

W0. Introduction

W0.1

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

Minerva Foods is a publicly traded Brazilian company with a global presence, exporting its products to more than 100 countries on five continents. At the end of 2022, the company's net revenue was R\$31.0 billion, with an Adjusted EBITDA of R\$3.1 billion and a net profit of R\$655.1 million.

Its operations encompass the processing and sales of animal protein and by-products, in addition to operating in the carbon credits market through its subsidiary, MyCarbon, and the energy sector in Brazil.

The Company is the leader in beef exports in South America with a market share of approximately 20%. In 2022, produced and processed 1,223.7 thousand tons of beef in the region. Minerva Foods also has a workforce of more than 23,000 employees in South America and Australia. The Company obtain, processes, and markets animal protein through an integrated, geographically diversified and flexible business platform, which includes 32 industrial units (slaughter, deboning, and processing) in Brazil, Argentina, Colombia, Paraguay, Uruguay, and Australia. Completing its operations are 14 own and outsourced distribution centers in South America (11 in Brazil, 1 in Chile, 1 in Argentina, 1 in Colombia, and 1 in Paraguay), as well as 12 international commercial offices (Algeria, Australia, Chile, China, Egypt, United Arab Emirates, United States, Italy, Lebanon, United Kingdom, Russia, and Taiwan). Moreover, we operate one food processing plant in Brazil (Minerva Foods Industrializados) and two facilities under the Swift brand in Argentina.

For the purposes of this questionnaire, the information will be presented globally and highlighting local specificities, when necessary or to exemplify actions in practice. The information will be reported as follows: Minerva Foods Brasil (includes operations and management in the Brazilian territory) and Minerva Foods Latam (includes operations and management in the territories of Argentina, Colombia, Paraguay and Uruguay).

Starting a new chapter in our 30-year history, in 2021, Minerva Foods updated its brand to reflect the evolution that has made Minerva Foods a modern, disruptive, and innovative business, committed to creating a sustainable food future for our planet. Minerva Foods is deeply committed to sustainability in such a way that this value is embedded in its institutional culture. With the aim of prioritizing and optimizing initiatives and investments and generating strategic partnerships, Minerva Foods' ESG agenda (environmental, social and corporate governance) was organized around three pillars: Dedication to the Planet, Prosperity of Our People and Product Quality and Respect for life.

In April 2021, Minerva Foods publicly disclosed its Commitment to Sustainability focused on the environmental pillar 'Dedication to the Planet'. The commitment aims to achieve zero net emissions by 2035 – 15 years ahead of the Paris Agreement – for the Company's operations. For this purpose, the Company has set a series of goals focused on combating illegal deforestation in the value chain and climate change.

W-FB0.1a/W-AC0.1a

**(W-FB0.1a/W-AC0.1a) Which activities in the food, beverage, and tobacco and/or agricultural commodities sectors does your organization engage in?**

Processing/Manufacturing

W0.2

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

	Start date	End date
Reporting year	January 1 2022	December 31 2022

W0.3

**(W0.3) Select the countries/areas in which you operate.**

- Argentina
- Brazil
- Colombia
- Paraguay
- Uruguay

W0.4

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

BRL

## W0.5

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

Companies, entities or groups over which operational control is exercised

## W0.6

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

Yes

## W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Australia	Minerva Foods acquired, in 2021 and 2022, 4 sheep slaughtering units in Australia, which only started operating in the second half of 2022. Although they are mentioned in the operational structure, the operations in Australia do not have all of their socio-environmental indicators consolidated, due to the process of structuring and standardizing the Company's management that is being carried out in the country. It is important to mention that the units in Australia represented less than 5% of the company's total revenue in 2022 and around 0.43% of the Company's total water consumption in the reporting period. The Company expects to start reporting in the next assessment cycle.

## W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, a Ticker symbol	BEEF3 - Brazilian Stock Exchange (B3)
Yes, an ISIN code	ISIN BEEF3 - BRBEEFACNOR6
Yes, an ISIN code	ISIN Bonds 28: US603374AE94 31: US603374AF69

## W1. Current state

### W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	<p>Direct Operations:</p> <ul style="list-style-type: none"> <li>Primary use: Treated water is utilized for various essential purposes, including receiving animals, primary washing of trucks, sterilization equipment, cleaning and sanitizing products and by-products, and plant sanitization at the end of production.</li> </ul> <p>Regarding technical performance indicators for in-natura meat production, the Company's recorded figures are as follows:</p> <ul style="list-style-type: none"> <li>Minerva Foods Brasil: A reduction of 1.42% in the water consumption and effluent generation indicator (m<sup>3</sup>/TPA) compared to the previous year.</li> <li>Minerva Foods Latam: A reduction of 13.17% in the indicator of water consumption and effluent generation (l/m<sup>3</sup>) compared to the previous year.</li> </ul> <p>These results are extensively discussed in the engineering and industrial management committees, which convene monthly to analyze the Company's strategic KPIs. Whenever necessary, action plans are devised to address observed deviations. The Company's future trend in water abstraction is geared towards a decrease, demonstrating our commitment to continuously enhance operational efficiency.</p> <ul style="list-style-type: none"> <li>Importance: Treated water is vital for operating an industrial food processing plant, as it is integral to daily washing and sanitization of the production area, ensuring compliance with current food safety legislation and preventing product contamination.</li> </ul> <p>Indirect Operations:</p> <ul style="list-style-type: none"> <li>Primary use: Water is primarily employed on our suppliers' livestock farms for animal watering. Some farms, which utilize an animal confinement system, also use water to clean pens and animal living areas, in line with animal welfare regulations.</li> <li>Importance: Adequate water supply is crucial for raising livestock to maintain animal health and well-being.</li> </ul>
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	<p>Direct operations:</p> <ul style="list-style-type: none"> <li>Primary use: The main purpose is for cleaning observation trailers, washing trucks, gardening, and irrigating patios. As an industrial food plant, reused water cannot have direct contact with products, in accordance with legislation.</li> <li>Importance: The utilization of reused water is crucial to reduce the demand for withdrawing surface and groundwater resources.</li> <li>Future dependency: The dependency on reused water is expected to increase in the future as improved water usage practices are implemented at the industrial units to minimize the need for fresh water intake.</li> </ul> <p>Indirect operations:</p> <ul style="list-style-type: none"> <li>Primary use: Reused water is employed in the pre-shipment truck sanitization processes and for cleaning corrals and other living areas where available.</li> <li>Importance: The use of water is vital to reduce the demand for surface water or reliance on third parties in these processes.</li> <li>Future dependency: The reliance on reused water is anticipated to grow in the future as better water usage practices are implemented in supplying farms. Additionally, this dependency is likely to increase with the implementation of water collection methods, such as rainwater harvesting, which can be used in feedlots to reduce dust and/or for animal watering.</li> </ul>

**W-FB1.1a/W-AC1.1a**

**(W-FB1.1a/W-AC1.1a) Which water-intensive agricultural commodities that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.**

