

Module: Introduction**Page: W0. Introduction**

W0.1**Introduction**

Please give a general description and introduction to your organization.

JBS SA is a food company with 61 years of tradition and global leader in animal protein processing. Operating in more than 20 countries, the company serves a base of more than 300,000 customers in over 150 countries through a diverse portfolio of products and brands. Headquartered in Brazil, JBS has approximately 215,000 employees – from factories to sales offices. The structure involves processing units of cattle, pigs, sheep, poultry, leather, and confinement of cattle and sheep. JBS is present in five continents with factories and offices in Brazil, United States, Australia, Canada, Italy, Argentina, Uruguay, Paraguay, Mexico, China and others operating in the segments of beef, pork, lamb and chicken, production and marketing of leather, pet products, hygiene and cleanliness, cans, collagen, biodiesel, transportation and vegetables and are incorporated into its business management the search for modernization, quality of products and raw materials, 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. The company's main customers are retail chains, wholesale clubs and companies in the food service industry - restaurants, hotels, food service distributors and further processors. With an annual net income of R\$ 120.5 billion, JBS is positioned as the largest animal protein company in the world.

More information can be found in the official JBS site (<http://www.jbs.com.br>) and in the JBS 2014 Annual and Sustainability Report (<http://relatorioanual.jbs.com.br>).

W0.2**Reporting year**

Please state the start and end date of the year for which you are reporting data.

Period for which data is reported

Wed 01 Jan 2014 - Wed 31 Dec 2014

W0.3

Reporting boundary

Please indicate the category that describes the reporting boundary for companies, entities, or groups for which water-related impacts are reported.

Companies, entities or groups over which operational control is exercised

W0.4

Exclusions

Are there any geographies, facilities or types of water inputs/outputs within this boundary which are not included in your disclosure?

Yes

W0.4a

Exclusions

Please report the exclusions in the following table

Exclusion	Please explain why you have made the exclusion
Units outside Brazil were not included in the questionnaire	Although JBS doesn't have an integrated management between Brazilians and Abroad Operations, the company is gradually implementing the gathering of environmental indicators' data between countries. This action is responsible for the completeness of data for the quantification of Greenhouses Gases and related Climate Change reports. Due to continuous improvement, there is a perspective, in the near future, to obtain the appropriate amount of data to report the water indicators.

Further Information

Module: Current State

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W1.1

Please rate the importance (current and future) of water quality and water quantity to the success of your organization

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital for operations	Important	Water quality and quantity are vital to JBS business continuity due to its importance to the sanitation procedures and industrial process, starting on the animal production to the slaughtering, and during the process of plucking, gutting and cleaning. These processes are also affected by the amplitude and variability of dry periods, since industrial wastewater is discharged in rivers after treatment, and during drought periods, its capacity to maintain quality is affected. Water shortage is a concern for JBS, since it impacts directly the animal watering, influences on the availability of soybeans, corn and on the growth of grass that are used to produce the animal feed by JBS suppliers. Droughts also impact the availability of electricity since the majority of energy generated in Brazil comes from Hydroelectric power plants, increasing the energy price and the probability of black-outs.

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	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 the production. 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. The Brazilian water crises in 2014 showed the importance of actions beyond the Company's gate. Its known that the availability of water depends on the management of the river basin and that includes all user of this resource, including JBS suppliers. The reuse of waste water is one of the actions that provides support to water management, reducing the need to increase water withdrawal and treatment

W1.2

For your total operations, please detail which of the following water aspects are regularly measured and monitored and provide an explanation as to why or why not

Water aspect	% of sites/facilities/operations	Please explain
Water withdrawals- total volumes	76-100	The control and management of the volume of water withdrawal is vital to the company, since it impacts directly the operational cost, viability of production and its control is a legal requirement in some states, where the environmental agency establishes limits for the volume flow rate for the water withdraw. The monitoring is accomplished through daily measurement readings of the facility's hydrometer. This information is used to report the total of water withdraw during the year, helping the decision making process to increase the efficiency of the facility
Water withdrawals- volume by sources	76-100	The control of this aspect impacts JBS production, since each source presents a peculiarity of availability, quality and cost during the year. Since there is flexibility to work with different sources, it is possible to manage the water withdrawal to achieve a lower cost and to maintain its production, during droughts or when a source has a decrease in its quality.

Water aspect	% of sites/facilities/operations	Please explain
Water discharges- total volumes	76-100	Most of facilities have the control of discharge due to flow rate measurements. When this data is not available, the facility estimate this value. This control is essential since the company has to respect the limits of discharge, which are established by the environmental agency.
Water discharges- volume by destination	76-100	Most of facilities has the control of discharge due to flow rate measurements. When this data isn't available, the facility estimate this value.
Water discharges- volume by treatment method	76-100	Due to JBS wastewater characteristics, most of units performs its treatment. There is a selection of the most appropriate method in order to obtain the best quality and the lowest treatment cost. In addition, the company has to provide periodically to the environmental agencies the treated wastewater quality analyses results
Water discharge quality data- quality by standard effluent parameters	76-100	JBS has to provide periodically to the environmental agencies the treated wastewater quality analyses results to prove that its process respects the environmental standards of wastewater discharge.
Water consumption- total volume	Less than 1%	There is not a specific control of water consumption (amount of water aggregated in the product), but it is possible to obtain the estimative value through monitored information.
Facilities providing fully-functioning WASH services for all workers	76-100	Water quality is critical to the sector, since its use is essential to the sanitation procedures and industrial process. During the water quality control for production process, in the same time, it is important to keep the standards for potable water to humans and employees

W1.2a

Water withdrawals: for the reporting year, please provide total water withdrawal data by source, across your operations

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Fresh surface water	38691.35	Lower	
Brackish surface water/seawater	0	Not applicable	JBS doesn't withdrawal water from Brackish surface or from the sea.

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Rainwater	66.71	Much higher	JBS is constantly seeking new sources to improve its water management process, with the objective of reducing costs and improving its efficiency.
Groundwater - renewable	25349.51	Higher	
Groundwater - non-renewable	0	Not applicable	JBS doesn't withdrawal water from non-renewable groundwater
Produced/process water	0	Not applicable	This use doesn't apply to JBS since it refers to the oil and gas industry
Municipal supply	2601.66	Much lower	Aiming to reduce cost, it is fundamental that JBS reduces the quantity of water which comes from third parties, for example, municipal supply. JBS has been focusing to withdraw water from alternative sources.
Wastewater from another organization	0	Not applicable	Due to sanitation rules, JBS doesn't use Wastewater from another organization in its process.
Total	66709.23	Lower	In 2014, there was 2% reduction, which is equivalent of 1.1 billion liters of water, due to the efforts of JBS to increase its efficiency and reduce consumption.

W1.2b

Water discharges: for the reporting year, please provide total water discharge data by destination, across your operations

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
Fresh surface water	52758.90	About the same	
Brackish surface water/seawater	0	Not applicable	JBS doesn't discharge wastewater at the sea or Brackish surface
Groundwater	5397.17	Lower	

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
Municipal treatment plant	363.85	Much lower	
Total	58519.93	Lower	The amount of discharged water is lower, due to the reduction of water withdrawal.

W1.2c

Water consumption: for the reporting year, please provide total water consumption data, across your operations

Consumption (megaliters/year)	How does this consumption figure compare to the last reporting year?	Comment
8189.30	Lower	The lower value is a consequence of the reduced amount withdrawal in 2014.

W1.3

Do you request your suppliers to report on their water use, risks and/or management?

Yes

W1.3a

Please provide the proportion of suppliers you request to report on their water use, risks and/or management and the proportion of your procurement spend this represents

Proportion of suppliers %	Total procurement spend %	Rationale for this coverage
1-25	1-25	<p>Integrated poultry and pork producers are considered key suppliers for JBS Foods, representing more than 51% of suppliers. However, considering JBS's Company, this number reduces significantly, since it has more than 70 thousand cattle suppliers. Since JBS performs technical visits at Poultry and Pork's suppliers it is possible to interact and improve the management of water. JBS Foods has been supporting the installation of tanks for collecting and storing rainwater and installed electric generators for its integrated partners, to ensure a regular supply of both water and power. At the Itapiranga unit, the region in which the project was implemented, 43% of poultry producers already have rainwater tanks with aggregate storage capacity of 85 million liters of water. 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 in the farm and the capacity of the tank, which can vary from 500 to 1,000 cubic meters. This initiative demonstrates the innovative approach and firm commitment of JBS and its integrated producers to identify solutions to ensure water availability.</p>

W1.3b

Please choose the option that best explains why you do not request your suppliers to report on their water use, risks and/or management

Primary reason	Please explain
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W1.4

Has your organization experienced any detrimental impacts related to water in the reporting period?

