brazil

Tocantins

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

% company's total global revenue that could be affected

Less than 1%

Comment

In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, was established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk.

Country/Area & River basin

Brazil
Uruguay

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

% company's total global revenue that could be affected

1-10

Comment

In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS's growth, was established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

Brazil
Parana

Type of risk & Primary risk driver

Regulatory
Higher water prices

Primary potential impact

Increased production costs

Company-specific description

Demand from the Brazilian sanitary regulation agency to enhance the factory cleaning frequency.

Timeframe

1-3 years

Magnitude of potential impact

High

Likelihood

Likely

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

The practices that aim an efficiency in the water use will mean that the obligation to use more water for cleaning does not impact the business as much.

Cost of response

0

Explanation of cost of response

The action does not have significant costs.

Country/Area & River basin

Brazil

Uruguay

Type of risk & Primary risk driver

Physical

Flooding

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Interruption of activities due to the flooding , preventing the transport of raw material, inputs (packaging, biomass boiler and others), and distribution of finished products. Furthermore, it were identified the following impacts: plant/production disruption leading to reduced output, supply chain disruption, transport disruption.

Timeframe

1-3 years

Magnitude of potential impact

Medium-low

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Primary response to risk

Develop flood emergency plans

Description of response

Track rainfall data to identify anticipating contingency actions for flooding

Cost of response

0

Explanation of cost of response

The action does not have significant costs.

Country/Area & River basin

Brazil

Other, please specify

Paraguay

Type of risk & Primary risk driver

Physical

Flooding

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Interruption of activities due to the flooding , preventing the transport of raw material, inputs (packaging, biomass boiler and others), and distribution of finished products. Furthermore, it were identified the following impacts: plant/production disruption leading to reduced output, supply chain disruption, transport disruption.

Timeframe

1-3 years

Magnitude of potential impact

Medium-low

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Primary response to risk

Develop flood emergency plans

Description of response

Track rainfall data to identify anticipating contingency actions for flooding

Cost of response

0

Explanation of cost of response

The action does not have significant costs.

Country/Area & River basin

Brazil

Parana

Type of risk & Primary risk driver

Physical

Increased water scarcity

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Currently, the region is facing issues associated with water availability. A higher water scarcity could result in a production disruption or increase on the capital cost.

Timeframe

Current up to one year

Magnitude of potential impact

Medium-low

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

Monitor weather forecasts and prevent droughts through water-saving actions and efficient reuse.

Cost of response

120,000

Explanation of cost of response

The costs are related to the purchase of new equipment more efficient in water use, as well as the development of new projects to reduce water consumption and / or increase the volume of reuse water. There are sites that are developed studies for the construction of ponds for water storage, as a measure of contingency in periods of extreme scarcity.

Country/Area & River basin

Brazil
Amazonas

Type of risk & Primary risk driver

Physical
Increased water scarcity

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Currently, the region is facing issues associated with water availability. A higher water scarcity could result in a production disruption or increase on the capital cost.

Timeframe

Current up to one year

Magnitude of potential impact

Medium-low

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

Monitor weather forecasts and prevent droughts through water-saving actions and efficient reuse

Cost of response

120,000

Explanation of cost of response

The costs are related to the purchase of new equipment more efficient in water use, as well as the development of new projects to reduce water consumption and / or increase the volume of reuse water. There are sites that are developed studies for the construction of ponds for water storage, as a measure of contingency in periods of extreme scarcity.

Country/Area & River basin

Brazil

Other, please specify

Western Northeast Atlantic

Type of risk & Primary risk driver

Physical

Increased water scarcity

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Currently, the region is facing issues associated with water availability. A higher water scarcity could result in a production disruption or increase on the capital cost.

Timeframe

Current up to one year

Magnitude of potential impact

Medium-low

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

Monitor weather forecasts and prevent droughts through water-saving actions and efficient reuse.

Cost of response

120,000

Explanation of cost of response

The costs are related to the purchase of new equipment more efficient in water use, as well as the development of new projects to reduce water consumption and / or increase the volume of reuse water. There are sites that are developed studies for the construction of ponds for water storage, as a measure of contingency in periods of extreme scarcity.

Country/Area & River basin

Brazil

Other, please specify

Tocantins-Araguaia

Type of risk & Primary risk driver

Physical

Increased water scarcity

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Currently, the region is facing issues associated with water availability. A higher water scarcity could result in a production disruption or increase on the capital cost.

Timeframe

Current up to one year

Magnitude of potential impact

Medium-low

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

Monitor weather forecasts and prevent droughts through water-saving actions and efficient reuse.

Cost of response

120,000

Explanation of cost of response

The costs are related to the purchase of new equipment more efficient in water use, as well as the development of new projects to reduce water consumption and / or increase the volume of reuse water. There are sites that are developed studies for the construction of ponds for water storage, as a measure of contingency in periods of extreme scarcity.

Country/Area & River basin

Brazil

Other, please specify

Paraguay

Type of risk & Primary risk driver

Physical

Increased water scarcity

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Currently, the region is facing issues associated with water availability. A higher water scarcity could result in a production disruption or increase on the capital cost.

Timeframe

Current up to one year

Magnitude of potential impact

Medium-high

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Adopt water efficiency, water re-use, recycling and conservation practices.

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

Monitor weather forecasts and prevent droughts through water-saving actions and efficient reuse.

Cost of response

120,000

Explanation of cost of response

The costs are related to the purchase of new equipment more efficient in water use, as well as the development of new projects to reduce water consumption and / or increase the volume of reuse water. There are sites that are developed studies for the construction of ponds for water storage, as a measure of contingency in periods of extreme scarcity.

Country/Area & River basin

Brazil

Other, please specify

South Atlantic

Type of risk & Primary risk driver

Physical

Increased water scarcity

Primary potential impact

Increased operating costs

Company-specific description

Necessity to look for another water supply and discharge sources that leads to an initial investment by the company.

Timeframe

Current up to one year

Magnitude of potential impact

Low

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

100,000

Potential financial impact figure - maximum (currency)

150,000

Explanation of financial impact

Costs related to temporary purchase third-party water.

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

Monitor weather forecasts and prevent droughts through water-saving actions and efficient reuse.

Cost of response

100,000

Explanation of cost of response

The costs are related to the purchase of new equipment more efficient in water use, as well as the development of new projects to reduce water consumption and / or increase the volume of reuse water.

W4.2a

(W4.2a) Provide details of risks identified within your value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

Brazil
Parana

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Physical
Increased water scarcity

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Potential Risks to agriculture in certain regions due to changes in water availability. This can affect the supply of raw material for the company, such as cattle, poultry, pork and animal feed.

Timeframe

1-3 years

Magnitude of potential impact

Medium-high

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

17,500,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The value refers to the amount of revenue obtained by the units located in this river basin that may be associated with the reported impacts.

Primary response to risk

Direct operations

Improve alignment of our public policy influencing activity with our water stewardship commitments

Description of response

Improvement of existing actions in the company's risk management, with the development modeling that allow to evaluate the impacts and recommend necessary measures.