Agricultural commodities	% of revenue dependent on these agricultural commodities	Produced and/or sourced	Please explain
Cattle products	More than 80%	Sourced	<p>More than 80% of the Company's revenue is derived from the production of fresh and processed beef. In the production process, water consumption begins in the observation corrals, where drinkable water troughs and water sprinklers are available to ensure the animals' thermal comfort. The corrals are also individually cleaned to maintain sanitary conditions and prepare them for the arrival of the next batch of animals.</p> <p>Subsequently, during the stunning and slaughter stage, the animals undergo a bath of hyperchlorinated water for leather sanitization and overall cleaning, followed by washing of the paws. Throughout the initial stages of slaughter and other carcass dismantling processes, water is utilized continuously and generously to ensure the safety and hygiene of the produced food. At the conclusion of the process, all areas are thoroughly sanitized in preparation for the following day's operations.</p>

**W1.2**

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

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water withdrawals – total volumes	100%	Daily	Flow meters	All water withdrawn (whether from surface sources, underground or purchased from third parties) is monitored daily, both in volume and time of withdrawal, by means of ultrasonic flow meters. The information is sent to a system to compile the data that is filed in a spreadsheet and presented monthly to the Industrial Management Committee for discussion on increasing or reducing consumption. Action plans are executed for cases that need attention.
Water withdrawals – volumes by source	100%	Daily	Flow meters	The total volume of water withdrawn from various sources (surface, underground, or public supply network) is monitored daily through accurately calibrated water meters at each unit. The information is then sent to a data compilation system, where it is filed in a Power BI spreadsheet. Monthly, this data is presented to a committee for discussion regarding any increases or reductions in consumption. Action plans are implemented for cases that require attention. It is important to emphasize that 100% of the water collection sources are diligently monitored in strict accordance with the licenses issued by the competent regulatory bodies. This ensures full compliance with all relevant regulations and environmental requirements.

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Entrained water associated with your metals & mining and/or coal sector activities - total volumes [only metals and mining and coal sectors]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Monthly	External laboratory analysis	The quality of all captured water is analyzed monthly and must be submitted to a potentiating treatment according to the environmental management policy and procedures. In some cases, even if the source is groundwater, certain units must treat their water due to its high degree of hardness, resulting from specific characteristics of the region, as in Colombia and Argentina. When water captured from wells meets all the parameters established by law, it can Only be sent for industrial use with the addition of chlorine. All water sourced from surface sources must undergo physical-chemical treatment until it meets the potability standards in accordance with current legislation. Parameters such as turbidity, hardness, pH, organic matter, and others are evaluated for raw water captured from rivers and streams. The treated water supplied to the industry is continuously monitored to ensure compliance with both national and international standards.
Water discharges – total volumes	100%	Daily	Flow meters and/or indirect method through loss discount based on literature.	<ul style="list-style-type: none"> <li>• Minerva Foods Brasil: The entire volume of effluent disposal is controlled daily and follows the recommendations stated in the disposal authorizations issued by the competent environmental agencies.</li> <li>• Minerva Foods Latam: The volume of effluents discharged is indirectly monitored by measuring the volume of water captured using hydrometers and estimating a percentage of loss to determine the total volume of water discarded for the month. The volume discharged in 2022 was monitored by calculating the total volume collected throughout the year and attributing a 15% loss percentage. Hence, to calculate the total annual volumes of effluent generated, the daily volumes captured and accurately measured by installed hydrometers are used. The monthly total is then calculated, taking into account a 15% loss throughout the process (as indicated in the literature). This measurement approach was adopted until all units had an automatic effluent flow measurement recorder installed.</li> </ul>
Water discharges – volumes by destination	100%	Daily	Flow meters and/or indirect method through loss discount based on literature.	<ul style="list-style-type: none"> <li>• Minerva Foods Brasil: The entire volume of effluents is daily controlled using flow meters or accounted for by considering the collected volume and applying a 15% loss percentage, following the literature. These measurements adhere to the recommendations outlined in the disposal permits issued by the competent environmental agencies. Effluent discharges are directed to surface sources, and a portion of the volume is allocated for fertigation of pastures on neighboring properties near the production units.</li> <li>• Minerva Foods Latam: The volume of treated effluent is indirectly measured and then directed to receiving bodies (surface sources), municipal treatments, or post-treatment ponds at the production units. Indirect measurement is conducted through estimation, attributing a percentage of loss to the daily volume of water collected and measured using hydrometers.</li> </ul>
Water discharges – volumes by treatment method	100%	Daily	Flow meters and/or indirect method through loss discount based on literature.	<p>All of the Company's units have their own effluent treatment systems and conduct daily control and measurement of volumes using flow meters, accounting for the captured volume while considering a 15% loss percentage (as indicated in the literature). The units also adhere to the recommendations outlined in the disposal authorizations issued by the competent environmental agencies.</p> <ul style="list-style-type: none"> <li>• Minerva Foods Latam: The treated effluent is either directed to the receiving body or sent for post-treatment at a municipal treatment plant, and all recommendations specified in the authorizations issued by the competent environmental agencies are strictly followed.</li> </ul>
Water discharge quality – by standard effluent parameters	100%	Monthly	External laboratory analysis	The company monitors 100% of its effluent in all operations. The parameters analyzed are recommended in accordance with the respective authorizations/licenses issued by the environmental licensing agency. All effluent generated at Minerva Foods' production units undergoes treatment with an organic load removal efficiency above 90%. System efficiency control is conducted through monthly laboratory analyses with an external laboratory, in addition to internal process controls. To manage indicators related to the effluent generated, the company has established targets for parameters such as BOD, ammoniacal nitrogen, sedimentable solids, and oils and greases. The results are presented and discussed monthly in meetings of the Corporate Engineering team, with action plans formulated when deviations are observed. The company strictly adheres to the recommendations outlined in its operating licenses issued by the competent authorities.
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	Not relevant	<Not Applicable>	<Not Applicable>	Minerva does not use chemicals in its production process.
Water discharge quality – temperature	100%	Monthly	External laboratory analysis	For all units, the water flow complies with current legislation in each country, with no issues regarding this parameter. Temperature is measured at various points in the system, including raw effluent entry, treated effluent exit, water temperature in the receiving body, and ambient temperature. The company strictly follows the operating license requirements based on the legislation in force, and measurements are conducted with each sample collection to be sent to the laboratory.
Water consumption – total volume	100%	Daily	Properly calibrated flow meters	Minerva Foods considers that all captured water is utilized within its operations, whether in the water treatment process itself or during production stages, such as the slaughtering and deboning processes. Any variance between the volume captured and discarded is attributed to natural process losses, such as evaporation and product aggregation. These inherent factors account for the difference in the total water usage.
Water recycled/reused	100%	Daily	Properly calibrated flow meters or pump flow.	Legislation imposes strict regulations on water reuse to prevent product contamination. Consequently, the company is limited to reusing only a percentage that ranges between 1% and 25% of the total water consumption. However, 100% of the reused volume is accurately measured, either directly through calibrated flow meters or indirectly through flow meters and monitoring pump working hours. Water collected from processes such as backwash of the filter, purge from the clarifier, water from the defrost, or flow from the sterilizers is utilized for washing the corrals and cleaning the cattle trucks. The flow checks are performed on the pumps during their daily operation to ensure efficient water management.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Daily	External and internal laboratory analysis.	<ul style="list-style-type: none"> <li>• Minerva Foods Brasil: All factories have suitable changing rooms for employees, equipped with individual bathrooms, showers, sinks, lockers, and a proper sewage system, complying with legislation. The Company ensures that all water supplied to employees meets the required potability standards. Regular water quality collections are conducted by inspectors from the Ministry of Agriculture assigned to the plant, attesting to the water's high quality. Strict hygiene standards are consistently followed, considering the company's line of business. All domestic sewage is collected and adequately treated in accordance with the legislation. In addition to Minerva Foods' daily internal control, the Ministry of Agriculture also conducts regular water quality tests, with some parameters being tested on a daily basis.</li> <li>• Minerva Foods Latam: Each relevant regulatory body also performs checks to ensure water quality compliance, whether for products or for employee use</li> </ul>