Yes

W1.4a

Please describe the detrimental impacts experienced by your organization related to water in the reporting year

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
Brazil	Parana	Phys-Declining water quality	Higher operating costs	There was an increase in the concentration of ammonia and organic matter in the water, requiring addition of chlorine dioxide in water treatment	Current	Disinfection costs increased by three times	Infrastructure investment Increased investment in new technology Promote best practice and awareness Establish site-specific targets	There is no possibility of either well water extraction or withdraw in another river. The company also adopts several operational actions, as listed in the 'response strategy'. The company aims to optimize the use of natural resources in the process such as: <ul style="list-style-type: none"> Established site-specific targets Infrastructure investment Increased investment in new technology Promote best practice and awareness

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
Brazil	Parana	Phys-Increased water scarcity	Higher operating costs	Because of the water scarcity, it was necessary to purchase third-party water.	From September to December, 2014	Third-party water purchase. A total increase of R\$200,000	<p>Infrastructure investment</p> <p>Increased investment in new technology</p> <p>Promote best practice and awareness</p> <p>Supplier diversification</p> <p>Establish site-specific targets</p>	<p>Withdraw license in a different basin, the Rio Grande basin. The company also adopts several operational actions, as listed in the 'response strategy'. The company aims to optimize the use of natural resources in the process such as:</p> <ul style="list-style-type: none"> • Established site-specific targets • Infrastructure investment • Increased investment in new technology • Promote best practice and awareness
Brazil	Parana	Reg-Higher water prices	Higher operating costs	Water cost increased in the reporting year.	Current	In some regions of the basin, water price increased 19%	<p>Infrastructure maintenance</p> <p>Increased investment in new technology</p> <p>Promote best practice and awareness</p> <p>Supplier diversification</p>	<p>There is no possibility of either well water extraction or withdraw in another river. The company also adopts several operational actions, as listed in the 'response</p>

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
							Establish site-specific targets	strategy'. The company aims to optimize the use of natural resources in the process through: <ul style="list-style-type: none"> •Established site-specific targets • Infrastructure investment • Increased investment in new technology • Promote best practice and awareness
Brazil	Parana	Phys-Flooding	Water supply disruption	There were two floods over 10 years. There was no direct impact on production	One day	It was spent about 60 thousand reais to substitute the electrical installations	Infrastructure investment Increased investment in new technology Promote best practice and awareness Supplier diversification Establish site-specific targets	The exchange of the equipment was performed, which was enough to solve the problem. The company also adopts several operational actions, as listed in the 'response strategy'. The company aims to optimize the use of natural resources in the process through: <ul style="list-style-type: none"> •Established site-specific targets • Infrastructure investment

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
								Increased investment in new technology • Promote best practice and awareness
Brazil	Parana	Phys-Inadequate infrastructure	Water supply disruption	Problem at the pump.	05 months	The total amount spent, including the cost to fix the pump and exchange the equipment, was R\$ 90,000	Infrastructure investment Increased investment in new technology Promote best practice and awareness Supplier diversification Establish site-specific targets	The exchange of the equipment was performed, which was enough to solve the problem. The company also adopts a mix of different operational activities, as listed in the 'response strategy'. The company aims to optimize the use of natural resources in the process through: Established site-specific targets • Infrastructure investment • Increased investment in new technology • Promote best practice and awareness
Brazil	Uruguay	Phys-Increased water scarcity	Higher operating costs	Because of the water scarcity, it was necessary to	30 days	Approximately R\$ 110,000.00 with water	Infrastructure investment Increased	Besides the third party water purchase, the

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				purchase third-party water. The event of water shortage is seasonal		purchase from third parties.	investment in new technology Promote best practice and awareness Supplier diversification Establish site-specific targets	company also adopts several operational actions, as listed in the 'response strategy'. The company aims to optimize the use of natural resources in the process through: <ul style="list-style-type: none"> Established site-specific targets Infrastructure investment Increased investment in new technology Promote best practice and awareness
Brazil	Other: South-east Atlantic (hydrographic regions)	Phys-Increased water scarcity	Higher operating costs	The area has no water supply	All year	It is known that the cost of purchasing third-party water is often more than double the cost of the capture of surface water or groundwater.	Infrastructure investment Increased investment in new technology Promote best practice and awareness Supplier diversification Establish site-specific targets	Since there is no possibility of well opening, the company has ponds that capture rainwater. This withdraw supplies approximately 2 months of production. The company also adopts several operational actions, as listed in the 'response

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
								strategy'. The company aims to optimize the use of natural resources in the process through: <ul style="list-style-type: none"> Established site-specific targets Infrastructure investment Increased investment in new technology Promote best practice and awareness
Brazil	Parana	Phys-Increased water scarcity Phys-Seasonal supply variability/inter annual variability	Plant/production disruption leading to reduced output	Necessity to look for another water supply and discharge sources, requiring initial investment by the company	60 days	R\$ 30,000,000 in sales	Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Establish site-specific targets Water	The company adopts a mix of different operational activities, as listed in the 'response strategy'. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
							management incentives	
Brazil	Amazonas	Phys-Increased water scarcity Phys-Seasonal supply variability/inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	120 days		Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Establish site-specific targets Water management incentives	The company adopts a mix of different operational activities, as listed in the 'response strategy'. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Other: Eastern Atlantic (hydrographic regions)	Phys-Increased water scarcity Phys-Seasonal supply variability/inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	180 days		Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased	The company adopts a mix of different operational activities, as listed in the 'response strategy'. The company aims to optimize the use of natural resources

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
							investment in new technology Promote best practice and awareness Establish site-specific targets Water management incentives	through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Tocantins	Phys-Increased water scarcity Phys-Seasonal supply variability/inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	30 days	R\$ 5,000,000	Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Establish site-specific targets Water management incentives	The company adopts a mix of different operational activities, as listed in the 'response strategy'. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
Brazil	Amazonas	Phys-Increased water scarcity Phys-Seasonal supply variability/inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	30 days	R\$ 5,000,000	Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Establish site-specific targets Water management incentives	The company adopts a mix of different operational activities, as listed in the 'response strategy'. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Tocantins	Phys-Increased water scarcity Phys-Seasonal supply variability/inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	120 days		Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology	The company adopts a mix of different operational activities, as listed in the 'response strategy'. The company aims to optimize the use of natural resources through process modifications and / or investments in

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
							Promote best practice and awareness Establish site-specific targets Water management incentives	equipment for more efficient use of water / wastewater treatment
Brazil	Amazonas	Phys-Flooding	Disruption to sales	Interruption of activities due to the flooding of Madeira River, preventing the transport of raw material (cattle), inputs (packaging, biomass boiler and others), and distribution of finished products. Other impacts acknowledged: • Plant/production disruption leading to reduced output • Supply chain disruption • Transport disruption	60 days	R\$ 4,000,000	Develop flood emergency plans	Production planning and supply chain improvements.
Brazil	Amazonas	Phys-Increased water scarcity Phys-Seasonal supply variability/inter annual variability Reg-Increased	Delays in permitting	Difficulties in renewing the permits for water withdraw and effluent discharge. Necessity to look	120 days	R\$ 500,000.00	Engagement with public policy makers Infrastructure investment Infrastructure	The company adopts a mix of different operational activities, as listed in the 'response

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
		difficulty in obtaining withdrawals/operations permit Reg-Regulatory uncertainty		for another water supply and discharge sources, requiring initial investment by the company. Other impacts acknowledged: Higher operating costs			<p>maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Establish site-specific targets Water management incentives</p>	strategy'. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Amazonas	Phys-Increased water scarcity Phys-Seasonal supply variability/inter annual variability	Higher operating costs	The need of finding another source of supply and source of disposal, requiring initial investment.	120 days	R\$ 500,000.00	<p>Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness</p>	The company adopts a mix of different operational activities, as listed in the 'response strategy'. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water /

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
							Establish site-specific targets Water management incentives	wastewater treatment
Brazil	Parana	Phys-Increased water scarcity Phys-Seasonal supply variability/inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	120 days	R\$ 500,000.00	Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Establish site-specific targets Water management incentives	The company adopts a mix of different operational activities, as listed in the 'response strategy'. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Parana	Phys-Declining water quality	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial	120 days		Engagement with public policy makers Infrastructure investment Infrastructure	The company adopts a mix of different operational activities, as listed in the 'response

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				investment by the company.			maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Establish site-specific targets Water management incentives	strategy'. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment

W1.4b

Please choose the option below that best explains why you do not know if your organization experienced any detrimental impacts related to water in the reporting year and any plans you have to investigate this in the future

Primary reason	Future plans
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Further Information

Module: Risk Assessment

Page: W2. Procedures and Requirements

W2.1

Does your organization undertake a water-related risk assessment?

