

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

W0.1**Introduction**

Please give a general description and introduction to your organization.

JBS S.A. is a global leader in animal protein processing, owner of beef, pork and lamb, poultry and leather processing plants, in addition to feedlots. It also operates in the segments of cleaning and hygiene products, collagen, can making, casings, biodiesel, vegetable, recycling and transport.

Headquartered in São Paulo and foothold in 22 different countries, the company has more than 185,000 employees in production platforms and sales offices. Its team serves more than 300,000 customers in over 150 countries, offering a vast product portfolio and renowned brands, including Swift, Friboi, Seara, 1855, Canelones, Great Southern, Doriana, Rezende, Seara Turma da Mônica, Maturatta, Swift Black, All Natural, Cabaña Las Lilas, Pilgrim's, Gold Kist Farms, Pierce and Frangosul.

The businesses are organized in the following units: JBS Mercosul (which includes the Company's beef, leather and related businesses in Brazil, Argentina, Paraguay and Uruguay), JBS USA (responsible for operations in Australia, Canada, the United States, Mexico and Puerto Rico) and JBS foods, created in 2013 with focus on the poultry, pork and value added products in Brazil.

The company's shares have been traded in the Novo Mercado Special Corporate Governance Listing segment of the BM&FBOVESPA since 2007, when it held its IPO. In 2013, the company posted net revenue of R\$92.9 billion, with exports accounting for 27% of this total. In terms of revenue breakdown by business unit, JBS Mercosul contributed with R\$25.8 billion (including JBS Foods), while JBS USA contributed with US\$18.6 billion (beef), US\$3.5 billion (pork) and US\$8.4 billion (poultry).

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

Tue 01 Jan 2013 - Tue 31 Dec 2013

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

List of 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.	Units outside Brazil won't be reported, since the company is passing through a process of strategic and global guidelines alignment. During this alignment process only the information about Brazilian units will be included on the questionnaire.

Further Information

Module: Current State

Page: W1. Context

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	Importance rating	Please explain
Direct use: sufficient amounts of good quality freshwater available for use across your own operations	Vital for operations	Water quality and quantity are vital to JBS business continuity, since its use is essential to the sanitation procedures and industrial process, starting on the animal arrival to the slaughterhouse, and during the process of plucking, gutting and cleaning. These processes are also affected by the amplitude and variability of dry periods, since after treatment the industrial wastewater is discharged in rivers, and in drought periods, its capacity to maintain its quality is compromised.
Direct use: sufficient amounts of recycled, brackish and/or produced water available for use across your own operations	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 sausages, which currently uses tanks that allow the reuse of water in the process. The reuse also occurs outside the industrial process, since the treated Wastewater is used to clean patios and external areas.
Indirect use: sufficient amounts of good quality freshwater available for use across your value chain	Important	Water shortage is a concern for JBS, given that it impacts directly the animal watering and the availability of soybeans and corn, used to produce the animal feed consumed on JBS suppliers. Droughts also impact the availability of electricity since the majority of energy generated in Brazil comes from Hydroelectric power plants, causing a rise on the price and the probability of black-outs occurrence,

Water quality and quantity	Importance rating	Please explain
Indirect use: sufficient amounts of recycled, brackish and/or produced water available for use across your value chain	Neutral	affecting the production plants of JBS. This item is classified as neutral since JBS can only act more intensively with integrated suppliers.

W1.2

Have you evaluated how water quality and water quantity affects /could affect the success (viability, constraints) of your organization's growth strategy?

Yes, evaluated over the next 1 year

W1.2a

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

To measure and evaluate the quality and quantity of water, JBS has the following procedures:

Water availability and quality:

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 provoking the shutdown of an operational unit.

After the assessment each unit evaluates the necessity to seek another collecting point and the appropriate goals off monthly water consumption.

Energy purchased: The staff responsible for purchasing energy on the free market periodically monitors climate conditions in order to identify the best time to conduct the purchased and selling of energy. As the Brazilian matrix is composed mainly of hydropower, water availability and regularity of rainfall are critical to this process.

Purchase of agricultural commodities: JBS Foods has a Risk Committee (FRC), composed by the Chief Executive Officer of JBS Foods, JBS Foods CFO and sales and risks directors of JBS. This committee meets quarterly to analyze weather maps, reports of changes in planting, picture of 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 effects on the company's business. The result of the quarterly meetings of this committee corresponds to the strategic planning of purchasing commodities in short

(3 months), medium (1 year) and long term (10 years).