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Please explain
Total withdrawals	14853.88	Higher	Change in accounting methodology	Lower	Investment in water-smart technology/process	The company started to account for other businesses/operations that were not included in the general numbers until 2021. These additional operations include rendering plants, leather production, feedlot farms, and live cattle farms. The decision to include them in the water consumption measurement is driven by the company's commitment to a more accurate and comprehensive assessment of its overall water usage. Water consumption data for the years 2021 and 2022 are as follows: 2021: 13,561.55 ML 2022: 14,853.88 ML
Total discharges	12466.98	Higher	Change in accounting methodology	Lower	Investment in water-smart technology/process	The company started to account for other businesses/operations that were not included in the general numbers until 2021. These additional operations include rendering plants, leather production, feedlot farms, and live cattle farms. The decision to include them in the water consumption measurement is driven by the company's commitment to a more accurate and comprehensive assessment of its overall water usage. Water consumption data for the years 2021 and 2022 are as follows: 2021: 11,569,26 ML 2022: 12,466,98 ML
Total consumption	1129.69	Higher	Change in accounting methodology	Lower	Investment in water-smart technology/process	Minerva Foods acknowledges that all captured water is utilized within its operations, whether in the water treatment process itself or during production stages (slaughtering process, deboning, etc.). The variance between the volume captured and discarded is attributed to natural process losses such as evaporation and product aggregation.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress, provide the proportion, how it compares with the previous reporting year, and how it is forecasted to change.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Identification tool	Please explain
Row 1	Yes	1-10	Higher	Facility closure	Lower	Increase/decrease in efficiency	Other, please specify	Minerva Foods conducts an internal evaluation of the water withdrawal areas, using the limits established in the capture and discharge permits, reports from environmental agencies in the regions where it operates, and the history of recorded droughts as the basis. Based on this evaluation, the Company classifies units in areas of water stress if they experience water impacts such as droughts, floods, or insufficient water availability to meet local needs. The control is carried out by evaluating volume measurement indicators for each month compared to previous years. The increase in water withdrawal in 2022 compared to 2021 is attributed to the fact that the Mirassol D'Oeste unit, the only one classified in Brazil as a water stress area, experienced Lay-off (temporary suspension of work) during practically the entire first half of 2021. This situation led to higher water usage in the subsequent year, contributing to the observed difference in water withdrawal volume.

W-FB1.2e/W-AC1.2e

(W-FB1.2e/W-AC1.2e) For each commodity reported in question W-FB1.1a/W-AC1.1a, do you know the proportion that is produced/sourced from areas with water stress?

Agricultural commodities	The proportion of this commodity produced in areas with water stress is known	The proportion of this commodity sourced from areas with water stress is known	Please explain
Cattle products	Not applicable	Yes	Minerva Foods sources cattle for its production process from regions that are a maximum of 300 kilometers away from the industrial units. Consequently, the characteristics of the regions where the cattle is produced are considered similar to those of the regions where they are processed. The Company conducts an internal evaluation of water withdrawal areas, based on the limits established in the capture and discharge permits, reports from environmental agencies in the operating regions, and historical records of droughts. As a result of this evaluation, units suffering from water impacts such as droughts, floods, or insufficient water availability to meet local needs are classified as units in areas of water stress. In the previous year, only the Mirassol do Oeste unit in Brazil was considered to be in an area of water stress. In this unit, 168,472 head of cattle were slaughtered, representing 9.79% of the total number of animals slaughtered by the company during the year 2022.

W-FB1.2g/W-AC1.2g

(W-FB1.2g/W-AC1.2g) What proportion of the sourced agricultural commodities reported in W-FB1.1a/W-AC1.1a originate from areas with water stress?

Agricultural commodities	% of total agricultural commodity sourced from areas with water stress	Please explain
Cattle products	1-10	<p>The cattle used as input in the production process originates from regions within a maximum distance of 300 kilometers from the industrial units. As a result, the characteristics of the regions where the cattle is produced are considered similar to those of the regions where it is processed. Minerva Foods conducts an internal evaluation of the water withdrawal areas, using as a basis the limits established in the capture and discharge permits, reports from environmental agencies in the regions where it operates, and historical records of droughts. Based on this evaluation, the Company classifies units as being in an area of water stress if they experience water impacts such as droughts, floods, or insufficient water availability to meet local needs.</p> <p>Last year, the Mirassol do Oeste unit in Brazil was the only one considered to be in an area of water stress. In this unit, 168,472 head of cattle were slaughtered, representing 9.79% of the total number of animals slaughtered by the company during the year 2022.</p> <p>Another approach to reduce the impact on areas considered water-stressed is through geographic diversification. In 2021, the Company announced the acquisition, through a structured joint venture with Salic, of two slaughterhouses specializing in sheep in Australia. This move represents a significant step towards expanding geographic diversification, arbitrage capacity, and entry into other branches of the protein market. Such decisions not only reduce exposure to risks and uncertainties typical of the segment but also enable the Company to plan and build a Minerva Foods connected to the future, capable of providing food in various forms, production structures, and value chain configurations, all while maintaining a focus on quality and sustainability.</p> <p>To mitigate risks, the Company also employs the "seller's option" strategy, which involves a sale option for products where the origin of production is not defined at the time of closing the business contract with the customer. This strategy allows Minerva Foods to arbitrate between industrial units and countries, considering factors such as the best production moment, raw material availability, financial return, and logistical flow, to meet customer demands efficiently.</p> <p>As a future trend, the Company expects to maintain low abstraction levels in water-stressed areas by exploring different sources of abstraction and adopting technologies to reduce water consumption.</p>

W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	9305.23	Lower	Investment in water-smart technology/process	<p>For the units that conduct surface water collection, the company has implemented water reuse projects, resulting in a reduction of the absolute volume collected. Several notable projects have been undertaken, such as the reuse of backwash water, defrosting chambers, and specific points in production, including the viscera table, among others. The volume of reused water now amounts to 2,212 m³ per day, equivalent to the daily water consumption of an industrial plant processing approximately 644 heads of cattle.</p> <ul style="list-style-type: none"> <li>• Minerva Foods Brasil: Achieved a reduction of 1.42% in the indicator of water consumption and effluent generation (m³/tpa) in Brazil compared to the previous year.</li> <li>• Minerva Foods Latam: Successfully reduced water abstraction by over 1 million m³, equivalent to 13.17% of the absolute volume.</li> </ul>
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	The company does not use brackish water sources in its operations.
Groundwater – renewable	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	The company understands that groundwater is non-renewable.
Groundwater – non-renewable	Relevant	4609.94	Higher	Change in accounting methodology	Groundwater abstraction is carried out through artesian wells located within the industrial premises of the units, duly licensed by the state and/or federal environmental agencies, as applicable. The increase compared to 2021 is due to the change in methodology, which now includes other businesses that were previously not accounted for, such as rendering plants, leather, confinement farms, etc., whose main water source is groundwater. The Barretos unit in Brazil stands out in this regard.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	The company does not use produced/entrained water sources in its production units in its operations
Third party sources	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	The variation is due to the reduction in production volume in the units where water from third parties is used. In addition, priority was given to internal funding.