Water risks are assessed

W2.2

Please select the options that best describe your procedures with regard to assessing water risks

Risk assessment procedure	Coverage	Scale	Please explain
Comprehensive company-wide risk assessment	Direct operations and supply chain	All facilities and some suppliers	JBS procedure regarding the assessment of water risk is "Comprehensive company-wide" and cover all facilities, due to the importance of water quality and quantity in operation process and its sanitation procedures. The amount of water withdrawal is daily registered by all facilities, evaluating the need of future investment to ensure water availability. Due to Water relevance and increased concern for its scarcity, JBS is developing a specific committee for Water and Energy. This strategic planning also covers survey of water and energy risks to JBS business, and the water and energy company's efficiency The Price of commodities and Energy are affected by the availability of water. For commodities there is a committee that analyzes weather maps, reports of changes in planting, picture of world supply and demand, prices curves and economic scenario, making a strategic planning of purchasing commodities Brazilian energy matrix is composed mainly of hydropower, water availability and regularity of rainfall are critical to this process. JBS purchases energy at the free market, and periodically monitors climate conditions in order to identify the best time to conduct the purchase and selling of energy. Poultry and pork suppliers are also monitored in order to

Risk assessment procedure	Coverage	Scale	Please explain
			guarantee that water is constantly available for those animals, and ensure the Animal Welfare In 2014 JBS foods performed more than 250,000 technical visits in properties of integrated growers during production period

W2.3

Please state how frequently you undertake water risk assessments, what geographical scale and how far into the future you consider risks for each assessment

Frequency	Geographic scale	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Country	Up to 1 year	The staff responsible for purchasing energy at the free market, periodically monitors climate conditions in order to identify the best time to conduct the purchase and selling of energy. As the Brazilian matrix is composed mainly of hydropower, water availability and regularity of rainfall are critical to this process.
Six-monthly or more frequently	Country	Up to 1 year	JBS Foods has a Risk Committee (FRC). This committee meets quarterly to analyze weather maps, reports of changes in planting, world suppliers and demand, prices curves and economic scenario, identifying, monitoring and developing strategies to mitigate the risks which the Company is exposed to and minimize its possible effects on the company's business. The result is the strategic planning of purchasing commodities in short (3 months), medium (1 year) and long term (10 years).
Six-monthly or more frequently	Region	Up to 1 year	Poultry and pork suppliers are also monitored in order to guarantee that water is constantly available for those animals, and ensure the Animal Welfare. In 2014 JBS foods performed more than 250,000 technical visits in properties of integrated growers during production .
Six-monthly or more frequently	Facility	Up to 1 year	Due to its importance each productive unit performs water availability assessment for its region, taking into account its quality and volume availability. Depending on the site volume and quality demand, operating costs may increase and affect negatively the company's operations causing the shutdown of an operational unit. After the assessment, each unit evaluates the necessity to seek another collecting point for water consumption and the appropriate goals to be reached monthly.

W2.4

Have you evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy?

Yes, evaluated over the next 1 year

W2.4a

Please explain how your organization evaluated the effects of water risks on the success (viability, constraints) of your organization's growth strategy?

The evaluation of water risk occurs internally and with JBS suppliers, since the water risk goes beyond the company's gate. The water availability is crucial to JBS activities. Rainfall patterns can affect directly the production of animal food and energy generation, both very important resources to the company. For this reason, all facilities perform water availability assessment for its region, taking into account its quality and volume availability. Depending on the site volume and quality demand for water, operating costs may increase and affect negatively the company's operations causing the shutdown of an operational unit. After the assessment each unit evaluates the necessity to seek another collecting point for water consumption and the appropriate goals to be reached monthly. The result of this assessment guides the company decisions to prevent risks and improve its efficiency.

To prevent additional costs with energy and commodities, monitoring of suppliers is vital to the growth of the company. For commodities there is a committee that analyzes weather maps, reports of changes in planting, world suppliers and demand, prices curves and economic scenario, making a strategic planning of purchasing commodities. In addition, there is a project to create a Water Committee to deal specifically with water issues enhancing the management on this subject.

Brazilian energy matrix is composed mainly by hydropower. Water availability and regularity of rainfall are critical to this process. JBS purchases energy at the free market, and since energy prices can fluctuate along with the amount of water available for energy production, JBS periodically monitors climate conditions in order to identify the best time to conduct the purchase and selling of energy. Poultry and pork suppliers are also monitored in order to guarantee that water is constantly available for those animals, and ensure the Animal Welfare

W2.4b

What is the main reason for not having evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy, and are there any plans in place to do so in the future?

Main reason	Current plans	Timeframe until evaluation	Comment
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W2.5

Please state the methods used to assess water risks

Method	Please explain how these methods are used in your risk assessment
Internal company knowledge Regional government databases WRI Aqueduct Other: 1)Somar Metereologia and 2) Environmental legislation	<ul style="list-style-type: none"> • Internal company knowledge: This method consists in using JBS Knowledge in its sector to evaluate and identify risks. Also, the facilities knowledge of water consumption, availability, quality and wastewater discharge are essential for the risk assessment process, identifying the potential scarcity and water stress • Regional government databases: Brazilian government offers climate data on its platform. JBS uses this information in its strategic planning for purchase of energy and commodities. Brazilian National Water Agency (ANA) offers a range of data and pathways access to water information. It provides the pathway for the sites of watershed committees. The data available provides the possibility to JBS identify changes in the regulatory system and follow requirements made by the watershed committees • WRI Aqueduct: The site provides information regarding regions with water stress. This information aligned with company, the internal knowledge is used to decide to prevent future negatives impacts on JBS operation • Other, please specify : 1)In order to complement the climate information available in government database JBS uses the climate predictions of "Somar Metereologia" to plan the strategic purchase of commodities and energy 2)This aspect is evaluated during the process, since legal demands may change and it can affect directly the company production, since the wastewater standard can change and amount of water that the company is allowed to withdrawal

W2.6

Which of the following contextual issues are always factored into your organization's water risk assessments?

Issues	Choose option	Please explain
Current water availability and quality parameters at a local level	Relevant, included	All JBS activities involve the use of water (confinement, farm, incubatory, feed factory, leather and other activities), The evaluation of water supply source is mandatory and JBS units measure and manage regularly the volume of water withdrawal, collection site, water consumption, and conduct analysis to monitor water quality. This process is linked with the internal company Knowledge and JBS follows the environmental legislation.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	In some states where JBS sites are located it is requested the payments for water use (SP, RJ, BA, PR and MG). These regulations are tracked by the company through participation in watershed committee, which disclose information about the river Basin management, and is considered in JBS “ Regional government databases” method.
Current stakeholder conflicts concerning water resources at a local level	Relevant, included for some facilities/suppliers	In Brazil, the priority of water use is for human consumption, in that aspect it is important to JBS manage the conflicts with local stakeholders . This aspect is a working progress to JBS, and its implementation isn’t completed yet. There is discussion in some watershed committees, with the presence of environmental spoken-man and other members of the local society, company’s and government. This discussion is covered by JBS Regional Government databases and JBS follows the environmental legislation.
Current implications of water on your key commodities/raw materials	Relevant, included	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’s evaluated by the company. The monitoring process uses government databases, internal knowledge and climate data from “Somar meteorologia” to formulate a strategic planning of purchase.
Current status of ecosystems and habitats at a local level	Not relevant, explanation provided	This aspect is classified as “Not Relevant” because it isn’t always considered in JBS water assessment, since regardless of risk assessment JBS mitigates its impacts on the ecosystems. The Company has projects that considers the protection and preservation of the environment, knowing that forestry preservation is one of the aspects that ensure water supply and quality. JBS supports projects like the Novo Campo (New Field) Program, which promotes 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 brings financial benefits to the ranchers in the region.
Current river basin management plans	Relevant, included for some facilities/suppliers	The watershed committees are composed by public Authority representatives, civil society organizations and water users. Two of its main competence are to approve the Basin Water Resources Plan and to arbitrate conflicts over water use in the First Administrative Instance. The committee is responsible for the basin management plans. JBS follows the committees discussion which helps the company to identify possible changes in the regulatory system, and it is included in the “Regional government databases” method.
Current access to fully-functioning WASH services for all employees	Relevant, included	Water quality is primordial to maintain JBS production, due to the sanitation rules of the sector. The monitoring of water quality is presented in the operational process, and the consumption of

Issues	Choose option	Please explain
		water by JBS employees is in compliance with the standard for human consumption. This process is covered by the Internal company knowledge method and the accomplish of current legislation requirements.
Estimates of future changes in water availability at a local level	Relevant, included	All JBS facilities monitors water condition in its region (Internal company knowledge), and due to Water relevance and increased concern for its scarcity, JBS has been developing a specific committee for Water and Energy. This strategic planning also covers survey of water and energy risks to JBS business, and the company water and energy efficiency.
Estimates of future potential regulatory changes at a local level	Not evaluated	
Estimates of future potential stakeholder conflicts at a local level	Not evaluated	
Estimates of future implications of water on your key commodities/raw materials	Relevant, included	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 criterias evaluated by the company. The monitoring process uses government databases, internal knowledge and climate data from "Somar meterologia" to formulate a strategic planning of purchase
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Not evaluated	
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Not evaluated	
Scenario analysis of regulatory and/or tariff changes at a local level	Not evaluated	
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Not evaluated	
Scenario analysis of implications of water on your key commodities/raw materials	Not evaluated	
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Not evaluated	
Other		

W2.7

Which of the following stakeholders are always factored into your organization's water risk assessments?