Cost of response

0

Explanation of cost of response

The action does not have significant costs.

Country/Area & River basin

Brazil

Amazonas

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Physical

Increased water scarcity

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Potential Risks to agriculture in certain regions due to changes in water availability. This can affect the supply of raw material for the company, such as cattle, poultry, pork and animal feed.

Timeframe

1-3 years

Magnitude of potential impact

Medium-high

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

12,500,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The value refers to the amount of revenue obtained by the units located in this river basin that may be associated with the reported impacts.

Primary response to risk

Direct operations

Improve alignment of our public policy influencing activity with our water stewardship commitments

Description of response

Improvement of existing actions in the company's risk management, with the development modeling that allow to evaluate the impacts and recommend necessary measures.

Cost of response

0

Explanation of cost of response

The action does not have significant costs.

Country/Area & River basin

Brazil

Other, please specify

Paraguay

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Physical

Flooding

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Extreme rains can affect agricultural production, with flooding and loss of production areas. Floods can also affect the logistic distribution of products to customers.

Timeframe

1-3 years

Magnitude of potential impact

Medium-high

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

3,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The value refers to the amount of revenue obtained by the units located in this river basin that may be associated with the reported impacts.

Primary response to risk

Direct operations

Improve alignment of our public policy influencing activity with our water stewardship commitments

Description of response

Improvement of existing actions in the company's risk management, with the development modelling that allow to evaluate the impacts and recommend necessary measures.

Cost of response

0

Explanation of cost of response

The action does not have significant costs.

Country/Area & River basin

Brazil

Other, please specify

South Atlantic

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Physical

Increased water scarcity

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Potential Risks to agriculture in certain regions due to changes in water availability. This can affect the supply of raw material for the company, such as cattle, poultry, pork and animal feed.

Timeframe

1-3 years

Magnitude of potential impact

Medium-high

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

750,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The value refers to the amount of revenue obtained by the units located in this river basin that may be associated with the reported impacts.

Primary response to risk

Direct operations

Improve alignment of our public policy influencing activity with our water stewardship commitments

Description of response

Improvement of existing actions in the company's risk management, with the development modelling that allow to evaluate the impacts and recommend necessary measures.

Cost of response

0

Explanation of cost of response

The action does not have significant costs.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Efficiency

Primary water-related opportunity

Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

The reduction in the use of natural resources such as water promotes reductions in cost, since it reduces the amount spent for water and wastewater treatment. JBS's strategy for cost savings encompasses several actions in reducing the amount of water used in industrial processes, decreasing costs with water consumption and effluent treatment. A diagnosis of all operations is carried out through a corporate action plan, which identifies areas of higher water consumption and opportunities for improvements in production process. All units are

encouraged to identify opportunities and to develop projects to improve water use efficiency and reduce water consumption.

Besides that, JBS's units have established water consumption Targets. The Targets are based on the performance and production volume and each unit is encouraged to develop programs and projects for the sustainable water use in their industrial processes.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,500,000

Potential financial impact figure – maximum (currency)

2,500,000

Explanation of financial impact

JBS encourages its collaborators to develop projects to make the water use more efficient in different processes which allows the expansion of the projects in the other units of the group, maximizing the results obtained.

The target monitoring, besides its establishment, does not generate significant cost.

Type of opportunity

Resilience

Primary water-related opportunity

Other, please specify

Increased shareholder value

Company-specific description & strategy to realize opportunity

To increase shareholder value, JBS works on ensuring the sustainability on its business through a water- risk assessment and the disclosure of its actions. In order to increase efficiency and avoid shortages, JBS established in Brazil the Sustainable Water Management Program (PGSA) that aims to identify critical areas and prioritize facilities and river basins to mitigate the risk of shortfalls and increase usage efficiency, in addition to measuring water-related financial impacts and providing strategic tools and methodologies. JBS's actions on water management are disclosed on its sustainability report. This report provides the investor vital information on water management, disclosing JBS's actions to ensure production in times of water shortage. JBS's transparency on CDP Water report and its good performance in relation to other companies in Latin America, brings security to its investors.mitigate the risk of shortfalls and increase usage efficiency, in addition to measuring water-related financial impacts and providing strategic tools and methodologies.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

50,000

Potential financial impact figure – maximum (currency)

100,000

Explanation of financial impact

The cost is related to the corporate management of the project and its updating.

Type of opportunity

Resilience

Primary water-related opportunity

Increased supply chain resilience

Company-specific description & strategy to realize opportunity

Supply chain resilience is important to ensure JBS's operations and growth. The strategy used by JBS to ensure the sustainability of its suppliers encompasses a set of actions on preparing suppliers to scarcity periods, promoting forest preservation and sustainable actions. Seara is supporting the installation of tanks for collecting in and storing rainwater and installed electric generators for its integrated partners to ensure a regular supply of both water and power. A tank has the capacity to supply a farm with up to 45,000 chickens for approximately 3 months. However, these amounts vary in accordance with the number of animals on the farm and the capacity of the tank, which can vary from 500 to 1,000 cubic meters. This initiative demonstrates the innovative approach of JBS's commitment and its integrated producers to identify solutions to ensure water availability. To ensure supply chain resilience, the company supports projects like the Liga do Araguaia, which promotes sustainable practices and spring preservation, to increase the productivity of cattle ranching farms in the Cerrado Biome in order to develop a new operating model that preserves natural resources and brings financial benefits to the ranchers in the region.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

The related costs have not yet been calculated.

Type of opportunity

Markets

Primary water-related opportunity

Increased shareholder value

Company-specific description & strategy to realize opportunity

To increase brand value, JBS acts on the access to new markets/ new trends of more sustainable products (with lower environmental impacts). Specific communication of projects aiming the improvement of water use efficiency in JBS, generating recognition due to the results achieved. JBS has projects to establish partnerships with clients, to make its products a leading reference in sustainability, aiming to reduce environmental impacts and promote improvement. Water consumption is one of the environmental indicators evaluated by JBS, and cases with good practices are cascaded in other units. One example is the Kind Leather, a a revolutionary type of leather, developed by JBS Couros. With a patent filed by the Company, Kind Leather uses a production process that reduces water consumption by 46%, energy consumption by 20%, and CO2 emissions during transport by 65%.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

The related costs have not yet been calculated.

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Facility 1

Country/Area & River basin

Brazil
Other, please specify
East Atlantic

Latitude

-15.25389

Longitude

-40.25019

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

275.68

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

275.68

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

239.07

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

239.07

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

36.31

Comparison of total consumption with previous reporting year

About the same

Please explain

No significant variations were recorded

Facility reference number

Facility 2

Facility name (optional)

Facility 2

Country/Area & River basin

Brazil

Parana

Latitude

-16.67902

Longitude

-49.25639

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

636.84

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

636.84

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

588.46

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

588.46

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

48.38

Comparison of total consumption with previous reporting year

Much lower

Please explain

The decrease in consumption is justified by the projects to reduce water consumption implemented.