W1.2b

What is the main reason for not having evaluated how water quality and water quantity affects /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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W1.3

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

Yes

W1.3a

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

Country	River basin	Impact indicator	Impact	Description of impact	Overall financial impact	Response strategy	Description of response strategy
Brazil	Amazon	Physical-	Higher	Facility: Matupá/MT There	The site had to buy	Infrastructure	In order to avoid drought, it was

Country	River basin	Impact indicator	Impact	Description of impact	Overall financial impact	Response strategy	Description of response strategy
		Drought	operating costs	was no water available during drought (Aug to Oct 2013).	external water, which resulted in the cost of R\$ 30,000.00/ year.	investment	requested a permit to execute water capitation in other location.
Brazil	Amazon	Physical-Drought	Higher operating costs	Facility: Colider/MT Lack of water during drought.	This drought resulted on an investment of R\$ 557,337.49 to implement a reservoir to capture water.	Infrastructure investment	In this facility it was implemented a reservoir , with a capacity to last for 25 days.
Brazil	Tocantins	Physical-Pollution of water supply	Higher operating costs	Facility: Vila Rica/MT Poor water quality. The only available source for water withdrawal requires high costs treatment.	Financial impacts are caused by the water treatment costs, in order to make it suitable for process use.	Supplier diversification	The immediate solution would be identifying other possible suppliers or other ways to get water, It was not identified any solution, however reduction measures were determined by the company to minimize the problem.
Brazil	Tocantins	Physical-Drought	Higher operating costs	Facility: Redenção/PA The facility had to stop its operation due to the absence of water, which resulted in 25 days of collective vacation for all employees.	Due to the absence of water it was necessary to invest R\$ 86 thousand to construct a dam.	Infrastructure investment	Restructuring of the dam aiming to keep the water assembled longer.
Brazil	Parana	Physical-Pollution of water supply	Higher operating costs	Facility: Goiânia/GO Poor water quality. The only available source for water withdrawal requires high costs treatment.	Financial impacts are caused by the water treatment costs, in order to make it suitable for process use.	Supplier diversification	The immediate solution would be identifying other possible suppliers or other ways to get water, It was not identified any solution, however reduction measures were determined by the company to minimize the problem.
Brazil	Tocantins	Physical-Pollution of water	Higher operating costs	Facility: Marabá/PA Poor water quality. The only available source for water	Financial impacts are caused by the water treatment	Supplier diversification	The immediate solution would be identifying other possible suppliers or other ways to get

Country	River basin	Impact indicator	Impact	Description of impact	Overall financial impact	Response strategy	Description of response strategy
		supply		withdrawal requires high costs treatment.	costs, in order to make it suitable for process use.		water, It was not identified any solution, however reduction measures were determined by the company to minimize the problem.
Brazil	Amazon	Physical-Increased water scarcity	Other: Operational adjustments	Facility: Tucumã/PA Low volume of water at the river, which resulted in reduction of water consumption.	There was no investments so far.	Establish site-specific targets	The Company determined consumption reduction measures.
Brazil	Parana	Physical-Pollution of water supply	Higher operating costs	Facility: Cuiabá/MT Poor water quality. The only available source for water withdrawal requires high costs treatment.	Financial impacts are caused by the water treatment costs, in order to make it suitable for process use.	Supplier diversification	The immediate solution would be identifying other possible suppliers or other ways to get water, It was not identified any solution, however reduction measures were determined by the company to minimize the problem.
Brazil	Other: Atlantic, Southeast portion	Physical-Pollution of water supply	Higher operating costs	Facility: Caxias do Sul/RS The Water has high concentrations of iron and manganese.	Financial impacts are caused by the water treatment costs, in order to make it suitable for process use.	Infrastructure investment	It was invested on the chlorine dioxide system to improve the treatment quality that resulted in high operation cost.

W1.3b

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 period 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

Please select the option that best describes your procedures with regard to assessing water risks and provide an explanation as to why this option is suitable for your organization

Water is integrated into a comprehensive, company-wide risk assessment process incorporating both direct operations and supply chain

W2.1a

You may provide additional information about your approach to assessing water risks here

JBS assesses locally and nationally risks related to water. The local evaluations consider the real situation of each site including the availability of water, viability and the costs. Water consumption goals are established after assessing the water supply source related to site's operation type and consumption history. Evaluations of the availability of energy, raw material and animal feed are provided before purchase, considering the national scenario of those resources, being water one of the main factors that can affect directly its availability.