Stakeholder	Choose option	Please explain
Customers	Relevant, included	Product quality depends directly on the quality of water used. Water scarcity impacts directly the price of energy, animal feed and quantity of products, and it affects the price of JBS final products.
Employees	Relevant, included	Water Management and water reduction are directly associated with employees action.
Investors	Relevant, included	Water availability is related to financial risk, since it has the power to shutdown units and reduce production and consequently JBS profit.
Local communities	Relevant, included	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 JBS permission to withdrawal water; the environmental agency can reduce JBS permit or cancel it.
NGOs	Relevant, included	The watershed committees is composed by public Authority representatives, civil society organizations and water users. NGOs participate in the committees meetings and can influence its decision.
Other water users at a local level	Relevant, included	The watershed committees is composed by public Authority representatives, civil society organizations and water users
Regulators	Relevant, included	Water shortage or high pressures of consumption were the main cause of payment for water usage in some regions.
River basin management authorities	Relevant, included	The watershed committee is an important tool and authority in river basin management, and it is covered in JBS water assessment
Statutory special interest groups at a local level	Not evaluated	
Suppliers	Relevant, included	JBS suppliers depend on water availability. - For grains suppliers water is vital for the crop development. - Brazil energy production is mainly hydropower plants, that harness energy from the available flow of the river. - Poultry and Pork suppliers need to guarantee the animal well-being, 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
Water utilities/suppliers at a local level	Relevant, included	About 3,9% of the water used inside the Company is supplied by third party, the price of the supplier can change due to scarcity of the water supply, resulting a rise in production cost

Stakeholder	Choose option	Please explain
Other		

W2.8

Please choose the option that best explains why your organisation does not undertake a water-related risk assessment

Primary reason	Please explain
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Further Information

Module: Implications

Page: W3. Water Risks

W3.1

Is your organization exposed to water risks, either current and/or future, that could generate a substantive change in your business, operations, revenue or expenditure?

Yes, direct operations and supply chain

W3.2

Please provide details as to how your organization defines substantive change in your business, operations, revenue or expenditure from water risk

Mapped and prioritized risk and opportunities defines substantive changes (in operation) for JBS. To evaluate and prioritize the risks and opportunities within the company (company and asset level), the process follows a methodology issued by the Sustainability Committee in which its 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 a 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 or high and medium probability impact. In the scenarios of medium and long term, only the risks / opportunities classified with high business impact and high probability of occurrence are the object of attention of the Sustainability Committee.

(c) The risks have been studied to be changed in opportunities.

The criteria for priorities is determined by assessing the impact of the risk and the probability of occurrence. The results are evaluated by the Sustainability Committee. The identified opportunities are assessed considering its improvement potential for the Sustainability Committee decision making.

W3.2a

Please provide the number of facilities* per river basin exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure and the proportion of total operations this represents

Country	River basin	Number of facilities	Proportion of total operations exposed to risk within river basin (%)	Comment
Brazil	Parana	23	11-20	Parana basin has the highest demand for water resources in the country, equivalent to 31% of Brazil demand, the main water use are irrigation and industry process. In 2014, some regions located in Parana Basin, such as São Paulo, experienced impacts due to scarcity affecting directly the human consumption. The Brazilian National Water Resources Policy states that in situations of scarcity the priority use of water resources is human consumption and animal watering. This way, in the case of

Country	River basin	Number of facilities	Proportion of total operations exposed to risk within river basin (%)	Comment
				water shortage, some facilities can be exposed to restrictions on the volume of the water withdrawals permit, difficulties in obtaining new permits, the need to purchase a large quantity of water from a third party increasing operational costs. This scenario increased the number of facilities exposed to risk in this river basin in comparison to CDP water in 2013. The classification of the facilities by basin was based on the data available in " http://hidroweb.ana.gov.br/HidroWeb.asp?Tocltem=4100 "
Brazil	Uruguay	1	1-5	The amount of facilities exposed to risk remained the same in comparison with 2013. The classification of the facilities by basin was based on the data available in " http://hidroweb.ana.gov.br/HidroWeb.asp?Tocltem=4100 "
Brazil	Other: South-east Atlantic (hydrographic	1	1-5	The classification of the facilities by basin was based on the data available in " http://hidroweb.ana.gov.br/HidroWeb.asp?Tocltem=4100 "
Brazil	Amazonas	5	11-20	The classification of the facilities by basin was based on the data available in " http://hidroweb.ana.gov.br/HidroWeb.asp?Tocltem=4100 "
Brazil	Other: Eastern Atlantic (hydrographic regions)	1	11-20	The amount of facilities exposed to risk remained the same in comparison with 2013. The Eastern Atlantic (hydrographic regions) covers Rio de Janeiro, one of the states also affected by the scarcity in the water supply. Moreover, the state is also high populated, and, as stated in Paraná Basin, in case of scarcity the priority use of water resources is human consumption and animal watering, which exposes JBS to risk due this reduction on the amount of water available. The classification of the facilities by basin was based on the data available in " http://hidroweb.ana.gov.br/HidroWeb.asp?Tocltem=4100 "
Brazil	Tocantins	3	21-30	The amount of facilities exposed to risk remained the same in comparison with 2013 The classification of the facilities by basin was based on the data available in " http://hidroweb.ana.gov.br/HidroWeb.asp?Tocltem=4100 "

W3.2b

Please provide the proportion of financial value that could be affected at river basin level associated with the facilities listed in W3.2a

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected within the river basin	Comment
Brazil	Parana	% global production capacity	21-30	In 2014, some regions located in Parana Basin, such as São Paulo, experienced impacts due to scarcity affecting directly the human consumption. The Brazilian National Water Resources Policy states that in situations of scarcity the priority use of water resources is human consumption and animal watering. This way, in the case of water shortage, some facilities can be exposed to restrictions on the volume of the water withdrawals permit, difficulties in obtaining new permits, the need to purchase a large quantity of water from a third party increasing operational costs
Brazil	Uruguay	% global production capacity	21-30	
Brazil	Other: South-east Atlantic (hydrographic regions)	% global production capacity	21-30	
Brazil	Amazonas	% global production capacity	6-10	
Brazil	Other: Eastern Atlantic (hydrographic regions)	% global production capacity	21-30	The Eastern Atlantic (hydrographic regions) covers Rio de Janeiro, one of the states also affected by the scarcity in the water supply. Moreover, the state is also high populated, and, as stated in Paraná Basin, in case of scarcity the priority use of water resources is human consumption and animal watering, which exposes JBS to risk due this reduction on the amount of water available
Brazil	Tocantins	% global production capacity	11-20	

W3.2c

Please list the inherent water risks that could generate a substantive change in your business, operations, revenue or expenditure, the potential impact to your direct operations and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
Brazil	Other: Brazil	Physical-Declining water quality	Fines/penalties	The discharge of effluent without appropriate controls into natural water resource directly undermines the quality of the water Resources.	Current-up to 1 year	Probable	Medium	Greater due diligence	Low	The company participates on local regulatory decisions through the watershed committee meetings, which has involvement of companies, government, NGOs and community.
Brazil	Other: Brazil	Physical-Ecosystem vulnerability	Supply chain disruption	The lack of rainfall could affect the energy generation, crops production (animal feed suppliers), and integrate partners supply.	Current-up to 1 year	Probable	High	Supplier diversification	High	The Group has an energy trader, who purchases directly from the free market, allowing the company to select by the source the energy to be

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<p>purchased. JBS Foods has a Risk Committee (FRC),this committee meets quarterly to analyze weather maps, reports of changes in planting, world supply and demand, prices curves and economic scenario, identifying, monitoring and developing strategies to mitigate the risks which the Company is exposed to and minimize its possible</p>

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<p>effects on the company's business. The result is the strategic planning of purchasing commodities in short (3 months), medium (1 year) and long term (10 years). JBS Foods is supporting the installation of tanks for collecting and storing rainwater; also, it has been supporting the installation of electric generators for its integrated</p>

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										partners to ensure a regular supply of both water and power
Brazil	Other: Brazil	Regulatory- Statutory water withdrawal limits/changes to water allocation	Other: Constraint to future growth	Many states have established water use fee, the trend is the establishment of new regulation for consumption and disposal.	1-3 years	Highly probable	Medium-high	Alignment of public policy positions with water stewardship goals	low	The company participates on local regulatory decisions through the watershed committee meetings, which has involvement of companies, government , NGOs and community.
Brazil	Other: Brazil	Physical-Increased water stress	Higher operating costs	High water demand in the industrial processes.	1-3 years	Unlikely	Low	Establish site-specific targets	Low	Setting goals for water consumption per animal slaughtered , subsidized by an investment

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										plan for the acquisition of equipment or process changes, allowing more efficient use of natural resource.
Brazil	Other: Brazil	Physical-Increased water stress	Plant/producti on disruption leading to reduced output	Stopping or limiting the productive capacity due to water scarcity or decrease in its quality.	1-3 years	Probable	High	Establish site-specific targets	Medium	Developme nt of projects for reuse of water and seek another sources for water withdrawal.
Brazil	Other: Brazil	Regulatory-Regulation of discharge quality/volumes leading to higher compliance costs	Higher operating costs	Slaughterhous e units located in the Amazon region are affected by the amplitude and variability of dry periods, since after treatment the industrial wastewater is	Current-up to 1 year	Highly probable	Low-medium	Infrastructur e investment	Medium-high	JBS has been evaluating alternatives for reduce the amount of water used in the production and identifying other