Facility reference number

Facility 3

Facility name (optional)

Facility 3

Country/Area & River basin

Brazil

Amazonas

Latitude

-6.75212

Longitude

-51.14101

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

294.16

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

296.16

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

234.98

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

234.98

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

59.19

Comparison of total consumption with previous reporting year

Much higher

Please explain

Absolute increase in water consumption due to increased production, but water consumption per ton of product has decreased.

Facility reference number

Facility 4

Facility name (optional)

Facility 4

Country/Area & River basin

Brazil

Amazonas

Latitude

-9.87622

Longitude

-56.08617

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

700.18

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

700.18

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

293.06

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

172.68

Discharges to brackish surface water/seawater

0

Discharges to groundwater

120.38

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

407.13

Comparison of total consumption with previous reporting year

Higher

Please explain

Increased production volume and consequently water consumption.

Facility reference number

Facility 5

Facility name (optional)

Facility 5

Country/Area & River basin

Brazil

Amazonas

Latitude

-10.80594

Longitude

-55.44643

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

402.69

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

402.69

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

367.03

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

175.08

Discharges to brackish surface water/seawater

0

Discharges to groundwater

191.95

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

35.66

Comparison of total consumption with previous reporting year

Much lower

Please explain

The decrease in consumption is justified by the projects to reduce water consumption implemented.

Facility reference number

Facility 6

Facility name (optional)

Facility 6

Country/Area & River basin

Brazil

Tocantins

Latitude

-10.65788

Longitude

-51.57927

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

747.61

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

747.61

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

685.3

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

255.16

Discharges to brackish surface water/seawater

0

Discharges to groundwater

430.15

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

62.31

Comparison of total consumption with previous reporting year

Lower

Please explain

The decrease in consumption is justified by the projects to reduce water consumption implemented.

Facility reference number

Facility 7

Facility name (optional)

Facility 7

Country/Area & River basin

Brazil

Amazonas

Latitude

-9.87357

Longitude

-67.80749

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

323.95

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

323.95

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

291.75

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

291.75

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

32.2

Comparison of total consumption with previous reporting year

About the same

Please explain

No significant variations were recorded

Facility reference number

Facility 8

Facility name (optional)

Facility 8

Country/Area & River basin

Brazil

Amazonas

Latitude

-11.70171

Longitude

-62.7188

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

676.43

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

676.43

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

898.26

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

898.26

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

-221.83

Comparison of total consumption with previous reporting year

About the same

Please explain

The total of water discharged is greater than the total withdrawal due to water that rains in the lagoons of the effluent treatment station. We do not use this water in the process, but it fills the ponds of the wastewater treatment plant and makes the effluent volume greater than the water withdrawal .

Facility reference number

Facility 9

Facility name (optional)

Facility 9

Country/Area & River basin

Brazil

Other, please specify

Eastern Northeast Atlantic

Latitude

-24.96317

Longitude

-53.45366

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

120.7

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

117.83

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

2.876

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

137.52

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

137.52

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

-16.82

Comparison of total consumption with previous reporting year

Much lower

Please explain

The total of water discharged is greater than the total withdrawal due to water that rains in the lagoons of the effluent treatment station. We do not use this water in the process, but it fills the ponds of the wastewater treatment plant and makes the effluent volume greater than the water withdrawal .

Facility reference number

Facility 10

Facility name (optional)

Facility 10

Country/Area & River basin

Brazil

Parana

Latitude

-18.4028

Longitude

-49.20779

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

651.68

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

575.916

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

75.763

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

505.3

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

505.3

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

146.38

Comparison of total consumption with previous reporting year

Much higher

Please explain

Increased production volume and consequently water consumption.

Facility reference number

Facility 11

Facility name (optional)

Facility 11

Country/Area & River basin

Brazil

Parana

Latitude

-18.9188

Longitude

-48.27835

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

240.63

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

170.277

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

70.4

Total water discharges at this facility (megaliters/year)

185.68

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

185.68

Total water consumption at this facility (megaliters/year)

54.95

Comparison of total consumption with previous reporting year

Much higher

Please explain

Increased production volume and consequently water consumption.

Facility reference number

Facility 12

Facility name (optional)

Facility 12

Country/Area & River basin

Brazil

Amazonas

Latitude

-10.80594

Longitude

-55.44643

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

261.5

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

261.5

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

234.71

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

42.33

Discharges to brackish surface water/seawater

0

Discharges to groundwater

192.39

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

26.79

Comparison of total consumption with previous reporting year

Much higher

Please explain

The production did not change significantly, but there was a smaller volume of water discharged, increasing the consumption value.

Facility reference number

Facility 13

Facility name (optional)

Facility 13

Country/Area & River basin

Brazil

Other, please specify

East Atlantic

Latitude

-22.78337

Longitude

-43.02426

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

1,069.07

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1,069.07

Total water discharges at this facility (megaliters/year)

760.73

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

760.73

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

308.34

Comparison of total consumption with previous reporting year

Much higher

Please explain

There was an increase in water consumption and also an increase in reuse.

Facility reference number

Facility 14

Facility name (optional)

Facility 14

Country/Area & River basin

Brazil

Parana

Latitude

-15.77795

Longitude

-47.92865

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

1,665.08

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

1,166

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

499.53

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

1,660.08

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

1,660.08

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

5

Comparison of total consumption with previous reporting year

Much lower

Please explain

There was an increase in water consumption and effluent disposal .

Facility reference number

Facility 15

Facility name (optional)

Facility 15

Country/Area & River basin

Brazil

Parana

Latitude

-15.77795

Longitude

-47.92865

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

29.35

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

29.35

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

16.65

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

16.65

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

12.69

Comparison of total consumption with previous reporting year

Much higher

Please explain

There was an increase in water consumption .

Facility reference number

Facility 16

Facility name (optional)

Facility 16

Country/Area & River basin

Brazil

Parana

Latitude

-15.77795

Longitude

-47.92865

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

45.66

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

45.66

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

10.07

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

10.07

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

35.59

Comparison of total consumption with previous reporting year

Lower

Please explain

The decrease in consumption is justified by the projects to reduce water consumption implemented.

Facility reference number

Facility 17

Facility name (optional)

Facility 17

Country/Area & River basin

Brazil
Parana

Latitude

-22.22872

Longitude

-54.81098

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

2,067

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

588.84

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

1,478.15

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

1,131.18

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

1,131.18

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

935.82

Comparison of total consumption with previous reporting year

Much higher

Please explain

Increased production volume and consequently water consumption.

Facility reference number

Facility 18

Facility name (optional)

Facility 18

Country/Area & River basin

Brazil

Parana

Latitude

-22.22872

Longitude

-54.81098

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

14.4

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

4.14

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

10.26

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

14.4

Comparison of total consumption with previous reporting year

About the same

Please explain

The feed factory (facility 18) is in the same location as the slaughter (facility 17), and for this reason the effluent is counted together with the slaughter effluent, we do not segregate it for the feed factory. The facility 18 is a very small operation, which practically does not generate effluent.