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water	Relevant	8993.7	Lower	Investment in water-smart technology/process	The reduction in surface water collection reflects the decrease in effluents, and the explanation remains applicable to this item. For units that conduct surface water collection, the company has implemented water reuse projects, resulting in a reduction in the absolute volume collected. Some projects have stood out, such as the reuse of backwash water, defrosting chambers, and specific points in production, including the viscera table, among others. The volume of reused water is 2,212 m <sup>3</sup> per day, equivalent to the daily water consumption of an industrial plant that processes around 644 heads of cattle. <ul style="list-style-type: none"> <li>• Minerva Foods Brasil: Achieved a 1.42% reduction in the indicator of water consumption and effluent generation (m<sup>3</sup>/tpa) in Brazil compared to the previous year.</li> <li>• Minerva Foods Latam: Successfully reduced water abstraction by more than 1 million m<sup>3</sup>, equivalent to 13.17% of the absolute volume.</li> </ul>
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	The company does not discharge into brackish water sources in its operations.
Groundwater	Relevant	1943.31	Higher	Increase/decrease in business activity	Compared to 2021, the disposal volume was slightly higher and reflects the slaughter variation in the period.
Third-party destinations	Relevant	1332.26	About the same	Increase/decrease in business activity	Compared to 2021, the disposal volume was slightly higher and reflects the slaughter variation in the period.

**W1.2j**

**(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.**

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	Primary reason for comparison with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	367	About the same	Increase/decrease in business activity	1-10	Tertiary treatment is only carried out at the Janaúba unit in Brazil, due to the disposal of effluents in the public network.
Secondary treatment	Relevant	12098.68	Higher	Increase/decrease in efficiency	100%	100% of the effluent generated at Minerva Foods' operations in South America undergoes secondary treatment, either through stabilization ponds or activated sludge processes.
Primary treatment only	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	100% of the effluent generated at Minerva Foods' operations in South America undergoes primary treatment, usually using physical-chemical methods (such as DAF flotation), followed by secondary or tertiary treatment, including stabilization ponds or activated sludge processes.
Discharge to the natural environment without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	100% of the effluent generated at Minerva Foods' operations in South America undergoes primary treatment, usually using physical-chemical methods (such as DAF flotation), followed by secondary or tertiary treatment, including stabilization ponds or activated sludge processes.
Discharge to a third party without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	100% of the effluent generated at Minerva Foods' operations in South America undergoes primary treatment, usually using physical-chemical methods (such as DAF flotation), followed by secondary or tertiary treatment, including stabilization ponds or activated sludge processes.
Other	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	100% of the effluent generated at Minerva Foods' operations in South America undergoes primary treatment, usually using physical-chemical methods (such as DAF flotation), followed by secondary or tertiary treatment, including stabilization ponds or activated sludge processes.

**W1.3**

**(W1.3) Provide a figure for your organization's total water withdrawal efficiency.**

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	310000000	14853.88		The reduction in water consumption is estimated based on the implementation of planned projects, and considering a value of m <sup>3</sup> per head slaughtered. <ul style="list-style-type: none"> <li>• Minerva Foods Brasil: Achieved a 1.42% reduction in the indicator for water consumption and effluent generation (m<sup>3</sup>/tpa) compared to the previous year.</li> <li>• Minerva Foods Latam: Successfully reduced water abstraction by more than 1 million m<sup>3</sup>, equivalent to 13.17% of the absolute volume.</li> </ul>

**W-FB1.3/W-AC1.3**

(W-FB1.3/W-AC1.3) Do you collect/calculate water intensity for each commodity reported in question W-FB1.1a/W-AC1.1a?

Agricultural commodities	Water intensity information for this produced commodity is collected/calculated	Water intensity information for this sourced commodity is collected/calculated	Please explain
Cattle products	Not applicable	Yes	Minerva Foods carefully monitors water consumption at its units, calculating water intensity by dividing consumption by the quantity of finished product in tons (TPA). This intensity serves as a valuable internal control metric and aids in setting targets for each operating unit.

W-FB1.3b/W-AC1.3b

(W-FB1.3b/W-AC1.3b) Provide water intensity information for each of the agricultural commodities identified in W-FB1.3/W-AC1.3 that you source.

**Agricultural commodities**

Cattle products

**Water intensity value (m3/denominator)**

2386.91

**Numerator: Water aspect**

Total water consumption

**Denominator**

Tons

**Comparison with previous reporting year**

Lower

**Please explain**

- Minerva Foods Brasil: Achieved a 1.42% reduction in the indicator of water consumption and effluent generation (m<sup>3</sup>/tpa) in Brazil compared to the previous year.
- Minerva Foods Latam: Successfully reduced water collection by over 1 million m<sup>3</sup>, equivalent to 11.57% of the absolute volume.

These results are discussed in the Industrial Management Commission, which convenes monthly to analyze the Company's strategic KPIs and, if necessary, prepare action plans to address any observed deviations. The future trend indicates a further decrease in water collection, as we continuously strive to enhance process efficiency

W1.4

(W1.4) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
Row 1	No	Working in collaboration with the federal inspection authorities of each country, Minerva Foods guarantees that all its products meet the highest quality requirements and are free from hazardous substances. Minerva Foods operates its own laboratories, accredited and/or recognized by ISO 17025, and also collaborates with third-party laboratories of the same level of reliability. The company conducts microbiological and physical-chemical analyses to ensure product safety and prevent contamination by pathogens. In addition to complying with legislation and internal procedures, the quality and safety control of products relies on internationally recognized certifications and approval of specific protocols. External quality and safety audits are conducted by the department responsible for inspection of products of animal origin in Brazil and equivalent bodies in Argentina, Colombia, Paraguay, and Uruguay.

W1.5

(W1.5) Do you engage with your value chain on water-related issues?

	Engagement	Primary reason for no engagement	Please explain
Suppliers	No	Important but not an immediate business priority	The company has made progress in disclosing actions related to water in its process together with stakeholders and demonstrating the importance of the theme in its management, however there is not yet a formal program that involves the theme of water in its value chain.
Other value chain partners (e.g., customers)	No	Important but not an immediate business priority	The company has made progress in disclosing actions related to water in its process together with stakeholders and demonstrating the importance of the theme in its management, however there is not yet a formal program that involves the theme of water in its customers and others stakeholders.