W2.2

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

Frequency	Geographic scale	Timeframe
The frequency of risk assessment is annual, and the facilities set reduction targets in accordance with the risks identified for each unit. The control for reduction targets is based on collections made weekly by each Facility.	Facility	The time frame adopted by JBS is Medium Term, and its consistent with the environmental investment plan that has a timeframe of 3 years.

W2.3

Please state the methods used to assess water risks

Method
Internal company knowledge
Regional government databases
WRI Aqueduct
Other: ANA - http://hidroweb.ana.gov.br/HidroWeb.asp?Toctem=4100

W2.4

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), being essential to its operation. The evaluation of water supply source is mandatory

Issues	Choose option	Please explain
		and JBS units measures and manage regularly the volume of water withdrawal, collection site and water consumption.
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.
Current stakeholder conflicts concerning water resources at a local level	Not evaluated	
Current implications of water on your key commodities/raw materials	Relevant, included	The company, monthly tracks the water availability where there are animal feed suppliers. 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.
Current status of ecosystems and habitats at a local level	Not evaluated	
Estimates of future changes in water availability at a local level	Relevant, included	Staff responsible for the environment department periodically evaluate the risks related to water supply, seeking alternatives to provide water in case of water shortage.
Estimates of future potential regulatory changes at a local level	Relevant, included	The company participates on local regulatory decisions through the watershed committee meetings, which has involvement of companies, government, NGOs and community.
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 evaluates the risks that can cause changes in the availability of inputs and raw materials for its operation. One of the evaluated items is water availability in regions where animal feed's suppliers and integrated farms are located.
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	Relevant, included	JBS units conduct studies of water availability in order to identify risks related to quantity and quality of sufficient water for short, medium and long term.
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, included	Since in some states JBS is already paying taxes for water usage, the company has been monitoring government new taxes initiatives, given that it can affect significantly operational cost.
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Not evaluated	
Scenario analysis of implications of water	Relevant,	Water shortage is a concern for JBS, given that it impacts directly the animal watering and the

Issues	Choose option	Please explain
on your key commodities/raw materials	included	availability of soybeans and corn, used to produce the animal feed consumed on its own farms and integrated suppliers. Therefore the availability of raw material and animal feed are evaluated before purchase.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Not evaluated	
Other		

W2.4a

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

Stakeholder	Choose option	Please explain
Customers	Relevant, included	Customers: product quality depends directly on the quality of water used.
Employees	Relevant, included	Employees: Water Management and reduction are directly associated by employees action.
Investors		
Local communities	Relevant, included	Local communities: superficial water consumption and discharge directly influence the local community which can be located downstream or upstream.
NGOs		
Other water users at a local level		
Regulators at a local level	Relevant, included	Regulators at a local level: water shortage or high pressures of consumption were the main cause of payment for water usage in some regions.
Statutory special interest groups at a local level		
Suppliers	Relevant, included	Suppliers: grains suppliers directly depend on water consumption for irrigation.

Stakeholder	Choose option	Please explain
Water utilities/suppliers at a local level	Relevant, included	Water utilities/suppliers at a local level: In order to guarantee the animal well-being, there are periodical visits to ensure the water availability at Poultry and Pork's suppliers.
Other		

W2.5

Do you require your key suppliers to report on their water use, risks and management?

Yes

W2.5a

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

Proportion of key suppliers %	Total procurement spend %	Rationale for this coverage
1-25	1-25	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 60 thousand cattle suppliers. Since JBS performs technical visits on Poultry and Pork's suppliers it is possible to interact and improve the management of water.

W2.5b

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

Primary reason	Please explain
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Further Information

Since the purchase of cattle doesn't follow the same process as the integrated suppliers of poultry and pork it is more difficult to track the practices used by each farm to manage water usage. JBS has more than 60 thousand cattle suppliers. Nevertheless, understanding the importance to work together with its supply chain, JBS has programs to guarantee that its raw materials do not come from areas/regions where non compliance practices were adopted, like deforestation, indigenous land or conservative units invasion and the use of slave work. The company has plans to expand its operations with its suppliers, both in relation to the number of affected suppliers and the scope of the programs.

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

For JBS what defines substantive changes from water are the risk and opportunities mapped and prioritized. 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 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 are studied to be transformed into opportunities.