Facility reference number

Facility 19

Facility name (optional)

Facility 19

Country/Area & River basin

Brazil

Parana

Latitude

-22.22872

Longitude

-54.81098

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

3.7

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

3.7

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

3.7

Comparison of total consumption with previous reporting year

Lower

Please explain

The decrease in consumption is justified by the projects to reduce water consumption implemented.

There is no effluent in a poultry farm, so the total discharge is 0.

Facility reference number

Facility 20

Facility name (optional)

Facility 20

Country/Area & River basin

Brazil

Parana

Latitude

-22.22872

Longitude

-54.81098

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

10.8

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

10.8

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

9.46

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

9.46

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

1.34

Comparison of total consumption with previous reporting year

Lower

Please explain

The decrease in consumption is justified by the projects to reduce water consumption implemented.

Facility reference number

Facility 21

Facility name (optional)

Facility 21

Country/Area & River basin

Brazil

Other, please specify

Southeast Atlantic

Latitude

-22.78699

Longitude

-43.31293

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

380.38

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

380.38

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

146

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

146

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

234.38

Comparison of total consumption with previous reporting year

Much higher

Please explain

The decrease in consumption is justified by the projects to reduce water consumption implemented.

Facility reference number

Facility 22

Facility name (optional)

Facility 22

Country/Area & River basin

Brazil

Other, please specify

South Atlantic

Latitude

-29.16755

Longitude

-51.17889

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

315.99

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

276

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

40

Total water discharges at this facility (megaliters/year)

377.86

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

377.86

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

-61.87

Comparison of total consumption with previous reporting year

Much lower

Please explain

The total of water discharged is greater than the total withdrawal due to water that rains in the lagoons of the effluent treatment station. We do not use this water in the process, but it fills the ponds of the wastewater treatment plant and makes the effluent volume greater than the water withdrawal.

Facility reference number

Facility 23

Facility name (optional)

Facility 23

Country/Area & River basin

Brazil

Other, please specify

South Atlantic

Latitude

-29.16755

Longitude

-51.17889

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

562.63

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

232

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

85.6

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

244.75

Total water discharges at this facility (megaliters/year)

518.99

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

518.99

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

43.64

Comparison of total consumption with previous reporting year

About the same

Please explain

No significant variations were recorded

Facility reference number

Facility 24

Facility name (optional)

Facility 24

Country/Area & River basin

Brazil

Other, please specify

South Atlantic

Latitude

-29.16755

Longitude

-51.17889

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

14.34

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

14.34

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

14.34

Comparison of total consumption with previous reporting year

Much higher

Please explain

There is no effluent in a poultry farm, so the total discharge is 0.

Facility reference number

Facility 25

Facility name (optional)

Facility 25

Country/Area & River basin

Brazil
Other, please specify
South Atlantic

Latitude

-29.16755

Longitude

-51.17889

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

41.51

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

41.51

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

37.36

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

37.36

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

4.15

Comparison of total consumption with previous reporting year

Lower

Please explain

The decrease in consumption is justified by the projects to reduce water consumption implemented.

Facility reference number

Facility 26

Facility name (optional)

Facility 26

Country/Area & River basin

Brazil

Uruguay

Latitude

-27.45801

Longitude

-53.93073

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

461.77

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

294.07

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0.31

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

167.39

Total water discharges at this facility (megaliters/year)

286.66

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

286.66

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

175.1

Comparison of total consumption with previous reporting year

Higher

Please explain

Increased production volume and consequently water consumption.

Facility reference number

Facility 27

Facility name (optional)

Facility 27

Country/Area & River basin

Brazil

Parana

Latitude

-23.53065

Longitude

-46.78635

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

145.25

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

145.25

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

132.39

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

132.39

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

12.86

Comparison of total consumption with previous reporting year

Higher

Please explain

Increased production volume and consequently water consumption.

Facility reference number

Facility 28

Facility name (optional)

Facility 28

Country/Area & River basin

Brazil

Parana

Latitude

-23.71205

Longitude

-46.41758

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

86.95

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

86.73

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0.22

Total water discharges at this facility (megaliters/year)

86.78

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

86.78

Total water consumption at this facility (megaliters/year)

0.17

Comparison of total consumption with previous reporting year

Much lower

Please explain

The decrease in consumption is justified by the projects to reduce water consumption implemented.

W5.1a

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been externally verified?

Water withdrawals – total volumes

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water withdrawal data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporative management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification

process, from its clients and other interested parties. In 2019, water withdrawals data were audited by SGS, a Swiss company that is a world leader in inspection, verification, testing and certification, according to standards established by GRI.

Water withdrawals – volume by source

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water withdrawal data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporate management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification process, from its clients and other interested parties. In 2019, water withdrawals data were audited by SGS, a Swiss company that is a world leader in inspection, verification, testing and certification, according to standards established by GRI.

Water withdrawals – quality

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water withdrawal data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporate management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification process, from its clients and other interested parties.

Water discharges – total volumes

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water discharge data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporative management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification process, from its clients and other interested parties. In 2019, water withdrawals data were audited by SGS, a Swiss company that is a world leader in inspection, verification, testing and certification, according to standards established by GRI.

Water discharges – volume by destination

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water discharge data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporative management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification process, from its clients and other interested parties. In 2019, water withdrawals data were audited by SGS, a Swiss company that is a world leader in inspection, verification, testing and certification, according to standards established by GRI.

Water discharges – volume by treatment method

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water discharge data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporative management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification process, from its clients and other interested parties.

Water discharge quality – quality by standard effluent parameters

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water discharge data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporative management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification process, from its clients and other interested parties. In 2019, water withdrawals data were audited by SGS, a Swiss company that is a world leader in inspection, verification, testing and certification, according to standards established by GRI.

Water discharge quality – temperature

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water discharge data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged

wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporative management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification process, from its clients and other interested parties

Water consumption – total volume

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water withdrawal/ discharge data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporative management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification process, from its clients and other interested parties

Water recycled/reused

% verified

76-100

What standard and methodology was used?

JBS provides periodic reports on water withdrawal/ discharge data to local environmental agencies and regulatory agencies regarding water resources management. Local environmental agencies perform periodic inspections in order to verify water withdrawal by source, volume of discharged wastewater, wastewater parameter, among other information. JBS created an internal data review process, which involves environmental corporative management, regional coordinators and unit supervisors. The company also receives several audits, with an external verification process, from its clients and other interested parties.

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

Yes, we have a documented water policy that is publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Company-wide	Description of water-related performance standards for direct operations Description of water-related standards for procurement Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance	JBS Materiality Matrix showed that Water is one of the four aspects that are material to JBS businesses. It's a company-wide since all units have to control and track water aspects, covering water withdrawal, quality standards, discharge of wastewater and all legal aspects related. Through this data, it is possible to evaluate the efficiency of each unit, and promote the development of actions with the objective to involve the water efficiency in the production process. JBS has an environmental policy for the entire company which preaches continuous improvement on water use efficiency. The company has a goal of reducing the intensity rate (m ³ /ton) of 13% in water withdrawals by 2025, taking 2014-2015 average as the base year. JBS also has an Environmental Guide that establishes standard to guarantee that all units follow the same procedure. It also explains how to use an internal software to report the consumption of water per ton of product, the cost of water and wastewater treatment per volume and other environmental aspects that make possible to evaluate units that need to improve its efficiency.