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				discharged in rivers, and in drought periods, its capacity to maintain its quality is compromised.						sources of discharge of treated effluents as fertigation.
Brazil	Parana	Regulatory- Statutory water withdrawal limits/changes to water allocation	Higher operating costs	Restriction on the volume of the water withdrawals permit if the rivers capacity decreases, as well as restriction on the hours for withdrawals. This increases the water costs, if the company has to purchase from third parties.	Current- up to 1 year	Probable	Low- medium	Engagement with public policy makers	There isn't	Participation at local Hydrographic Basin Committees . The company also adopts several operational actions with the objective to optimize the use of natural resources in its processes, such as: <ul style="list-style-type: none"> •Established site-specific targets • Infrastructure

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<ul style="list-style-type: none"> • Investment • Increased investment in new technology • Promote best practice and awareness
Brazil	Parana	Regulatory- Statutory water withdrawal limits/changes to water allocation	Higher operating costs	Restriction on the volume of the water withdrawals permit if the rivers capacity decreases, as well as restriction on the hours for withdrawals. This increases the water costs, if the company has to purchase from third parties.	Current- up to 1 year	Probable	Low- medium	Engagement with public policy makers	There isn't	<p>Participation at local Hydrographic Basin Committees . The company also adopts several operational actions with the objective to optimize the use of natural resources in its processes, such as:</p> <ul style="list-style-type: none"> • Established site-specific

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<ul style="list-style-type: none"> targets Infrastructure investment Increased investment in new technology Promote best practice and awareness
Brazil	Parana	Regulatory- Statutory water withdrawal limits/changes to water allocation	Higher operating costs	Restriction on the volume of the water withdrawals permit if the rivers capacity decreases, as well as restriction on the hours for withdrawals. This increases the water costs, if the company has to purchase from third parties.	Current- up to 1 year	Probable	Low- medium	Engagement with public policy makers	There isn't	Participation at local Hydrographic Basin Committees . The company also adopts several operational actions with the objective to optimize the use of natural resources in its processes, such as: <ul style="list-style-type: none">

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<ul style="list-style-type: none"> Established site-specific targets Infrastructure investment Increased investment in new technology Promote best practice and awareness
Brazil	Parana	Physical-Increased water scarcity	Plant/production disruption leading to reduced output	Currently, the region doesn't have plenty of water. A higher water scarcity could result in a production disruption or increase on the capital cost.	Current-up to 1 year	Probable	Medium	<ul style="list-style-type: none"> Establish site-specific targets Infrastructure investment Increased investment in new technology Promote best practice and awareness Other: As a preventive measure, the 		<ul style="list-style-type: none"> The company also adopts several operational actions with the objective to optimize the use of natural resources in its processes, such as: Established site-specific

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
								company adopts practices that can enable water consumption reduction in its processes and adopts reuse when and where allowed		<ul style="list-style-type: none"> targets • Infrastructure investment • Increased investment in new technology • Promote best practice and awareness
Brazil	Parana	Regulatory-Higher water prices	Higher operating costs	Currently the company needs to purchase a large quantity of water from a third party, increasing a lot the cost of production.	Current-up to 1 year	Probable	Medium	Establish site-specific targets Infrastructure investment Increased investment in new technology Promote best practice and awareness Other: As a preventive measure, the	The cost of water purchase is at least 3 times higher than the cost with underground and superficial withdrawals	The company adopts several operational actions with the objective to optimize the use of natural resources in its processes, such as: <ul style="list-style-type: none"> •Established site-specific

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
								company adopts practices that can enable water consumption reduction in its processes and adopts reuse when and where allowed		<ul style="list-style-type: none"> targets • Infrastructure investment • Increased investment in new technology • Promote best practice and awareness
Brazil	Parana	Regulatory- Increased difficulty in obtaining withdrawals/operations permit	Higher operating costs	Obtaining permits could be even more complicated due to the unavailability of water in abundance in the state.	Current- up to 1 year	Probable	Medium-high	Other: The company built an emissary, to reduce the amount of organic load, by distributing it along the river. Even with a lower water volume in the river, it will be possible to maintain its	Investment of approximately R\$1,800,000	The company adopts several operational actions with the objective to optimize the use of natural resources in its processes, such as: <ul style="list-style-type: none"> •Established site-specific

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
								quality.		<ul style="list-style-type: none"> • Infrastructure investment • Increased investment in new technology • Promote best practice and awareness
Brazil	Parana	Physical-Increased water scarcity	Higher operating costs	In 2014 shortages of water didn't lead to disruption on slaughtering, but the unit has gone through critical moments. In certain periods of the year the unit run with wells on its limits. If availability decreases, the plant will have no water	Current-up to 1 year	Probable	Medium	Other: As a preventive measure, the company adopts practices that can enable water consumption reduction in its processes		<p>The company adopts several operational actions with the objective to optimize the use of natural resources in its processes, such as:</p> <ul style="list-style-type: none"> • Established site-specific targets • Infrastructure

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				in its reservoirs						<ul style="list-style-type: none"> Increased investment in new technology Promote best practice and awareness
Brazil	Parana	Regulatory- Increased difficulty in obtaining withdrawals/operations permit	Higher operating costs	Obtaining permits could be even more complicated due to the unavailability of water in abundance in the state	Current- up to 1 year	Probable	Medium-high	Other: The company built an emissary, to reduce the amount of organic load, by distributing it along the river. Even with a lower water volume in the river, it will be possible to maintain its quality.	Investment of approximately R\$10,000	<p>The company adopts several operational actions with the objective to optimize the use of natural resources in its processes, such as:</p> <ul style="list-style-type: none"> Established site-specific targets Infrastructure investment

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<ul style="list-style-type: none"> • Increased investment in new technology • Promote best practice and awareness
Brazil	Parana	Physical-Projected water scarcity	Higher operating costs	Currently, the region doesn't have plenty of water. A higher water scarcity could result in a production disruption or increase on the capital cost.	Current-up to 1 year	Probable	Medium	Other: As a preventive measure, the company adopts practices that can enable water consumption reduction in its processes and adopts reuse when and where allowed	Investment of approximately R\$2,000,000	<p>The company adopts several operational actions with the objective to optimize the use of natural resources in its processes, such as:</p> <ul style="list-style-type: none"> • Established site-specific targets • Infrastructure investment • Increased investment

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<p>in new technology</p> <ul style="list-style-type: none"> Promote best practice and awareness
Brazil	Parana	Physical-Increased water scarcity Physical-Seasonal supply variability/Inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, what leads to an initial investment by the company.	Current-up to 1 year	Probable	Medium-high	<p>Establish site-specific targets</p> <p>Infrastructure investment</p> <p>Infrastructure maintenance</p> <p>Greater due diligence</p> <p>Increased capital expenditure</p> <p>Increased investment in new technology</p> <p>Promote best practice and awareness</p> <p>Water management</p>		<p>The company adopts a mix of different operational activities. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment.</p>

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
								incentives		
Brazil	Amazonas	Physical-Increased water scarcity Physical-Seasonal supply variability/Inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, what leads to an initial investment by the company.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Water management incentives	R\$ 620,888.35	The company adopts a mix of different operational activities. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment.
Brazil	Other: Eastern Atlantic	Physical-Increased water scarcity Physical-Seasonal	Higher operating costs	Necessity to look for another water	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets		The company adopts a

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
	(hydrographic regions)	supply variability/Inter annual variability		supply and discharge sources, what leads to an initial investment by the company.				Infrastructure investment Greater due diligence Increased investment in new technology Promote best practice and awareness Water management incentives		mix of different operational activities. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment.
Brazil	Parana	Physical-Increased water scarcity Physical-Seasonal supply variability/Inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets Infrastructure investment Infrastructure maintenance	R\$ 170,000	The company adopts a mix of different operational activities. The company aims to

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
								Increased capital expenditure Increased investment in new technology Promote best practice and awareness Water management incentives		optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment.
Brazil	Tocantins	Physical-Increased water scarcity Physical-Seasonal supply variability/Inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment	R\$ 1,291,460	The company adopts a mix of different operational activities. The company aims to optimize the use of natural resources through process modification

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
								in new technology Promote best practice and awareness Water management incentives		s and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Amazonas	Physical-Increased water scarcity Physical-Seasonal supply variability/Inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and	R\$ 90,000	The company adopts a mix of different operational activities. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
								awareness Water management incentives		efficient use of water / wastewater treatment
Brazil	Tocantins	Physical-Increased water scarcity Physical-Seasonal supply variability/Inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets Infrastructure investment Infrastructure maintenance Increased capital expenditure Increased investment in new technology Promote best practice and awareness		The company adopts a mix of different operational activities. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
Brazil	Amazonas	Physical-Flooding	Disruption to sales	Interruption of activities due to the flooding of Madeira River, preventing the transport of raw material (cattle), inputs (packaging, biomass boiler and others), and distribution of finished products. Furthermore, we identified the following impacts: <ul style="list-style-type: none"> • Plant/production disruption leading to reduced output • Supply chain disruption • Transport disruption 	1-3 years	Highly probable	Low-medium	Develop flood emergency plans		Changes in the production planning and in supply chains
Brazil	Amazonas	Physical-Increased water scarcity Physical-Seasonal supply	Delays in permitting	Difficulties in obtaining renewal of permits for	Current-up to 1 year	Probable	Low-medium	Engagement with public policy makers		The company adopts a mix of