The criteria for priorities are determined by assessing the impact of the risk and the probability of occurrence. The results are evaluated by the Sustainability Committee. The identified opportunities for emission reduction are assessed considering additionality and the potential for emission reduction, therefore these both criteria are considered for decision making of Sustainability Committee.

W3.2a

Please complete the table below providing information as to the number of facilities in your direct operations exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure. Please also provide either the proportion of cost of goods sold, global revenue or global production capacity that could be affected across your entire organization at the river basin level

Country	River basin	Number of facilities within the river basin exposed to water risk	Reporting metric	Proportion of chosen metric that could be affected within the river basin
Brazil	Parana	6	Other: % Brazil consumption water	6-10
Brazil	Uruguay	1	Other: % Brazil consumption water	1-5
Brazil	Other: Atlantic, Southeast portion	2	Other: % Brazil consumption water	1-5
Brazil	Amazon	3	Other: % Brazil consumption water	1-5
Brazil	Tocantins	3	Other: % Brazil consumption	1-5

Country	River basin	Number of facilities within the river basin exposed to water risk	Reporting metric	Proportion of chosen metric that could be affected within the river basin
			water	

W3.2b

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 into waterbody without appropriate controls 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	Other: Temporarily shutdown	The lack of rainfall could affect the supply	Current-up to 1 year	Probable	High	Supplier diversification	High	The Group has an energy trader, who

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
			of operations	of electric power plants, since the Brazilian energy matrix is derived mostly from water source.						purchases directly from the free market, allowing the company to select by the source the energy to be purchased.
Brazil	Other: Brazil	Regulatory- Statutory water withdrawal limits/changes to water allocation	Constraint to future growth	Many states have established water use charges, 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 plan for the acquisition of equipment or process

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
										changes, allowing more efficient use of natural resource.
Brazil	Other: Brazil	Physical- Increased water stress	Constraint to future growth	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	Development of projects for reuse of water and seek others sources for water withdrawal.
Brazil	Other: Brazil	Regulatory- Regulation of discharge quality/volumes leading to higher compliance costs	Higher operating costs	Slaughterhouse units located in the Amazon region are affected by the amplitude and variability of dry periods, since after treatment the industrial wastewater is discharged in rivers, and in drought periods, its capacity to maintain its quality is compromised.	Current-up to 1 year	Highly probable	Low-medium	Infrastructure investment	Medium-high	JBS has been evaluating alternatives for reduce the amount of water used in the production and identifying other sources of discharge of treated effluents as fertigation.
Brazil	Parana	Physical- Pollution of water supply	Higher operating costs	Facility: Amparo/SP Poor Water quality,	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid significant

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
				increasing the cost of treatment.						increase in operational costs.
Brazil	Parana	Physical- Increased water scarcity	Higher operating costs	Facility: Passos/MG One of the risk associated with Rio Grande basin is shortages due to the lack of rain. Furthermore, the withdrawal point in Rio Grande is made downstream of the town, compromising its quality.	4-6 years	Probable	Medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid dry periods and other damages.
Brazil	Uruguay	Physical- Pollution of water supply	Higher operating costs	Facility: Seara/SC The risk to the unit it is associated to Guarani aquifer, since it is responsible for water supply, and its damage can impact directly the company.	>6 years	Unlikely	Low	Water management incentives	Low	Perform the proper use of water and ensure the integrity of the aquifer.
Brazil	Other: Atlantic basin,	Physical- Pollution of water supply	Higher operating costs	Facility: Forquilha/SC Lack of water	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid

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
	Southeast portion Araranguá River			due to poor quality and high-demand.						significant increase in operational costs.
Brazil	Parana	Physical-Pollution of water supply	Higher operating costs	Facility: Jacarezinho/PR Poor water quality, representing a supply risk.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid significant increase in operational costs.
Brazil	Other: Atlantic basin, Southeast portions (Caí River / Uruguay River / Guaíba River)	Physical-Pollution of water supply	Higher operating costs	Facility: Caxias do Sul/RS Water with high concentrations of iron and manganese. An investment in a chlorine dioxide system was made to improve treatment quality.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid significant increase in operational costs
Brazil	Parana	Physical-Increased water scarcity	Higher operating costs	Facility: Andradina/SP Groundwater extraction on site. Threats of scarcity in the region indicate a risk of failure to supply water for the company.	4-6 years	Probable	Medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid dry periods and larger damages due to the lack of water.
Brazil	Amazon	Physical-	Closure of	Facility:	1-3 years	Probable	High	Establish	Low	Set targets for