	<p>Commitment to water-related innovation</p> <p>Commitment to stakeholder awareness and education</p> <p>Commitment to water stewardship and/or collective action</p> <p>Recognition of environmental linkages, for example, due to climate change</p>	
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W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Board Chair	The Board Chair is the President of the Sustainability Committee. The Sustainability Committee is an assessment body directly linked to the board of directors shall advise them regarding the risks and opportunities in sustainability initiatives. It is responsible for dealing with and connecting subjects related to sustainability in the company's business, such as: identification, evaluation and treatment of critical issues that results in risks and business impact; monitoring and implementation of policies, strategies and specific actions; and evaluation of proposals for investments in sustainability. In this way, all relevant water issues are dealt by the Committee, under the president's coordination. The Sustainability area also reports to the Sustainability Committee the performance of operations in relation

	<p>to water consumption targets.</p> <p>The President is responsible for organizing and coordinating the Committee's activities, including, among other duties:</p> <p>(a) propose the schedule of activities for the corresponding year, including the annual calendar of regular meetings;</p> <p>(b) chair the Committee's meetings;</p> <p>(c) report to the Board of Directors the work carried out by the Committee.</p>
Chief Sustainability Officer (CSO)	<p>The CSO is responsible to report the themes that should be discussed by the Sustainability Committee. The Sustainability Committee shall advise the Board of Directors regarding the risks and opportunities in sustainability initiatives. It is responsible for dealing with and connecting subjects related to sustainability in the company's business, such as: identification, evaluation and treatment of critical issues that results in risks and business impact; monitoring and implementation of policies, strategies and specific actions; and evaluation of proposals for investments in sustainability. The Sustainability area also reports to the Sustainability Committee the performance of operations in relation to water consumption targets.</p>
Board-level committee	<p>The Sustainability Committee shall advise the Board of Directors regarding the risks and opportunities in sustainability initiatives. It is responsible for dealing with and connecting subjects related to sustainability in the company's business, such as: identification, evaluation and treatment of critical issues that results in risks and business impact; monitoring and implementation of policies, strategies and specific actions; and evaluation of proposals for investments in sustainability. The Sustainability area also reports to the Sustainability Committee the performance of operations in relation to water consumption targets.</p>
Chief Executive Officer (CEO)	<p>In 2019 the Brazil CEO became a member of the Sustainability Committee. The Sustainability Committee shall advise the Board of Directors regarding the risks and opportunities in sustainability initiatives. It is responsible for dealing with and connecting subjects related to sustainability in the company's business, such as: identification, evaluation and treatment of critical issues that results in risks and business impact; monitoring and implementation of policies, strategies and specific actions; and evaluation of proposals for investments in sustainability. The Sustainability area also reports to the Sustainability Committee the performance of operations in relation to water consumption targets.</p>
Chief Operating Officer (COO)	<p>The Sustainability Committee shall advise the Board of Directors regarding the risks and opportunities in sustainability initiatives. It is responsible for dealing with and connecting subjects related to sustainability in the company's business, such as: identification, evaluation and treatment of critical issues that results in risks and business impact; monitoring and implementation of policies,</p>

	strategies and specific actions; and evaluation of proposals for investments in sustainability. The Sustainability area also reports to the Sustainability Committee the performance of operations in relation to water consumption targets.
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W6.2b

(W6.2b) Provide further details on the board’s oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	<ul style="list-style-type: none"> Monitoring implementation and performance Providing employee incentives Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Setting performance objectives 	<p>The Sustainability Committee, by internal regulation, meets ordinarily every three months to discuss relevant sustainability issues, such as water related issues. One of the issues discussed is the performance of the Sustainable Water Management Program (PGSA) program, reported to Committee by the business presidents.</p> <p>The PGSA provides the identification of critical river basins in water stress. This program’s goal is to improve water efficiency and reduce the risk of water scarcity, promoting an integrate management.</p> <p>This information is essential for the board guide or approves the team to establish a goal development plan, new project development, new investment analysis, budgeting, business planning and planning (volumes and production sites), risk management, and other items.</p> <p>The performance in the water use of each unit is evaluated daily by a technical team and the main management of the units, if deviations are identified, action plans are created to improve the indicators.</p> <p>The parameters monitored are also reported in a computerized corporate software (Credit360), which allows management and performance evaluation of the company's global sustainability indicators.</p> <p>The performance data are reported daily to corporate environment managers and operations director, weekly data is presented to the business president.</p>

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)

Chief Executive Officer (CEO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The CEO of the Brazil operations is one of four members of the Sustainability Committee.

The members of Sustainability Committee are responsible for dealing with and connecting subjects related to sustainability in the company's business, such as: identification, evaluation and treatment of critical issues that results in risks and business impact; monitoring and implementation of policies, strategies and specific actions; and evaluation of proposals for investments in sustainability. Water-related issues are material for JBS and consequently discussed in the Sustainability Committee. The corporate sustainability area also reports to the Sustainability Committee the performance of operations in relation to water consumption targets.

The Sustainability Committee, by internal regulation, meets ordinarily every three months, or, extraordinarily, whenever convened by its Chairman or by the Chairman of the Board of Directors.

Name of the position(s) and/or committee(s)

Other C-Suite Officer, please specify

Chairman of the directors board



Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The chairman of the Sustainability Committee is the chairman of the Board of Directors of JBS. The President is responsible for organizing and coordinating the Committee's activities, including, among other duties:

- (a) propose the schedule of activities for the corresponding year, including the annual calendar of regular meetings;
- (b) define the agenda, convene, install and chair the Committee's meetings;
- (c) represent the Committee before any other corporate governance bodies of the Company, signing, when necessary, any correspondence, invitations and reports on behalf of the Committee;
- (d) report to the Board of Directors the work carried out by the Committee.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	JBS has an annual bonus program for its leadership, which evaluates individual results related to performance goals and behavioral assessment. In the case of environmental professionals, the Directors, Managers and Supervisors have water consumption targets, if they meet the established goal, they are awarded a bonus. The company also recognizes individual or collective efforts to develop new projects that generate process change or behavioral change of employees that manage the reduction in the volume of water abstracted and/or consumed. The recognition is accomplished by means of internal channel disclosure for the whole company, as well as providing specific training and presentation of the initiatives in internal events.

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Chief Operating Officer (COO) Other C-suite Officer Directors	Reduction of water withdrawals Reduction in consumption volumes	JBS has an annual bonus program for its leadership, which evaluates individual results related to performance goals and behavioural assessment. In the case of environmental professionals, the Directors, Managers and Supervisors have water consumption targets, if they meet the established goal, they are awarded a bonus.
Non-monetary reward			

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

- Yes, direct engagement with policy makers
- Yes, trade associations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

The environmental analysts of JBS units join several regional River Basin Committees, in participation with government, private initiative and society. In this way, it is possible to positively influence public policies through the involvement with the political decision makers and ensure that JBS is aligned

with the region's policies. In these forums and events, JBS can influence the decision making and try to guarantee that the choices made by the group will follow the water resources policy of the company.