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
		variability/Inter annual variability Regulatory-Increased difficulty in obtaining withdrawals/operations permit		water withdraws and effluent discharge. Necessity to look for another water supply and discharge sources, requiring initial investment by the company. Furthermore, we identified the following impacts: • Higher operating costs				Establish site-specific targets Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Water management incentives		different operational activities. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Parana	Physical-Increased water scarcity Physical-Rationing of municipal water supply	Reduction in revenue	Necessity to look for another water supply and discharge	Current-up to 1 year	Probable	Low-medium	Engagement with public policy makers Establish		The company adopts a mix of different

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
		Physical-Seasonal supply variability/Inter annual variability		sources, requiring initial investment by the company.				<ul style="list-style-type: none"> site-specific targets Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital expenditure Increased investment in new technology Promote best practice and awareness Water management incentives 		operational activities. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Amazonas	Physical-Increased water scarcity Physical-Seasonal supply variability/Inter	Higher operating costs	Necessity to look for another water supply and discharge sources,	Current-up to 1 year	Probable	Low-medium	<ul style="list-style-type: none"> Establish site-specific targets Infrastructure investment 		The company adopts a mix of different operational

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
		annual variability		requiring initial investment by the company.				Infrastructure maintenance Increased capital expenditure Increased investment in new technology Promote best practice and awareness Water management incentives		activities. The company aims to optimize the use of natural resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Tocantins	Physical-Increased water scarcity Physical-Seasonal supply variability/Inter annual variability	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets Infrastructure investment Infrastructure maintenance Greater due diligence Increased		The company adopts a mix of different operational activities. The company aims to optimize the use of natural

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
								capital expenditure Increased investment in new technology Promote best practice and awareness Water management incentives		resources through process modifications and / or investments in equipment for more efficient use of water / wastewater treatment
Brazil	Parana	Physical-Declining water quality	Higher operating costs	Necessity to look for another water supply and discharge sources, requiring initial investment by the company.	Current-up to 1 year	Probable	Low-medium	Engagement with public policy makers Establish site-specific targets Infrastructure investment Infrastructure maintenance Greater due diligence Increased capital		The company adopts a mix of different operational activities. The company aims to optimize the use of natural resources through process modifications and / or

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
								expenditure Increased investment in new technology Promote best practice and awareness Water management incentives		investments in equipment for more efficient use of water / wastewater treatment

W3.2d

Please list the inherent water risks that could generate a substantive change in your business operations, revenue or expenditure, the potential impact to your supply chain and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
Brazil	Other: Brazil	Physical-Climate change	Other: Constraint to future growth	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.	>6 years	Probable	Medium-high	Engagement with suppliers	High	Environmental Monitoring System of cattle suppliers, which assists in combating deforestation. Partnership projects with investors to develop integrated production (farming, forestry and livestock).
Brazil	Other: Brazil	Physical-Climate change	Other: Constraint to future growth	Droughts can impact the availability of electricity since the majority of energy generated in Brazil comes from Hydroelectric power plants, causing the increase of price and the probability of black-outs occurrence.	Current-up to 1 year	Highly probable	High	Supplier diversification	High	The Group has an energy trader, who purchases directly from the free market, allowing the company to select the source the energy to be purchased.
Brazil	Parana	Physical-Pollution of water source	Higher operating costs	Due to the difficulty of treatment in rural areas, the farmer may have its production compromised.	Current-up to 1 year	Probable	High	Water management incentives	High	The Company provides technical support in environmental criteria for suppliers, such as water management

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your direct operations that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain
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W3.2f

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your supply chain that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain
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W3.2g

Please choose the option that best explains why you do not know if your organization is exposed to water risks that could generate a substantive change in your business operations, revenue or expenditure and discuss any future plans you have to assess this

Primary reason	Future plans
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Further Information

W4.1

Does water present strategic, operational or market opportunities that substantively benefit/have the potential to benefit your organization?

Yes

W4.1a

Please describe the opportunities water presents to your organization and your strategies to realize them

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
Brazil	Cost savings	Reduction in the amount of water used in the industrial processes, decreasing costs with water consumption and effluent treatment.	1-3 years	A diagnosis of all operations carried out through a corporate action plan, identifying areas of higher water consumption and opportunities for improvements in production process. In 2014 JBS was able to reduce in 2% its water withdrawal, which is equivalent of 1.1 billion liters of water, due to the efforts of JBS to increase its efficiency and reduce consumption.
Brazil	Improved water efficiency	JBS units have established water consumption Targets	Current-up to 1 year	JBS Targets are based on production volume and each unit is encouraged to develop programs and projects for the sustainable water use in their industrial processes. In 2014 JBS was able to reduce in 2% its water withdrawal, which is equivalent of 1.1 billion liters of water, due to the efforts of JBS to increase its efficiency and reduce consumption. This result was possible due to the company's efforts in water reuse, changes in the production process and also with implementation of daily controls that enabled consumption reduction even with increased beef production. In terms of water reuse, in 2014, JBS Brazil had a 3% reuse index of the total volume collected, which is equivalent to more than two million m3 of water.
Brazil	Increased shareholder	Disclose of actions on the Sustainably report.	Current-up to 1 year	JBS sustainability report provides the investor with vital information on water management, disclosing JBS action to ensure its production in times of water shortage.

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
	value			
Brazil	Ensuring supply chain resilience	Preparing suppliers to scarcity periods	Current-up to 1 year	JBS Foods 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. At the Itapiranga unit, the region in which the project was implemented, 43% of poultry producers already have rainwater tanks with aggregate storage capacity of 85 million liters of water. 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 and firm commitment of JBS and its integrated producers to identify solutions to ensure water availability.
Brazil	Increased brand value	Access to new markets / new trends of more sustainable products (with lower environmental impacts).	1-3 years	JBS has projects to establishment partnerships with clients, to make its products in 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.
Company-wide	Increased brand value	The decision to voluntarily report water resources management through CDP Water, adds value to the company image and reputation for their stakeholders.	Current-up to 1 year	The company has publicly disclosed its actions in the annual report and in other reports such as CDP Water.

W4.1b

Please choose the option that best explains why water does not present your organization with any opportunities that have the potential to provide substantive benefit

Primary reason	Please explain

W4.1c

Please choose the option that best explains why you do not know if water presents your organization with any opportunities that have the potential to provide substantive benefit

Primary reason	Please explain

Further Information

Module: Accounting

Page: W5. Facility Level Water Accounting (I)

W5.1

Water withdrawals: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 1	Brazil	Parana	Facility 1	1619.95	Lower	
Facility 2	Brazil	Parana	Facility 2	10.80	Much higher	
Facility 3	Brazil	Parana	Facility 3	317.94	Much lower	
Facility 4	Brazil	Parana	Facility 4	665.82	Lower	

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 5	Brazil	Parana	Facility 5	5.38	Lower	
Facility 6	Brazil	Parana	Facility 6	859.29	Lower	
Facility 7	Brazil	Parana	Facility 7	7.63	Lower	
Facility 8	Brazil	Parana	Facility 8	24.37	Much higher	
Facility 9	Brazil	Parana	Facility 9	1339.45	Higher	
Facility 10	Brazil	Parana	Facility 10	9.30	Higher	
Facility 11	Brazil	Parana	Facility 11	14.83	Higher	
Facility 12	Brazil	Parana	Facility 12	1838.69	Much higher	
Facility 13	Brazil	Parana	Facility 13	16.60	Lower	
Facility 14	Brazil	Parana	Facility 14	32.23	Much higher	
Facility 15	Brazil	Parana	Facility 15	310.77	Lower	
Facility 16	Brazil	Parana	Facility 16	2.80	Lower	
Facility 17	Brazil	Parana	Facility 17	832.08	This is our first year of measurement	
Facility 18	Brazil	Parana	Facility 18	0.98	This is our first year of measurement	
Facility 19	Brazil	Uruguay	Facility 19	1988.88	Higher	
Facility 20	Brazil	Other: South-east Atlantic (Hydrografic region)	Facility 20	531.58	Higher	
Facility 21	Brazil	Parana	Facility 21	777.28	Lower	
Facility 22	Brazil	Amazonas	Facility 22	384.25	Much lower	
Facility 23	Brazil	Other: Eastern Atlantic (Hydrografic region)	Facility 23	264.93	Much lower	
Facility 24	Brazil	Tocantins	Facility 24	491.32	Lower	
Facility 25	Brazil	Amazonas	Facility 25	398.40	Much lower	
Facility 26	Brazil	Tocantins	Facility 26	1.50	This is our first year of measurement	Facility 26 is a new facility
Facility 27	Brazil	Amazonas	Facility 27	330.51	Higher	
Facility 28	Brazil	Parana	Facility 28	809.77	Higher	
Facility 29	Brazil	Amazonas	Facility 29	276.34	Lower	