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
		Drought	operations	Matupá/MT There was no water available during drought (Aug to Oct 2013).				site-specific targets		water reduction to reduce water demand.
Brazil	Amazon	Physical-Drought	Closure of operations	Facility: Colider/MT Lack of water during dry season.	1-3 years	Probable	High	Establish site-specific targets	Low	Set targets for water reduction to reduce water demand.
Brazil	Tocantins	Physical-Pollution of water supply	Higher operating costs	Facility: Vila Rica/MT Poor water quality. The only available source requires a high cost treatment.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid significant increase in operational costs.
Brazil	Tocantins	Physical-Drought	Closure of operations	Facility: Redenção/PA The facility had to stop its operation due to the absence of water, which resulted in 25 days of collective vacation for all employees.	1-3 years	Probable	High	Establish site-specific targets	Low	Set targets for water reduction to reduce water demand.
Brazil	Parana	Physical-Pollution of water supply	Higher operating costs	Facility: Goiânia/GO Poor water quality. The only	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid significant

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
				available source requires a high cost treatment.						increase in operational costs.
Brazil	Tocantins	Physical- Pollution of water supply	Higher operating costs	Facility: Marabá/PA Poor water quality. The only available source requires a high cost treatment.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid significant increase in operational costs.
Brazil	Amazon	Physical- Increased water scarcity	Higher operating costs	Facility: Tucumã/PA River with low volume of water.	4-6 years	Probable	Medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid dry periods and larger damages due to the lack of water.
Brazil	Parana	Physical- Pollution of water supply	Higher operating costs	Facility: Cuiabá/MT Poor water quality. The only available source requires a high cost treatment.	Current-up to 1 year	Probable	Low-medium	Establish site-specific targets	Medium	Set targets for water reduction to avoid significant increase in operational costs.

W3.2c

Please list the inherent 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	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	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 a rise on the 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 by the source the energy to be purchased.
Brazil	Other: Brazil	Physical-Pollution of water supply	Higher operating costs	Due to the difficulty of treatment in rural areas, the farmer may compromised his production.	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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W3.2e

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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W3.2f

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 was carried through a corporate action plan, identifying areas of higher water consumption and opportunities for improvements in production process. A plan for investment in eco-efficiency projects was prepared (R\$ 48 million), with the initial focus on the acquisition and installation of monitoring equipment, which allowed obtaining historical data and setting goals for environmental indicators, such as water consumption for production.
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 transform 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 replicated in other units. In 2013, JBS received from Walmart a recognition on environmental improvement, including water reduction, in Friboi Hamburger's industrial process.
Company-wide	Increased brand value	The decision to voluntarily report water resources management through CDP Water, adds value to the company image and reputation	Current-up to 1 year	The company has publicly disclosed its actions in the annual report and in other reports such as CDP Water.

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
		before their stakeholders.		

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
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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
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Further Information

Module: Accounting

W5.1

Please report the total withdrawal, discharge, consumption and recycled water volumes across your operations for the reporting period

Water use	Quantity (megaliters)
Total volume of water withdrawn	67813.05
Total volume of water discharged	59185.13
Total volume of water consumed	6781.31
Total volume of recycled water used	1354

W5.2

For those facilities exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure, the number of which was reported in W3.2a, please detail which of the following water aspects are regularly measured and monitored and an explanation as to why or why not

Water aspect	% of facilities	Please explain
Water withdrawals- total volumes	76-100	Water management is vital to JBS business continuity, therefore every unit has operational procedures and measures to manage water consumption, water withdrawal, wastewater generated, withdrawal site, disposal site and wastewater analysis.
Water withdrawals- volume by sources	76-100	Water management is vital to JBS business continuity, therefore every unit has operational procedures and measures to manage water consumption, water withdrawal, wastewater generated, withdrawal site, disposal site and wastewater analysis.
Water discharges- total volumes	76-100	Water management is vital to JBS business continuity, therefore every unit has operational procedures and measures to manage water consumption, water withdrawal, wastewater generated, withdrawal site, disposal