Through PGSA, JBS also has current processes with indicators of water consumption management, liquid effluents, causes analysis and improvement plans.

To ensure that JBS representatives are aligned with its policies, only water specialists can represent the company in forums and events related to the topic.

In addition, JBS has assumed the chair of the recently formed ABPA Sustainability Chamber, which focuses on discussing strategic issues such as water management, animal welfare and climate change. For the company it is an opportunity to interact with other actors, represent industry trends and access public policies, such as lead the initiatives in concordance with JBS policies.

The results of JBS advocacy and activities in external forums and events are currently reported to the Sustainability Committee. If the results or interests are inconsistent with the company's water policy, the Sustainability Committee assesses whether the activities are worth it or not.

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

Yes (you may attach the report - this is optional)

 ras-jbs-2019-eng-final.pdf

 <https://ri.jbs.com.br/arquivos-cvm/formulario-de-referencia-cadastral-e-prospectos/https://jbs.com.br/wp-content/uploads/2020/05/ras-jbs-2019-eng-final.pdf>

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	JBS manages sustainability in line with the Sustainable Development Goals (SDGs) and for water issues, objective 6 "Clean water and sanitation" is considered in new projects and business plans. We recognize that JBS's geographic and production expansion is related to the quality and quantity of water available locally. Drought periods affect the ability of rivers to maintain their quality after the discharge of treated industrial wastewater, droughts also affect animal irrigation, influence the growth of grains, which are used to produce animal feed. In addition, we recognize that drought can affect the availability of electricity, since most of the energy generated in Brazil comes from hydroelectric plants, and periods of drought can increase the price of energy. In this way, JBS 'ability to make progress in production will be made possible by efforts in the administration and management of water resources. JBS Brazil has a strategy to improve the water management, guided by the Sustainable Water Management Program (PGSA), which identifies critical units through internal evaluation (risk of water scarcity and strategic importance of the unit) and external aspects (Water Balance in the hydrographic basin) making it possible to prioritize the allocation of investments and the establishment of goals to reduce risk exposure. JBS also establishes internal goals to reduce water intensity and promote the engagement of the value chain in water resource management practices.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	Water management is not just a critical issue for JBS and food industry sustainability, is a basic element of the value chain, essential for animal and vegetable development and for ensuring products and processes meet sanitary standards. In Brazil, JBS has the Sustainable Water Management Program (PGSA), that identifies critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize investment allocation and targets setting to reduce the exposure to shortage risk. JBS also established a long-term target to reduce water usage intensity. The target base year is 2014-2015 average and the global goal that JBS has established was 13% of reduction by 2025 for Brazil operations, a 11-year scenario.

Financial planning	Yes, water-related issues are integrated	5-10	<p>Water is an extremely relevant aspect and included in JBS investment assessments. In Brazil, JBS has an annual investment plan for environmental improvements with focus on water use management, treatment of effluents, management of solid residues and atmospheric emissions and greenhouse effect gases (GHG). This plan is developed based on a comprehensive environmental diagnosis made by the Company to identify opportunities for improving the environmental indicators from processing plants in Brazil. The Investment Plan is updated on a yearly basis and has an extensive list of projects concluded. The adherence to these principles in the Company routine is guided by the Environment Policy, which presents standards and good practices to be applied and discloses environmental monitoring and control points in order to achieve seamlessness of actions and routine among all production plants. The water investment has increased 137% since 2015.</p> <p>JBS also has the Sustainable Water Management Program (PGSA), that identifies critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize investment allocation and targets setting to reduce the exposure to shortage risk.</p>
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W7.2

(W7.2) What is the trend in your organization’s water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

Row 1

Water-related CAPEX (+/- % change)

42

Anticipated forward trend for CAPEX (+/- % change)

10

Water-related OPEX (+/- % change)

25

Anticipated forward trend for OPEX (+/- % change)

10

Please explain

CAPEX increased by 42% because in 2019 investments were made to modernize and improve efficiency in the treatment of water and effluents, such as structural improvements and the standardization of controls in water treatment plants; implantation of automatic operation control / disinfection equipment; construction of raw water storage reservoirs for periods of drought; projects for reusing cooling water and backwashing the water treatment plant.

OPEX was estimated based on environmental management expenses in general and increased by 25% because closed factories were reopened and new factories have been acquired.

For the next year, the trend is for investments to increase in CAPEX and OPEX, since JBS intends to reopen closed factories and inaugurate new factories, hiring new employees and increasing the costs of water supply and license renewals (OPEX) and also carrying out more investments to acquire or update fixed assets (CAPEX).

W7.3

(W7.3) Does your organization use climate-related scenario analysis to inform its business strategy?

	Use of climate-related scenario analysis	Comment
Row 1	Yes	The profitability of the company's industrial processes in Brazil may be materially affected by commodity prices related to animal feed such as grains, corn and soybeans. The company monthly tracks the water availability and its impacts on energy production and animal feed (soy and corn), besides projecting future scenarios to determine strategies. The availability and cost of raw material vary according to rainfall distribution; therefore, it is also one of the criteria evaluated by the company.

		The monitoring process uses government databases, internal knowledge, data from “Somar Metereologia” and climate data to formulate a strategic planning of purchase. The analysis is also based on Sustainable Water Management Program (PGSA) assessment, WRI Aqueduct and Regional government databases such as the Brazilian National Water Agency (ANA).
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W7.3a

(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?

Yes

W7.3b

(W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization’s response?

	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify Sustainable Water Management Program (PGSA)	Climate change, including the impact of water stress, creates both physical and financial risks. Natural disasters, fires, droughts, changes in rainfall patterns or extreme weather conditions, including floods, extreme cold or heat, hurricanes or other storms, could harm the health or growth of farming and interfere with the Company's operations through a lack of energy , lack of fuel, damage to production and installations or interruption of means of transport, among other things. Any of these factors, as well as disruptions in our information systems, could have an adverse effect on our financial results.	In Brazil, due to the increased concern for water scarcity and its relevance in constraining JBS’s growth, it established the Sustainable Water Management Program (PGSA) to develop integrated sustainability strategies on Water Management. This program has a Water Committee, comprised by sustainability managers, responsible for their respective operational unit to deal specifically with water issues, enhancing water management. The program identified the critical units by evaluating internal (water shortage risk and water strategic importance) and the external aspects (Water Balance in the river basin) for each unit, making it possible to prioritize actions such as investment allocation and targets setting to reduce the units exposure to shortage risk. A next step of the program is to

			develop future scenarios, with projections in the localities where the company acts to direct the actions that minimize the related impacts.
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W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

We intend to establish water pricing parameters for the coming years.

W8. Targets

W8.1

(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	In the context of our company’s non-financial targets, we have assessed water and performance since 2014. Target setting is driven by the identification of opportunities of water use which is map by each JBS facility. The target set by the facility is assessed by the corporate management and president of the business unit and then signed off by the CEO from Brazil operations. This legitimize the target companywide and ensures that they are meaningful in terms of our water commitments.