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 30	Brazil	Amazonas	Facility 30	112.94	Much higher	
Facility 31	Brazil	Parana	Facility 31	180.62	This is our first year of measurement	Facility 31 is a new facility
Facility 32	Brazil	Parana	Facility 32	570.96	Much higher	
Facility 33	Brazil	Parana	Facility 33	325.25	Higher	
Facility 34	Brazil	Tocantins	Facility 34	88.66	Lower	

Further Information

Page: W5. Facility Level Water Accounting (II)

W5.1a

Water withdrawals: for the reporting year, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.1

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 1	1619.95	0	0	0	0	0	0	0	
Facility 2	0	0	0	10.80	0	0	0	0	
Facility 3	317.93	0	0	0	0	0	0.01	0	
Facility 4	665.82	0	0	0	0	0	0	0	
Facility 5	0	0	0	5.38	0	0	0	0	
Facility 6	0	0	0	496.37	0	0	362.92	0	

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 7	0	0	0	0.64	0	0	6.98	0	
Facility 8	0	0	0	24.37	0	0	0	0	
Facility 9	940.62	0	0	398.84	0	0	0	0	
Facility 10	0	0	0	9.30	0	0	0	0	
Facility 11	0	0	0	0	0	0	14.83	0	
Facility 12	885.01	0	0	953.16	0	0	0.53	0	
Facility 13	0	0	0	16.60	0	0	0	0	
Facility 14	0	0	0	32.23	0	0	0	0	
Facility 15	0	0	0	310.77	0	0	0	0	
Facility 16	0	0	0	2.79	0	0	0.01	0	
Facility 17	0	0	0	832.08	0	0	0	0	
Facility 18	0	0	0	0	0	0	0.98	0	
Facility 19	1413.86	0	0	575.02	0	0	0	0	
Facility 20	254.93	0	0	23.70	0	0	252.95	0	
Facility 21	777.28	0	0	0	0	0	0	0	
Facility 22	384.25	0	0	0	0	0	0	0	
Facility 23	264.93	0	0	0	0	0	0	0	
Facility 24	491.32	0	0	0	0	0	0	0	
Facility 25	374.40	0	0	0	0	0	24.00	0	
Facility 26	1.50	0	0	0	0	0	0	0	
Facility 27	328.03	0	0	0	0	0	2.49	0	
Facility 28	408.89	0	0	400.88	0	0	0	0	
Facility 29	276.34	0	0	0	0	0	0	0	
Facility 30	0	0	0	112.94	0	0	0	0	
Facility 31	180.62	0	0	0	0	0	0	0	
Facility 32	492.62	0	0	56.69	0	0	21.65	0	
Facility 33	0	0	0	180.94	0	0	144.30	0	
Facility 34	0	0	0	85.21	0	0	3.45	0	

W5.2

Water discharge: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 1	1460.64	Lower	
Facility 2	0.00	About the same	The wastewater of this Facility is accounted in facility 1
Facility 3	281.41	Much lower	
Facility 4	603.76	Lower	
Facility 5	4.84	This is our first year of measurement	
Facility 6	814.75	Lower	
Facility 7	0.00	About the same	The wastewater of this Facility is accounted in facility 6
Facility 8	23.01	Higher	
Facility 9	1207.62	Higher	
Facility 10	0.00	About the same	The wastewater of this Facility is accounted in facility 9
Facility 11	15.40	Lower	
Facility 12	1671.06	Lower	
Facility 13	5.21	This is our first year of measurement	
Facility 14	21.95	Much lower	
Facility 15	252.27	Higher	
Facility 16	0.00	About the same	The wastewater of this Facility is accounted in facility 15
Facility 17	757.19	This is our first year of measurement	
Facility 18	0	This is our first year of measurement	The wastewater of this Facility is accounted in facility 17
Facility 19	1755.03	Much higher	
Facility 20	447.71	Much higher	
Facility 21	621.82	Much lower	
Facility 22	396.30	Lower	
Facility 23	238.44	Much lower	

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 24	399.36	Lower	
Facility 25	358.56	Much lower	
Facility 26	105.22	This is our first year of measurement	New Facility
Facility 27	295.22	Higher	
Facility 28	800.77	Higher	
Facility 29	269.96	Lower	
Facility 30	101.65	Much higher	
Facility 31	163.60	This is our first year of measurement	New Facility
Facility 32	428.92	Much higher	
Facility 33	259.27	Lower	
Facility 34	83.69	Much higher	

W5.2a

Water discharge: for the reporting year, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.2

Facility reference number	Fresh surface water	Municipal Treatment Plant	Seawater	Groundwater	Comment
Facility 1	1460.64	0	0	0	
Facility 2	0	0	0	0	
Facility 3	281.41	0	0	0	
Facility 4	603.76	0	0	0	
Facility 5	0	0	0	4.84	
Facility 6	814.75	0	0	0	
Facility 7	0	0	0	0	

Facility reference number	Fresh surface water	Municipal Treatment Plant	Seawater	Groundwater	Comment
Facility 8	23.01	0	0	0	
Facility 9	1207.62	0	0	0	
Facility 10	0	0	0	0	
Facility 11	15.40	0	0	0	
Facility 12	1671.06	0	0	0	
Facility 13	0	0.42	0	4.79	
Facility 14	21.95	0	0	0	
Facility 15	252.27	0	0	0	
Facility 16	0	0	0	0	
Facility 17	757.19	0	0	0	
Facility 18	0	0	0	0	
Facility 19	1755.03	0	0	0	
Facility 20	447.71	0	0	0	
Facility 21	621.82	0	0	0	
Facility 22	396.30	0	0	0	
Facility 23	238.44	0	0	0	
Facility 24	399.36	0	0	0	
Facility 25	358.56	0	0	0	
Facility 26	105.22	0	0	0	
Facility 27	295.22	0	0	0	
Facility 28	800.77	0	0	0	
Facility 29	135.94	0	0	134.02	
Facility 30	101.65	0	0	0	
Facility 31	119.32	0	0	44.28	
Facility 32	16.12	0	0	412.80	
Facility 33	0	259.27	0	0	
Facility 34	0	0	0	83.69	

Water consumption: for the reporting year, please provide water consumption data for all facilities reported in W3.2a

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain the change if substantive
Facility 1	159.31	Lower	
Facility 2	1.08	Much higher	Estimated value
Facility 3	36.53	Much higher	
Facility 4	62.06	Lower	
Facility 5	0.54	Much lower	
Facility 6	44.54	Much higher	
Facility 7	0.76	Lower	Estimated value
Facility 8	1.36	Much lower	
Facility 9	131.84	Higher	
Facility 10	0.93	Higher	Estimated value
Facility 11	1.48	Higher	
Facility 12	167.63	Much lower	
Facility 13	11.38	Lower	
Facility 14	10.28	Much lower	
Facility 15	58.49	Much lower	
Facility 16	0.28	Lower	Estimated value
Facility 17	74.87	This is our first year of measurement	
Facility 18	0.10	This is our first year of measurement	Estimated value
Facility 19	233.85	Much lower	
Facility 20	83.87	Much lower	
Facility 21	155.46	Lower	
Facility 22	38.43	Much lower	
Facility 23	26.49	Much lower	
Facility 24	91.96	Higher	
Facility 25	39.84	Much lower	

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain the change if substantive
Facility 26	0.15	This is our first year of measurement	New Facility
Facility 27	35.29	Much higher	
Facility 28	9.00	Much lower	
Facility 29	6.38	Much lower	
Facility 30	11.29	Much higher	
Facility 31	17.02	This is our first year of measurement	New Facility
Facility 32	142.04	Much higher	
Facility 33	65.98	Much higher	
Facility 34	4.97	Much lower	

W5.4

For all facilities reported in W3.2a what proportion of their water accounting data has been externally verified?

Water aspect	% verification	What standard and methodology was used?
Water withdrawals- total volumes	76-100	Local environmental agencies perform periodic inspections in order to verify water consumption by source, volume of Wastewater discharged, Wastewater parameter, among other information
Water withdrawals- volume by sources	76-100	Local environmental agencies perform periodic inspections in order to verify water consumption by source, volume of Wastewater discharged, Wastewater parameter, among other information
Water discharges- total volumes	76-100	Local environmental agencies perform periodic inspections in order to verify water consumption by source, volume of Wastewater discharged, Wastewater parameter, among other information
Water discharges- volume by destination	76-100	Local environmental agencies perform periodic inspections in order to verify water consumption by source, volume of Wastewater discharged, Wastewater parameter, among other information
Water discharges- volume by treatment method	Not verified	

Water aspect	% verification	What standard and methodology was used?
Water discharge quality data- quality by standard effluent parameters	76-100	Local environmental agencies perform periodic inspections in order to verify water consumption by source, volume of Wastewater discharged, Wastewater parameter, among other information
Water consumption- total volume	Not verified	

Further Information

Module: Response

Page: W6. Governance and Strategy

W6.1

Who has the highest level of direct responsibility for water within your organization and how frequently are they briefed?