Water aspect	% of facilities	Please explain
		site and wastewater analysis.
Water discharges- volume by destination	76-100	Water management is vital to JBS business continuity, therefore every unit has operational procedures and measures to manage water consumption, water withdrawal, wastewater generated, withdrawal site, disposal site and wastewater analysis.
Water discharges- volume by treatment method	76-100	Water management is vital to JBS business continuity, therefore every unit has operational procedures and measures to manage water consumption, water withdrawal, wastewater generated, withdrawal site, disposal site and wastewater analysis.
Water discharge quality data- quality by standard effluent parameters	76-100	Water management is vital to JBS business continuity, therefore every unit has operational procedures and measures to manage water consumption, water withdrawal, wastewater generated, withdrawal site, disposal site and wastewater analysis.
Water consumption- total volume	76-100	Water management is vital to JBS business continuity, therefore every unit has operational procedures and measures to manage water consumption, water withdrawal, wastewater generated, withdrawal site, disposal site and wastewater analysis.
Water recycling/reuse-total volume	26-50	The operational procedures and measures to manage reuse water are developed by the operation unit, however, the volume is not measured in all stages of industrial process. Improvement methods are often implemented aiming to obtain more reliable measurements.

W5.3

Water withdrawals: for the reporting period, 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 period?	Please explain the change if substantial
Facility 1	Brazil	Parana	ANDRADINA	1837	About the same	
Facility 2	Brazil	Parana	GOIÂNIA	1407	Higher	Increase in

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 period?	Please explain the change if substantial
						production.
Facility 3	Brazil	Tocantins	MARABÁ	836	Much higher	Increase in production.
Facility 4	Brazil	Tocantins	REDENÇÃO	532	About the same	
Facility 5	Brazil	Amazon	TUCUMÃ	436	About the same	
Facility 6	Brazil	Parana	CUIABÁ	368	Higher	Increase in production.
Facility 7	Brazil	Amazon	COLÍDER	714	About the same	
Facility 8	Brazil	Amazon	MATUPÁ	472	Much lower	
Facility 9	Brazil	Tocantins	VILA RICA	1071	Lower	
Facility 10	Brazil	Parana	AMPARO	1797	Higher	Increase in production.
Facility 11	Brazil	Parana	PASSOS	674	About the same	
Facility 12	Brazil	Uruguay	SEARA	1817	Higher	Increase in production.
Facility 13	Brazil	Other: Atlantic, Southeast portion	FORQUILINHA	1641	About the same	
Facility 14	Brazil	Parana	JACAREZINHO	880	About the same	
Facility 15	Brazil	Other: Atlantic, Southeast portion	CAXIAS DO SUL	485	Much higher	Increase in productio.

Further Information

Page: W5. Water Accounting (II)

W5.3a

Water withdrawals: for the reporting period, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.3

Facility reference number	Surface water	Groundwater (renewable)	Groundwater (non-renewable)	Municipal water	Recycled water	Produced/process water	Wastewater	Brackish/salt water
Facility 1	1837	0	0	0	0		1689	
Facility 2	1366	41	0	0	0		1196	
Facility 3	836	0	0	0	0		710	
Facility 4	426	106	0	0	0		452	
Facility 5	436	0	0	0	0		436	
Facility 6	368	0	0	0	0		368	
Facility 7	390	324	0	0	0		659	
Facility 8	472	0	0	0	0		329	
Facility 9	1037	34	0	0	0		1051	
Facility 10	1791	6	0	0.1	0		1611	
Facility 11	674	0	0	0	0		607	
Facility 12	1175	642	0	0	111		1767	
Facility 13	1152	0	0	489	0		1526	
Facility 14	0	518	0	362	31		850	
Facility 15	386	19	0	80	12		342	

W5.4

Water discharge: for the reporting period, please provide the water accounting data for all facilities reported in W5.3

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 period?	Please explain the change if substantive
Facility 1	1689	About the same	
Facility 2	1196	About the same	
Facility 3	710	Much higher	Increase in production.
Facility 4	452	About the same	
Facility 5	436	About the same	
Facility 6	368	Higher	Increase in production.
Facility 7	659	Higher	
Facility 8	329	Lower	
Facility 9	1051	Much lower	
Facility 10	1611	About the same	
Facility 11	607	Lower	
Facility 12	1767	Higher	Increase in production.
Facility 13	1526	About the same	
Facility 14	850	About the same	
Facility 15	342	Higher	Increase in production.