W2. Business impacts

W2.1

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

No



W2.2

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

	Water-related regulatory violations	Fines, enforcement orders, and/or other penalties	Comment
Row 1	No	<Not Applicable>	

W3. Procedures

W3.1

(W3.1) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified	Please explain
Row 1	Yes, we identify and classify our potential water pollutants	<p>The Company conducts periodic internal and external laboratory analyses through accredited facilities. Additionally, the company evaluates the aspects and impacts arising from its operations, demonstrating a commitment to environmental responsibility.</p> <p>The frequency of analyses varies based on the operating unit, treatment type, and specific parameters being monitored. These analyses can be conducted on an hourly, daily, weekly, monthly, or semi-annual basis, as appropriate.</p> <p>The Company sets its targets in alignment with the environmental regulations of each country, ensuring compliance with local laws. The targets are also tailored to each parameter being assessed, taking into account factors such as BOD, COD, Solids, Nitrogen, temperature, turbidity, oils, and greases, among others.</p> <p>By employing these comprehensive environmental monitoring and evaluation practices, the Company aims to mitigate any potential adverse effects and continuously improve its environmental performance.</p>	<Not Applicable>

W3.1a

**(W3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.**

**Water pollutant category**

Inorganic pollutants

**Description of water pollutant and potential impacts**

BOD (Biochemical Oxygen Demand);

COD (Chemical Oxygen Demand);

Solids;

Oils and Greases;

Ammoniacal Nitrogen;

Among others.

**Value chain stage**

Direct operations

**Actions and procedures to minimize adverse impacts**

Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience

Resource recovery

Beyond compliance with regulatory requirements

Implementation of integrated solid waste management systems

Industrial and chemical accidents prevention, preparedness, and response

Water recycling

Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Upgrading of process equipment/methods

**Please explain**

The identification and classification of polluting possibilities is carried out by surveying aspects and impacts, and the legislation in force in each country. The Company follows the guidelines and standards established by current environmental legislation, whether municipal, national or international. In these standards, the limits allowed for the discharge of industrial and sanitary effluents are recommended. These parameters are constantly monitored in order to eliminate potential pollutants in their final sources of release, especially surface releases in bodies of water.

Minerva Foods Brazil: All effluents are monitored through analysis reports issued by specialized laboratories, accredited in accordance with ISO/IEC 17.025 Standard or internationally recognized certification.

Minerva Foods Latam: In the case of the units in Colombia, the laboratories must be approved by IDEAM and not Paraguay, the laboratories must be accredited by ONA (National Accreditation Agency), so that the analyzes are approved and presented to environmental bodies.

The evaluation of the results of the monitoring analyzes aims to identify the causes of the parameters outside the expected interval for either compliance with the legislation or for the improvement of the operation. The reports or internal verification support the monitoring reports of the unit regarding the quality of the receiving body (when the discharge is fresh) or the water pipe, when fertigation or percolation is used.

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**Water pollutant category**

Other nutrients and oxygen demanding pollutants

**Description of water pollutant and potential impacts**

BOD (Biochemical Oxygen Demand);

COD (Chemical Oxygen Demand);

Solids;

Oils and Greases;

Ammoniacal Nitrogen;

Among others.

**Value chain stage**

Direct operations

**Actions and procedures to minimize adverse impacts**

Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience

Resource recovery

Beyond compliance with regulatory requirements

Implementation of integrated solid waste management systems

Industrial and chemical accidents prevention, preparedness, and response

Water recycling

Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Upgrading of process equipment/methods

**Please explain**

At Minerva Foods, each of our units has a comprehensive solid waste management plan that identifies waste sources and ensures proper disposal practices. We diligently assess the impacts of our activities through thorough aspect and impact evaluations. Our primary focus lies on preserving sensitive ecosystems like rivers and other receiving bodies, where we discharge our effluents, as well as areas utilizing fertigation, where soil plays a critical role. To achieve this, we invest strategically in cutting-edge technologies, maintain diligent monitoring, and rely on a highly skilled technical team to evaluate and minimize our environmental footprint.

As a testament to our dedication, in 2022, we successfully completed significant enhancements to the effluent treatment system at our José Bonifácio unit in Brazil. The implementation of an activated sludge treatment system resulted in a remarkable reduction of methane emissions, the primary source of greenhouse gas emissions in Scope 1.

Additionally, we are proud of our investment in directing treated effluents to neighboring pasturelands surrounding our industrial units and select Company-owned areas, where fertigation is employed. This approach not only preserves water bodies but also substantially reduces the need for nitrogen-based fertilizers, which are known greenhouse gas emitters. In 2022, 37.7% of our discharged water volume was utilized for fertigation in Brazil.

## W3.3

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

Yes, water-related risks are assessed

## W3.3a

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

#### Value chain stage

Direct operations

#### Coverage

Full

#### Risk assessment procedure

Water risks are assessed in an environmental risk assessment

#### Frequency of assessment

More than once a year

#### How far into the future are risks considered?

Up to 1 year

#### Type of tools and methods used

Tools on the market

International methodologies and standards

Other

#### Tools and methods used

WRI Aqueduct

IPCC Climate Change Projections

Internal company methods

Scenario analysis

#### Contextual issues considered

Water availability at a basin/catchment level

Water quality at a basin/catchment level

Stakeholder conflicts concerning water resources at a basin/catchment level

Impact on human health

Implications of water on your key commodities/raw materials

Water regulatory frameworks

Status of ecosystems and habitats

#### Stakeholders considered

Employees

Local communities

NGOs

Regulators

Water utilities at a local level

Other water users at the basin/catchment level

#### Comment

The company holds monthly discussions through the industrial committee to review its water usage performance and projects the consumption curve based on its slaughter/production volume. Moreover, in 2022, the company conducted water sustainability studies across all its operations. The objective is to evaluate and forecast potential conditions that could impact our operations in the short, medium, and long term concerning water use and availability. These studies follow external company methodologies, and we are incorporating internationally recognized methodologies from the WRI for additional depth and compliance.

Additionally, it is important to note that our Climate Risks project, utilizing the methodology brought by TCFD, has mapped risks related to water scarcity, river flooding, heatwaves, cold snaps, strong winds, and forest fires. Through the use of specialized software developed by a consulting firm, we have identified the units with the highest probability of experiencing these threats. The results of this mapping exercise are currently being analyzed by the responsible teams and will be utilized in the Company's future planning, once the project is finalized.