	<p>Site/facility specific targets and/or goals</p> <p>Country level targets and/or goals</p>	<p>To ensure accountability and ownership the targets are monitored by the facilities through the database system Credit360 monthly, and then annually reported to the business president. Any significant variances must be justified and monitored with a red flag.</p> <p>These targets are typically related to improving use of water efficiency; thus, we track both total water use and water use intensity to each facility from Beef (Friboi), pork, poultry (Seara), JBS leather and JBS new business and each facility. Then business unit is set with a specific reduction target. Our intention is to reduce absolute water use across Brazil business units by 13% by 2025.</p> <p>The improvement in the ESG Assessments is a Goal to JBS. Year by year the company follows the ESG evaluations reports and makes a GAP analysis in order to understand whats are the opportunities of improvement internally in JBS management.</p>
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W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

Target reference number

Target 1

Category of target

Water use efficiency

Level

Business

Primary motivation

Reduced environmental impact

Description of target

Water use was identified as a material environmental issue for JBS as it is at the base of the production chain, essential for animal and plant production (food for the animal chain), in addition to ensuring the health standards of processes and products, because is essential to cleaning areas, equipment and utensils.

Reduction target is a key pillar of water security as published in our Corporate Sustainability Strategy for the next 5 years. Our intention is to reduce absolute water use across Brazil business units by 13% by 2025, against a baseline year of fiscal 2014-2015 average.

The target setting is driven by the identification of opportunities by the each facility, then assessed by the corporate management and president of the business unit and then signed off by the CEO from Brazil operations and Sustainability Committee.

Moreover, to achieve the target JBS Brazil invested over R\$ 6.7 million in improvements and eco-efficiency related to water, 86% more than in 2018.

Quantitative metric

Other, please specify

% reduction per business unit

Baseline year

2014

Start year

2019

Target year

2025

% of target achieved

0

Please explain

The % achieved represents Brazil operation progress made against the base line year by the end of the reporting year ("% of the target"/ "%reduced in 2019").

The targets are monitored by the facilities through the database system Credit360 monthly, and then annually reported to the business president. Any significant variances must be justified and monitored with a red flag.

W8.1b

(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.

Goal

Engagement with public policy makers to advance sustainable water management and policies

Level

Company-wide

Motivation

Water stewardship

Description of goal

JBS goal is to participate in watershed committee. This goal was selected since tracking changes in water availability, water use conflicts and changes in its regulatory framework is essential to ensure JBS Growth. JBS participation in the watershed committee provides the company with the necessary information and contacts to improve water efficiency and to work together with the local community in projects beyond the company gates.

Baseline year

2017

Start year

2018

End year

2025

Progress

JBS tracks the progress during watershed committee discussion. JBS intends to expand its participation in watershed Committees for its operations (local governance). This goal is in development and it is included in the phases of the Sustainable Water Management Program (PGSA).

Goal

Engagement with suppliers to help them improve water stewardship

Level

Other, please specify
Supply Chain

Motivation

Recommended sector best practice

Description of goal

JBS goals is to Ensure the supply of quality water. Protecting supplier's business making them more resilience to water risk ensure JBS supply, shielding its production from water risk.

Baseline year

2017

Start year

2018

End year

2025

Progress

Poultry, pork and cattle suppliers are also monitored in order to guarantee that water is constantly available for those animals, and ensure the Animal Welfare. Seara has been supporting the installation of cistern for storing rainwater in the water stressed regions to ensure a regular supply of water.

Goal

Promotion of sustainable agriculture practices

Level

Other, please specify
Supply Chain

Motivation

Corporate social responsibility

Description of goal

JBS goal is realize a sustainable management of suppliers in the Amazon, promoting sustainable practices to increase the productivity of farms in the Amazon region in order to develop a new operating model that preserves natural resources and that brings financial benefits to the ranchers in the region.

Baseline year

2017

Start year

2018

End year

2025

Progress

The Company has projects aiming the protection and preservation of the environment, knowing that forestry preservation is one of the aspects that ensure water supply and quality.

Goal

Reduce environmental impact of product in use phase

Level

Company-wide

Motivation

Reduced environmental impact

Description of goal

The company is committed to the goal of reducing water intensity in 13% until 2025 for Brazil operations.

Baseline year

2015

Start year

2019

End year

2025

Progress

The company was not able yet to reduce the water consumption intensity. The main reason is the government requirements about sanitation for food companies.

Goal

Other, please specify

Employees engagement

Level

Company-wide

Motivation

Water stewardship

Description of goal

JBS goal is promote the environmental education on conscious use of water. To identify opportunities for improvement to reduce water waste and promote a cultural change on water resources management.

Baseline year

2017

Start year

2018

End year

2025

Progress

One of the projects that JBS Sustainable Water Management Program (PGSA) is the improvement of the engagement of industrial employees. According to the PGSA, in 2019, the engagement was strengthened in the internal communication campaigns (leadership and factory employees) for the conscious use of water. The communication plan provides for several actions throughout the year, especially in the dry season.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

Yes

W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	<p>Water withdrawals:</p> <ul style="list-style-type: none"> - Total volumes - Volumes by source <p>Water Discharges:</p> <ul style="list-style-type: none"> - Total volumes - Volumes by destination <p>Water Discharge Quality:</p> <ul style="list-style-type: none"> - By standard effluent parameters <p>Water Consumption:</p> <ul style="list-style-type: none"> - Total volume <p>Water recycled/reused</p>	ISAE 3000	Eventually, JBS receives third party audit, carried out for stakeholders, to ensure that there are no risks in the investment of projects that include water indicators (water consumption, by source for example) to environmental improvements.

W10. Sign off

W-FI

(W-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

W10.1

(W10.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Sustainability Director	Director on board

W10.2

(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

No

SW. Supply chain module

SW0.1

(SW0.1) What is your organization's annual revenue for the reporting period?

Annual revenue

Row 1	204,500,000,000
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SW0.2

(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?

Yes

SW0.2a

(SW0.2a) Please share your ISIN in the table below.

	ISIN country code	ISIN numeric identifier (including single check digit)
Row 1	BR	JBSSACNOR8

SW1.1

(SW1.1) Could any of your facilities reported in W5.1 have an impact on a requesting CDP supply chain member?

Yes, CDP supply chain members buy goods or services from facilities listed in W5.1

SW1.1a

(SW1.1a) Indicate which of the facilities referenced in W5.1 could impact a requesting CDP supply chain member.

Facility reference number

Facility 27

Facility name

Facility 27

Requesting member

Arcos Dorados

Description of potential impact on member

Although the facility (Facility 27) is in a region of water stress (seasonal stress), it doesn't have any register of decline in production, or production stoppages due to the water scarcity. The facility has as highly efficient process, with daily performance monitoring and water consumption goal - in addition to the constant development of projects to reduce and optimize the use of water in industrial processes. Other identified impacts are: Constraint to growth (low risk - The contingency plan in case of water stress is to transfers its production to another JBS unit, since the company has other facilities that are qualified and have the capacity to produce de same products with the same quality); Increased operating costs (low risk - Currently the facility has its own source of water and it is enough to meet its demand, and the contingency plan foresee, in case of a high water stress, to expand its withdrawal sources to maintain its production).