W5.4a

Water discharge: for the reporting period, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.3

Facility reference number	Surface water	Municipal Treatment Plant	Saltwater	Injection for production/disposal	Aquifer recharge	Storage/waste lagoon
Facility 1	1689	0	0	0	0	0
Facility 2	1196	0	0	0	0	0
Facility 3	710	0	0	0	0	0

Facility reference number	Surface water	Municipal Treatment Plant	Saltwater	Injection for production/disposal	Aquifer recharge	Storage/waste lagoon
Facility 4	452	0	0	0	0	0
Facility 5	436	0	0	0	0	0
Facility 6	368	0	0	0	0	0
Facility 7	659	0	0	0	0	0
Facility 8	329	0	0	0	0	0
Facility 9	1051	0	0	0	0	0
Facility 10	1611	0	0	0	0	0
Facility 11	607	0	0	0	0	0
Facility 12	1767	0	0	0	0	0
Facility 13	1526	0	0	0	0	0
Facility 14	850	0	0	0	0	0
Facility 15	342	0	0	0	0	0

W5.5

Water consumption: for the reporting period, please provide water consumption data for all facilities reported in W5.3

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting period?	Please explain the change if substantive
Facility 1			
Facility 2			
Facility 3			
Facility 4			
Facility 5			
Facility 6			

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting period?	Please explain the change if substantive
Facility 7			
Facility 8			
Facility 9			
Facility 10			
Facility 11			
Facility 12			
Facility 13			
Facility 14			
Facility 15			

W5.6

For the reporting period, please provide any available water intensity values for your organization's products or services across its operation

Country	River basin	Product name	Product unit	Water unit	Water intensity (Water unit/Product unit)	Water use type	Comment

W5.7

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

Water aspect	% verification	What standard 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 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	
Water recycling/reuse-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
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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 result 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 to influence on politics decisions through participation on 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.
Exploration of water valuation practices	Actions to reduce consumption and increased water reuse brought some gains to the company, such as, awards, clients recognitions and markets access.
Introduction of water management KPIs	Report through CDP Water is helping the company to manage new sustainability indicators, with strategic

Influence of water on business strategy	Please explain
	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.
Greater supplier engagement	The company tracks the production in its poultry and pork suppliers through technical visits, helping farmers in order 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.
Tighter supplier 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
Closure of operations	The risk of closure of the operation 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 location 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, a company-wide water policy

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-related spending: % of total CAPEX during this reporting period compared to last reporting period	Water-related spending: % of total OPEX during this reporting period compared to last reporting period	Motivation for these changes
91%	100%	In the last year the operational cost has increased due to the Company's business expansion. The investments are performed gradually according to the needs of each unit.

Further Information

W7.1

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

Yes, not significant

W7.1a

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

Facility name	Incident description	Financial penalty or fine	Currency	Incident resolution
Caxias do Sul/RS	Fines related to wastewater discharge in accordance with legal standards.	12312	BRL(R\$)	Operational improvement on the primary system (increase in the efficiency of the flotator) to reduce the organic load in the secondary system, enhancing effluent's quality.
Itapiranga/RS – Un Suínos	Fines related to wastewater discharge in accordance with legal standards.	10000	BRL(R\$)	Promote improvement on the efficiency of the lagoon system.
Salvador do Sul/RS	Fines related to wastewater discharge in accordance with legal standards.	9000	BRL(R\$)	Develop the existing treatment with the construction of an anaerobic tank to improve the consumption of organic matter.
Goiânia/GO	Fines related to wastewater discharge in accordance with legal standards.	230000	BRL(R\$)	Investment of R\$ 4,850,000 on an activated sludge treatment.
Lins/SP	Fines related to wastewater discharge in accordance with legal standards standards.	80000	BRL(R\$)	Investment of R\$ 3,600,000 on an activated sludge treatment.

W7.1b

Please indicate the total of all penalties and/or fines for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations as a percentage of total operating expenditure (OPEX) compared to last year

Further Information

Page: W8. Targets and Initiatives

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 water intensity	Other: Cost savings and risk mitigation	Maximum targets for consumption per tonne of products.	Other: m ³ /ton products - manufactured products	2013	2013	

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base-line year	Target year	Proportion of target achieved, % value
Reduction of water intensity	Other: Cost savings and risk mitigation	Maximum targets for consumption per slaughtered animal.	Other: m ³ /cattle	2013	2013	76%

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

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: Sign Off

Page: Sign Off

W9.1

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.	Other: Sustainability Director.

Further Information

[CDP 2014 Water 2014 Information Request](#)