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
Individual/Sub-set of the Board or other committee appointed by the Board	Scheduled- quarterly	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.

W6.2

Is water management integrated into your business strategy?

Yes

W6.2a

Please choose the option(s) below that best explain how water has positively influenced your business strategy

Influence of water on business strategy	Please explain
Alignment of public policy positions with water stewardship goals	The company can track local actions and influence politics decisions through participation in watershed committees.
Establishment of sustainability goals	The water usage management contributes to the Company's sustainability. One of the examples is the establishment of a consumption goal and its monitoring.
Establishment of a clear water strategy	Due to Water relevance and increased concern for its scarcity, JBS is developing a specific committee for Water and Energy. This strategic planning also covers survey of water and energy risks to JBS business and the company water and energy efficiency.
Exploration of water valuation practices	Actions to reduce consumption and increase water reuse brought some gains to the company, such as, awards, client's recognition and markets access. Improving water efficiency, and encouraging units to develop programs and projects for the sustainable use of water in their industrial processes. Reducing the amount of water withdrawal, ensuring the units productions.
Water resource considerations are factored into location planning for new operations	This assessment is vital to ensure the units production, and the identification of regions with water stress makes possible to prevent additional costs, guaranteeing the company's profit.
Water resource considerations are factored into site expansions	The units' expansion has to evaluate the water availability, in order to certify the feasibility of the expansion, avoiding financial losses.
Introduction of water management KPIs	Report through CDP Water is helping the company to manage new sustainability indicators, with strategic view on water themes
Investment in staff/training	Due to the evaluation of water usage, it was possible to identify the necessity of staff training, aiming to improve water management.
Publicly demonstrated our commitment to water	The Company can publicly demonstrate its engagement with water management through its annual report and CDP Water questionnaire, and in the Sustainability Report, through specific water indicators
Greater customer engagement	Due to the water crises, JBS was requested by its clients to provide information about the company's water management.

Influence of water on business strategy	Please explain
Greater supplier engagement	The company tracks the production in its poultry and pork suppliers through technical visits, helping farmers to guarantee water availability
Tighter operational performance standards	Identifying risks and impacts related to local and global water usage helps the company to elaborate policies related to water use, including goals and restrictions.

W6.2b

Please choose the option(s) below that best explains how water has negatively influenced your business strategy

Influence of water on business strategy	Please explain
Other: Production disruption	The risk of production disruption is associated with water shortage or high operational cost
Divestment from regions exposed to water risks	Problems with water withdrawal have already been one of the criteria used to close an operation site.
Increased capital expenditure	The ongoing decrease of water quality or water shortage has severe implications on operational cost since it would be necessary to withdraw water from other locations or install a new treatment system.

W6.2c

Please choose the option that best explains why your organization does not integrate water management into its business strategy and discuss any future plans to do so

Primary reason	Please explain
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W6.3

Does your organization have a water policy that sets out clear goals and guidelines for action?

Yes

W6.3a

Please select the content that best describes your water policy (tick all that apply)

Content	Please explain why this content is included
Company-wide Performance standards for direct operations	It's a company-wide since all units have to control and track water aspects, covering water withdrawal, quality standards, discharge of waste water 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 foods has an Environmental Guide that establishes standard to guarantee that all units follow the same procedure. It also explain 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

W6.4

How does your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) during the most recent reporting period compare to the previous reporting period?

Water CAPEX (+/- % change)	Water OPEX (+/- % change)	Motivation for these changes
258.9	11.3	The motivation behind these changes is to guarantee constant improvement of processes, ensuring the standards recommended by law. Capex increased due to the approval of an investment plan, after the completion of the environmental diagnosis. The investment plan aims the application of new technologies, more efficient equipment in water consumption and water treatment. In the reporting period, there were more than 15 facilities that invested in projects to improve the water and wastewater treatment, which helped to boost the values of CAPEX. The variation in OPEX was due to increase in chemical costs used in water and wastewater treatment and due to 10 new plants that started operations in 2014.

Further Information

Page: W7. Compliance

W7.1

Was your organization subject to any penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations in the reporting year?

Yes, not significant

W7.1a

Please describe the penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations and your plans for resolving them

Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution
Facility 35	Fine	There was a leakage of wastewater from a deactivated sedimentation pond to a stream The incident occurred only one time in 2014. It never occurred in previous years,	1	14000	BRL(R\$)	The stream was cleaned and the pond was deactivated.
Facility 17	Fine	The effluent discharged was not in compliance with discharge standards	1	30000	BRL(R\$)	Physico-chemical treatment adjustment of the wastewater treatment plant.

W7.1b

What proportion of your total facilities/operations are associated with the incidents listed in W7.1a

0.83%

W7.1c

Please indicate the total financial impacts of all incidents reported in W7.1a as a proportion of total operating expenditure (OPEX) for the reporting year. Please also provide a comparison of this proportion compared to the previous reporting year

Impact as % of OPEX	Comparison to last year
0.04	Lower

Further Information

W8.1

Do you have any company wide targets (quantitative) or goals (qualitative) related to water?

Yes, targets and goals

W8.1a

Please complete the following table with information on company wide quantitative targets (ongoing or reached completion during the reporting period) and an indication of progress made

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base-line year	Target year	Proportion of target achieved, % value
Reduction of product water intensity	Cost savings	Maximum targets for consumption per tonne of products	Other: m ³ /ton products - manufactured products	2013	2014	100%
Reduction of product water intensity	Cost savings	Maximum targets for consumption per slaughtered animal.	Other: m ³ /cattle	2013	2014	89%
Reduction of product water intensity	Cost savings	Maximum targets for consumption per kg of leather	Other: Litters/kg de leather	2013	2014	100%
Reduction of product water intensity	Cost savings	Maximum targets for consumption per slaughtered animal (poultry).	Other: Litters/poultry	2013	2014	89%
Reduction of product water intensity	Cost savings	Maximum targets for consumption per slaughtered animal (pork).	Other: m ³ /pork	2013	2014	95%

W8.1b

Please describe any company wide qualitative goals (ongoing or reached completion during the reporting period) and your progress in achieving these

Goal	Motivation	Description of goal	Progress
Engagement with public policy makers to advance sustainable water policies and management	Water stewardship	To participate in watershed committee.	JBS tracks the progress during watershed committee discussion.
Engagement with suppliers to help them improve water stewardship	Recommended sector best practice	Ensure the supply of quality water	Poultry and pork suppliers are also monitored in order to guarantee that water is constantly available for those animals. and ensure the Animal Welfare. In 2014 JBS foods performed more than 250.000 technical visits in properties of integrated growers during production . JBS Foods 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. At the Itapiranga unit, the region in which the project was implemented. 43% of poultry producers already have rainwater tanks with aggregate storage capacity of 85 million liters of water. 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.
Sustainable agriculture	Recommended sector best practice	Sustainable management of suppliers in the Amazon	The Company has projects aiming the protection and perseveration of the environment, knowing that forestry preservation is one of the aspects that ensure water supply and quality. JBS supports projects as the Novo Campo (New Field) Program. which promotes 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.

W8.1c

Please explain why you do not have any water-related targets or goals and discuss any plans to develop these in the future

Further Information

Module: Linkages/Tradeoff

Page: W9. Managing trade-offs between water and other environmental issues

W9.1

Has your organization identified any linkages or trade-offs between water and other environmental issues in its value chain?

Yes

W9.1a

Please describe the linkages or trade-offs and the related management policy or action

Environmental issues	Linkage or trade-off	Policy or action
Water and Electricity Consumption	Linkage	The use of pumping equipment's are common in water withdrawal processes, and its operation depends on the electricity available. In 2014 JBS was able to reduce in 2% the total amount of water withdrawal, consequently the need to pump water and the consumption of energy due to this process was lower. JBS has targets of water consumption that makes possible to improve its production efficiency and also procedures that helps to identify the facilities that need improvement
Water and Fuel Consumption	Linkage	All facilities uses steam in the energy production process. This steam produced through the heating of water by fuel combustion such as wood. When the water (Steam after the condensation process) is recirculated in the energy generation process, making possible to generate electricity with less fuel. Moreover the recirculation of Steam reduces the demand for water withdrawal, helping in the process of saving water.

Further Information

Module: Sign Off

W10.1

Please provide the following information for the person that has signed off (approved) your CDP water response

Name	Job title	Corresponding job category
Marcio Nappo	Sustainability Director	Director on board

W10.2

Addressing water risks effectively, in many instances, requires collective action. CDP would like to support you in finding potential partners that are also working to tackle water challenges in the river basins you report against. Please select if your organization would like CDP to transfer your publicly disclosed risk and impact drivers and response strategy data from questions W1.4a, W3.2b, W3.2c, W4.1a and W8.1b to the United Nations Global Compact Water Action Hub.

No

Further Information

CDP