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## W3.3b

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

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row 1	<p>The company maintains a dedicated technical engineering and environmental department that conducts field analyses, studies, and growth projections to establish strategies ensuring the sustainability of our water sources, both for discharge and extraction. At Minerva Foods, we prioritize informed decision-making through strategic weekly forums where we analyze factors that shape supply and demand in the sector. These discussions include the assessment of climate forecasts derived from CFS2, GFS, ECMWF, and COSMO INMET models, among other relevant information.</p>	<p>Considering the predominantly hydroelectric energy matrix in Brazil and Paraguay, our company faces the potential challenge of increased electricity costs during periods of water scarcity. To effectively monitor the electricity sector, we analyze various sources of information, including mathematical price forecasting models, weather maps, and reports from the Brazilian National Electric System Operator (ONS).</p> <p>Water-related risks can result in significant electricity price hikes, impacting our production costs. To mitigate these risks, our subsidiary, Minerva Energia, plays a vital role in assessing the optimal contracting period and minimizing financial impacts by securing long and medium-term energy contracts. This strategic approach helps safeguard our company against the inherent price volatility in the energy market.</p>	<p>Minerva Foods actively fosters open dialogue with community representatives, government authorities, and institutions in the areas of healthcare, education, and social integration. Our teams at the units conduct qualitative analyses to reinforce the positive effects that our presence generates in the surrounding communities. Furthermore, we are currently developing Stakeholder Engagement Plans for all our slaughter and deboning units in South America. These plans aim to measure both the positive and negative impacts, as well as identify new opportunities for local development in the regions where Minerva Foods operates.</p>	<p>To mitigate the impact of rising electricity prices and potential consumption restrictions during electricity rationing, ongoing studies are being conducted. These studies explore options such as self-production of energy, which could make the company more self-sufficient in generating a portion of its energy needs and minimize water-related risks associated with the energy matrix in Brazil and Paraguay. Data is currently being validated, and feasibility assessments of the projects are underway.</p> <p>Minerva Foods also holds regular discussions to review its water usage performance and project consumption trends based on slaughter/production volume. Furthermore, the company conducts studies across all its operations for the medium and long term, with the objective of evaluate and project potential conditions that could impact operations in terms of water use and availability.</p> <p>In addition, the company has undertaken a Climate Risks project, utilizing the methodology introduced by the TCFD. This project involved mapping risks associated with water scarcity, river flooding, heatwaves, cold waves, strong winds, and forest fires. Specialized software developed by a consulting firm facilitated the identification of units most likely to be affected by these threats. The results of this mapping exercise are currently being analyzed by the responsible teams and will be utilized in the company’s future planning after the project is completed.</p>

**W4. Risks and opportunities**

**W4.1**

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

Yes, only within our direct operations

**W4.1a**

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

Minerva Foods demonstrates a proactive approach to risk management and recognizes the potential impact of its dependence on forest commodities in its direct operations and value chain. To address and manage these risks effectively, the company has implemented a comprehensive Risk Management Policy since 2019, publicly available on its website. This policy ensures that risks are periodically identified, documented, and structured to be known and addressed in a systematic manner.

The identified risks are categorized according to their nature and origin:

**Strategic Risks:** These risks are associated with management's strategic decisions in pursuit of the company's business objectives.

**Financial Risks:** This category is further divided into three segments:

**Market Risks:** Arise from possible losses caused by fluctuations in interest rates, exchange rates, share prices, and commodity prices.

**Credit Risks:** Relate to potential losses due to uncertainty in receiving amounts agreed upon with third parties.

**Liquidity Risks:** Involve the possibility of the company being unable to meet its obligations effectively, potentially leading to significant losses.

**Compliance Risks:** These risks involve potential sanctions due to non-compliance with applicable legislation, agreements, regulations, codes of conduct, and policies.

**Operational Risks:** Arise from issues within the company's infrastructure that may impact operational efficiency and resource utilization.

Among the significant financial and strategic impacts that can affect Minerva Foods' business are fluctuations in raw material costs (mainly cattle purchases) and selling prices of its products. These prices can be influenced by various factors, including supply and demand dynamics, climate change-related events affecting cattle supply, disease outbreaks, economic conditions, and more. To address the financial impact of such risks, Minerva Foods diversifies its cattle purchases across various locations, leveraging the geographical diversity of its operations.

Additionally, in response to growing climate risks, the company initiated a project in 2022 to integrate climate risks (physical and transitional) into its risk management. This involves considering climate change scenarios aligned with its strategic vision in the medium and long term (2030 and 2050), as recommended by the Task Force on Climate-related Financial Disclosures (TCFD). The project aims to prioritize initiatives that mitigate climate risks, and the preliminary results have been included in the 2022 Sustainability Report. The project is expected to be completed in 2023.

Within this project, Minerva Foods is analyzing potential impacts of physical risks, such as cold and heat waves, meteorological droughts, floods, and fires, on its forestry operations. Additionally, they are mapping and analyzing transition risks related to regulation, reputation, market, and technology. For assets with higher risk, the company will define mitigation plans to address these challenges effectively. To prioritize the initiatives that mitigate these risks, the Company considers that a significant financial risk is one that, if materialized, fears the potential to cause a financial impact from 10% of EBITDA, or that represents a value of about R\$ 280 million (considering that the EBITDA of the Company in 2022 was R\$ 2.8 billion).

As the leading exporter in South America with approximately 70% of its revenue coming from international markets, Minerva Foods is exposed to trade barriers and regulatory changes in various importing countries. For example, there is the case of the European Union imposition of stringent sustainability requirements, and any loss of sales in this market would result in an estimated 8% reduction in the company's revenue, equivalent to approximately 1.8 billion reais.

**W4.1b**

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

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	1	1-25	Leveraging an internal methodology to complement the WRI methodology, Minerva Foods classifies its Mirassol D'Oeste unit in Brazil as situated in a water-stressed area. In 2022, the company initiated a project in collaboration with a specialized consultancy to map and assess climate risks, encompassing the entire value chain in alignment with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The outcomes of this project will be reported to the Carbon Disclosure Project (CDP) in the upcoming reporting cycle.

**W4.1c**

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

**Country/Area & River basin**

Brazil	Other, please specify (Bacia Hidrográfica do Paraguai )
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**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

**% company's total global revenue that could be affected**

1-10

**Comment**

N/A

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**W4.2**

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

**Country/Area & River basin**

Brazil	Other, please specify (Bacia do Rio da Prata)
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**Type of risk & Primary risk driver**

Acute physical	Drought
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**Primary potential impact**

Increased operating costs

**Company-specific description**

The possibility of drought may necessitate Minerva Foods to procure water from alternative sources beyond the ones originally defined or face a substantial increase in water prices required for all operations, particularly in Brazil and Paraguay. Additionally, the drought-related risk could lead to an escalation in energy costs, significantly impacting the company's operational expenses.

**Timeframe**

1-3 years

**Magnitude of potential impact**

Medium-high

**Likelihood**

More likely than not

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1000000

**Potential financial impact figure - minimum (currency)**

<Not Applicable>

**Potential financial impact figure - maximum (currency)**

<Not Applicable>

**Explanation of financial impact**

The amount of BRL 1,000,000.00 represents the estimated average revenue loss per day of production for the unit in the event that the identified risk materializes.

**Primary response to risk**

Develop drought emergency plans

**Description of response**

Minerva Foods actively monitors the climate scenario and implements measures to mitigate the impact of drought emergencies. One such measure is expanding the radius of raw material procurement to ensure a stable supply during water scarcity. Additionally, the company is conducting drilling studies for the construction of artesian wells at the unit, exploring alternative water sources to enhance water availability and resilience in the face of drought conditions.