Comment

The Sustainable Water Management Program has as goal the achievement of greater efficiency on water use, reducing the risk of shortages in Brazilian industrial units. The program aims to identify critical units located in critical micro-basin, making possible to prioritize the development of projects, investment allocation and setting of targets. Through this program, JBS identified the Brazilian units exposed to water risks and all units identified will receive specific follow-up, helping to set priorities for environmental investments. The Program also includes projects beyond the company's gates, covering JBS's Supply Chain on an effort to preserve water resources.

SW1.2

(SW1.2) Are you able to provide geolocation data for your facilities?

	Are you able to provide geolocation data for your facilities?	Comment
Row 1	No, this is confidential data	

SW2.1

(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.

Requesting member

Arcos Dorados

Category of project

Other

Type of project

Other, please specify

Collaborative measures

Motivation

The collaborative measures aim to benefit Arcos Dorados and its suppliers, including JBS.

Estimated timeframe for achieving project

4 to 5 years

Details of project

The project could comprise the identification of Arcos Dourados' suppliers (besides JBS) and other key stakeholders with facilities located in sensitive river basins. The purpose of the project is to promote and share collaborative actions to reduce the water footprint (through the decreasing of water withdrawal, improvement on water discharge parameters, increase on water reuse and water re-circulation indexes) of the companies involved and, consequently, promote the conservation of the river basins and business Sustainability.

Projected outcome

The project could be led by Arcos Dourados together with JBS and other key stakeholders, aiming collaborative measures to promote conservative actions for the most sensitive river basins where the facilities located. These collaborative measures could focus on the recovery and preservation of natural resources in the river basin, such as forests, as a strategic action to promote the water quality and availability; Increasing the efficiency on water withdrawal and discharge, improving the water footprint of the companies involved in the project, thus contributing to the decrease of Arcos Dourados's indirect water footprint.

Increasing the water use efficiency and promoting the improvement of water quality and availability are keys actions to promote the business sustainability.

Requesting member

Johnson & Johnson

Category of project

Other

Type of project

Other, please specify

Collaborative measures

Motivation

The collaborative measures aim to benefit Johnson & Johnson and its suppliers, including JBS.

Estimated timeframe for achieving project

4 to 5 years

Details of project

The project could comprise the Johnson & Johnson' suppliers (besides JBS) and other key stakeholders with facilities located in sensitive river basins. The purpose of the project would be to promote and share collaborative actions to reduce the water footprint (through the decreasing of water withdrawal, improvement on water discharge parameters, increase on water reuse and water re circulation indexes) of the companies involved and, consequently, promote the conservation of the river basins and business Sustainability.

Projected outcome

The project could be led by Johnson & Johnson together with JBS and other key stakeholders, aiming collaborative measures to promote conservative actions for the most sensitive river basins where the facilities are located. These collaborative measures could focus on the recovery and preservation of natural resources in the river basin, such as forests, as a strategic action to promote the water quality and availability; Increasing the efficiency on water withdrawal and discharge, improving the water footprint of the companies involved in the project, thus contributing to the decrease of Johnson & Johnson indirect water footprint.

Increasing the water use efficiency and promoting the improvement of water quality and availability are keys actions to promote the business sustainability.

Requesting member

Wal Mart de Mexico

Category of project

Other

Type of project

Other, please specify

Collaborative measures

Motivation

The collaborative measures aim to benefit Walmart Mexico's and its suppliers, including JBS.

Estimated timeframe for achieving project

4 to 5 years

Details of project

The project could comprise the Walmart Mexico's suppliers (besides JBS) and other key stakeholders with facilities located in sensitive river basins. The purpose of the project would be to promote and share collaborative actions to reduce the water footprint (through the decreasing of water withdrawal, improvement on water discharge parameters, increase on water reuse and water re-circulation indexes) of the companies involved and, consequently, promote the conservation of the river basins and business Sustainability In 2019, JBS Brazil operations did not record sales to Wal Mart Mexico.

Projected outcome

The project could be led by Walmart Mexico's together with JBS and other key stakeholders, aiming collaborative measures to promote conservative actions for the most sensitive river basins where the facilities are located. These collaborative measures could focus on the recovery and preservation of natural resources in the river basin, such as forests, as a strategic action to promote the water quality and

availability; Increasing the efficiency on water withdrawal and discharge, improving the water footprint of the companies involved in the project, thus contributing to the decrease of Walmart Mexico's indirect water footprint. Increasing the water use efficiency and promoting the improvement of water quality and availability are keys actions to promote the business sustainability. In 2019, JBS Brazil operations did not record sales to Wal Mart Mexico.

SW2.2

(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?

Yes

SW2.2a

(SW2.2a) Please select the requesting CDP supply chain member(s) that have driven collaborative water projects.

Requesting member

Arcos Dorados

Category of project

Communications

Type of project

Other, please specify

Supply chain engagement

Description of project

The project consists to promoting the development of management indicators, strategy and corporate policies for Arcos Dourados suppliers through CDP Supply Chain Water program.

Progress

Through CDP Supply Chain Water program, JBS provides water management data, strategy and performance since the beginning of Arcos Dorados initiative.

Requesting member

Arcos Dorados

Category of project

Other

Type of project

Other, please specify

Sustainable beef program

Description of project

The Sustainable Beef Program is sustainable approach for meat sourcing.

Progress

Sustainable Beef Program: The new approach for the purchase of meat produced, following defined socio-environmental criteria open numerous opportunities for local development, increased productivity and environmental regularization of livestock farms, ensuring the conservation of native forests in protect areas and its water resources.

SW3.1

(SW3.1) Provide any available water intensity values for your organization's products or services.

Product name

Arcos Dorados - Beef, poultry and fish products

Water intensity value

3.66

Numerator: Water aspect

Water withdrawn

Denominator

m3/tons of products

Comment

The water intensity value supplied to Arcos Dourados was quantified by summing the water withdrawal amount and dividing this value for the sum of the facilities' production in tons. It was considered all products produced and water withdrawal by the unit in cubic meters.

Product name

Arcos Dorados - Beef products

Water intensity value

9.16

Numerator: Water aspect

Water withdrawn

Denominator

m3/tons of products

Comment

The water intensity value supplied to Arcos Dourados was quantified by summing the water withdrawal amount and dividing this value for the sum of the facilities' production in tons. It was considered all products produced and water withdrawal by the unit in cubic meters.



Product name

Johnson & Johnson

Water intensity value

1.98

Numerator: Water aspect

Water withdrawn

Denominator

m3/tons of product.

Comment

The water intensity value supplied to Johnson & Johnson was quantified by summing the water withdrawal amount and dividing this value for the sum of the facility production in tons. It was considered all products produced and water withdrawal by the unit in cubic meters.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Investors Customers	Public	Yes, submit Supply Chain Questions now



Please confirm below

I have read and accept the applicable Terms