**Cost of response**

26400

**Explanation of cost of response**

The response cost calculation includes the consideration of procuring tanker trucks to supply water to the unit. The estimated cost is determined based on the assumption of BRL12.00 per m³ as the cost of delivering water via water truck, taking into account the average daily consumption of the Mirassol D'Oeste unit. This allows for an estimation of the financial implications associated with securing alternative water sources during water scarcity situations.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Evaluation in progress	The company is actively engaged in continuous studies aimed at minimizing the effects of electricity price fluctuations and potential consumption constraints during electricity rationing scenarios. Furthermore, research is being carried out to explore the possibility of self-energy production, which could enable the company to become partially self-sufficient in generating its energy, thereby mitigating water risks associated with Brazil and Paraguay's energy matrix. The data is currently undergoing validation, and feasibility assessments for these projects are still in progress, making it difficult to estimate the impact of this risk on the value chain.

W4.3

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

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

## W4.3a

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

**Type of opportunity**

Efficiency

**Primary water-related opportunity**

Improved water efficiency in operations

**Company-specific description & strategy to realize opportunity**

Water reuse initiatives, such as utilizing recycled water for truck cleaning and corral washing, and upgrading equipment like pressure reducers in sanitary inlets and sanitizing hoses, enhance operational efficiency across all Minerva Foods units.

An illustrative example can be seen in Uruguay, where the Company is replacing drinking water supplies for barometric condensers and blood dryers with water sourced from sanitary filters. This water is then used for handwashing and clarified purging purposes. These measures not only contribute to water conservation but also optimize resource utilization within the production processes.

**Estimated timeframe for realization**

Current - up to 1 year

**Magnitude of potential financial impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

3700000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact**

Taking into account the company's initiatives to reduce water consumption, with an average value of BRL 2.30 per m<sup>3</sup> and an estimated reuse rate of approximately 12%, the company achieves annual savings of approximately BRL 3.7 million. These savings demonstrate the positive impact of the company's water conservation efforts, not only in terms of resource preservation but also in terms of cost optimization.

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## W5. Facility-level water accounting

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### W5.1

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

**Facility reference number**

Facility 1

**Facility name (optional)**

Mirassol D'Oeste - MT

**Country/Area & River basin**

Brazil	Other, please specify (Bacia do Rio do Paraguai)
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**Latitude**

-15.414807

**Longitude**

-58.072188

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

**Total water withdrawals at this facility (megaliters/year)**

587

**Comparison of total withdrawals with previous reporting year**

Higher

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

587

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

**Total water discharges at this facility (megaliters/year)**

497

**Comparison of total discharges with previous reporting year**

Higher

**Discharges to fresh surface water**

497

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

**Total water consumption at this facility (megaliters/year)**

587

**Comparison of total consumption with previous reporting year**

Higher

**Please explain**

The increase is due to the fact that the Mirassol D'Oeste unit in 2021 decreed a lay-off still due to the pandemic during practically the entire first semester. In 2022, production operated normally. The unit's slaughter volume in 2022 was 203% higher than in 2021, from 55,554 heads to 168,472, which reflected in the increase in the amount captured, consumed, and discarded. All the volume of water captured is based on local measurements made at the Company's unit.

**W5.1a**

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

**Water withdrawals – total volumes**

**% verified**

76-100

**Verification standard used**

Permit for capture and disposal issued by the environmental agency.  
Volumes filed and reported to the competent environmental agency. The information is verified at each renewal.

**Please explain**

<Not Applicable>

**Water withdrawals – volume by source**

**% verified**

76-100

**Verification standard used**

Permit for capture and disposal issued by the environmental agency.  
Volumes filed and reported to the competent environmental agency. The information is verified at each renewal.

**Please explain**

<Not Applicable>

**Water withdrawals – quality by standard water quality parameters**

**% verified**

76-100

**Verification standard used**

Analyzes carried out by the federal inspection.  
Report carried out and evaluated by the federal inspection present at the unit.

**Please explain**

<Not Applicable>

**Water discharges – total volumes**

**% verified**

76-100

**Verification standard used**

Permit for capture and disposal issued by the environmental agency.  
Volumes filed and reported to the competent environmental agency. The information is verified at each renewal.

**Please explain**

<Not Applicable>

**Water discharges – volume by destination**

**% verified**

76-100

**Verification standard used**

Permit for capture and disposal issued by the environmental agency.  
Volumes filed and reported to the competent environmental agency. The information is verified at each renewal.

**Please explain**

<Not Applicable>

**Water discharges – volume by final treatment level**

**% verified**

76-100

**Verification standard used**

Permit for capture and disposal issued by the environmental agency.  
Volumes filed and reported to the competent environmental agency. The information is verified at each renewal.

**Please explain**

<Not Applicable>

**Water discharges – quality by standard water quality parameters**

**% verified**

76-100

**Verification standard used**

Permit for capture and disposal issued by the environmental agency.  
Volumes filed and reported to the competent environmental agency. The information is verified at each renewal.

**Please explain**

<Not Applicable>

**Water consumption – total volume**

**% verified**

76-100

**Verification standard used**

Permit for capture and disposal issued by the environmental agency.  
Volumes filed and reported to the competent environmental agency. The information is verified at each renewal.

**Please explain**

<Not Applicable>

**W6. Governance**

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**W6.1**

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

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

**W6.1a**

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

	Scope	Content	Please explain
Row 1	Company-wide	Commitment to prevent, minimize, and control pollution Commitments beyond regulatory compliance	<p>In the Health and Safety, Environment, Food Safety and Social Responsibility Policy, the key points to which the company is committed are addressed, in this sense, the policy understands the importance of "respecting the environment and the community through the prevention and conservation of natural resources to sustain the negotiation and management of environmental aspects with the proper treatment of its liquid effluents, solid waste and atmospheric emissions".</p> <p>Minerva Foods considers the management of water resources essential in its operations, seeking to monitor, reduce and optimize consumption, as well as expand water reuse and improve effluent treatment. Water withdrawal occurs as provided for in the authorizations issued by the environmental agency, always considering the rational use of the resource and the reduction of possible present and future impacts.</p> <p>To achieve a more efficient process in the use of water, Minerva Foods has several initiatives aimed at improving processes and environmental education, such as water reuse projects, installation, or replacement of equipment, such as pressure reducers in sanitary inlets and sanitizing hoses. Environmental education actions are carried out with employees and the community, sensitizing participants on the importance of everyone contributing to conscious consumption.</p> <p>In the generation and treatment of effluents, the Company maintains monitoring and improvement actions that always follow the legislation in force for each country. The Company has also invested in the disposal of treated effluent in fertigation systems for pastures adjacent to the industrial units and in some of the Company's own areas.</p>

**W6.2**

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

Yes

**W6.2a**

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

Position of individual or committee	Responsibilities for water-related issues
Board-level committee	The Finance and Risk Committee is an advisory body, linked to the Company's Board of Directors, and is responsible for assisting the Board of Directors (i) in monitoring and evaluating the effectiveness of the financial policies applied by the Company, in the fulfillment of its responsibilities, including, but not limited to, the issuance of recommendations to the Board of Directors on risks and mitigation strategies, with a view to giving greater efficiency and quality to the decisions taken by the Board of Directors, (ii) monitoring and evaluating the effectiveness of the policies applied by the Company, including the Risk Management Policy, in the implementation of mitigating measures of the risk factors to which the Company is exposed, as well as in the analysis of the Brazilian and global economic situation, with its potential impacts on the Company's financial, operational and strategic position. The Finance and Risk Committee, together with the Company's Board of Directors, must constantly analyze the risks to which the Company is exposed and which may adversely affect its business, financial situation and the results of its operations, monitoring changes in the macroeconomic and sectoral scenario that may influence its activities, providing, whenever necessary, all information regarding the limitation of the Company's exposure to the risks to which it is subject.
Chief Executive Officer (CEO)	The Company's CEO acts in making important decisions on water issues that may affect the strategy to achieve the long-term goal expressed in the commitment to achieve net zero emissions by 2035, business objectives and mobilization of necessary resources. He is the central point of communication between the Company's operations and the Board of Directors and monitors the progress of the plans outlined and indicators of the sustainability agenda.
Chief Operating Officer (COO)	Director responsible for environmental management. The COO acts as direct support to the CEO to implement the Company's strategic plan, guiding the officers under his management to comply with policies established by the Company, as well as regulations, which have among their guidelines the objective of avoiding or minimizing adverse impacts on human health and the environment, avoiding or minimizing pollution resulting from activities and promoting the most sustainable use of resources, including energy and water (use of water resources and disposal as effluent). The COO is responsible for identifying priority demands and forwarding them to the CEO for consideration, such as those arising from socio-environmental criteria that permeate water issues (mainly from the unit located in a water stress area), in addition to ensuring that industrial managers are complying with other guidelines and strategies relevant to Minerva Foods.
Other, please specify (The Sustainability and Innovation Advisory Board)	The Innovation and Sustainability Advisory Board is a non-statutory collegiate advisory body, linked to the Company's Executive Board, responsible for monitoring and discussing practices related to socio-environmental sustainability, corporate governance, and innovation, to provide greater transparency, efficiency, and assertiveness of Minerva Foods initiatives. This board meets monthly and is composed of the CEO, CFO, CTO, HR Director, Legal Director, Institutional Relations Director, Executive Managers of Sustainability, Renove Program and of MyCarbon and 2 independent members.
Other, please specify (Sustainability Commission)	The Sustainability Commission aims to drive the sustainability agenda across the organization and assist in decision-making related to socio-environmental issues. In addition, oversees and guides the execution of the Company's transition to a low carbon economy plan and monitors the progress towards the targets settled at the Commitment to Sustainability. The Committee is composed by CEO, CFO, CTO, HR Director, Legal Director, Institutional Relations Director, Executive Managers of Sustainability, Renove Program and of MyCarbon. This Committee was responsible for the decision to publicly announce Minerva Foods' commitment to the sustainability in April 2021. The main objective of the Company's Commitment to Sustainability is to drive Minerva Foods' transition to a low-carbon economy, achieving carbon neutrality by 2035, 15 years ahead of the Paris Agreement. To achieve this, the Company is working on three major axes: 1. Eco-efficiency in controlled operations; 2. Combating illegal deforestation in the value chain; and 3. Development of the Renove program on partner farms.
Other, please specify (Sustainability Executive Managers)	The Sustainability Executive Managers are subordinated to the Institutional Relations Department and are responsible for identifying and managing risks and opportunities related to social and environmental practices and coordinating the implementation of plans linked to the strategy for the expressed long-term goal Commitment to Sustainability (net zero emissions by 2035).
Other, please specify (Environmental Managers)	The Environmental Managers are subordinated to the Operational Efficiency and Engineering Department and COO and are responsible for the environmental licensing of operations, management of water and effluent treatment, correct disposal of waste, development of efficiency projects for productive resources and energy, including the management of wood consumption for use in the boilers of industrial units.

**W6.2b**

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Sporadic - as important matters arise	Monitoring implementation and performance Monitoring progress towards corporate targets Overseeing and guiding scenario analysis Reviewing and guiding risk management policies	The Board of Directors of Minerva Foods is the highest governance body of the Company and is responsible for determining all the strategy guidelines of the business areas and monitoring their results, advised by the Finance and Risk Committee. Another important committee to mention is the Industrial Management Commission. With monthly meetings, the results of the strategic KPIs for the Company are discussed and, when necessary, action plans are prepared for observed deviations.

**W6.2d**

**(W6.2d) Does your organization have at least one board member with competence on water-related issues?**

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues	Primary reason for no board-level competence on water-related issues	Explain why your organization does not have at least one board member with competence on water-related issues and any plans to address board-level competence in the future
Row 1	Yes	The criteria used by the company assess the competence of the advisor(s), professional expertise and academic experience in issues related to water resources.	<Not Applicable>	<Not Applicable>

**W6.3**

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

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

Chief Sustainability Officer (CSO)

**Water-related responsibilities of this position**

- Assessing future trends in water demand
- Assessing water-related risks and opportunities
- Managing water-related risks and opportunities
- Setting water-related corporate targets
- Monitoring progress against water-related corporate targets

**Frequency of reporting to the board on water-related issues**

More frequently than quarterly

**Please explain**

Director responsible for environmental management. The COO acts as direct support to the CEO to implement the Company's strategic plan, guiding the officers under his management to comply with policies established by the Company, as well as regulations, which have among their guidelines the objective of avoiding or minimizing adverse impacts on human health and the environment, avoiding or minimizing pollution resulting from activities and promoting the most sustainable use of resources, including energy and water (use of water resources and disposal as effluent). The COO is responsible for identifying priority demands and forwarding them to the CEO for consideration, such as those arising from socio-environmental criteria that permeate water issues (mainly from the unit located in a water stress area), in addition to ensuring that industrial managers are complying with other guidelines and strategies relevant to Minerva Foods.

W6.4

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

	Provide incentives for management of water-related issues	Comment
Row 1	No, and we do not plan to introduce them in the next two years	

W6.5

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

Yes, other

W6.5a

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

**Minerva Foods Brasil:** the Company actively participates in the Brazilian river basin committees. It is through democratic discussions and negotiations that these committees evaluate the real and divergent interests on the use of water in the river basins. The main decisions taken by the commission are: to approve and monitor the preparation of the Basin Water Resources Plan, which gathers strategic information for water management in each basin; to arbitrate conflicts over water use (in the first administrative instance); to establish mechanisms and suggest the amounts to be charged for water use. Participation is guided by the Company's policy and any action that is not in accordance with the guidelines expressed in the document must be evaluated by the Audit, Risks and Compliance area. In addition, the Company monitors and seeks to ensure compliance with water potability and effluent discharge standards to meet the legal requirements applicable to its activities and commitments.

W6.6

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

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

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	<p>In order to achieve a more efficient process in the use of water, Minerva Foods has several initiatives aimed at improving processes and environmental education, such as water reuse projects, installation or replacement of equipment, such as pressure reducers in sanitary inlets and sanitizing hoses. Environmental education actions are carried out with employees and the community, sensitizing participants on the importance of everyone contributing to conscious consumption.</p> <p>Reuse water is used in the industries in processes such as: washing trucks, irrigating gardens and washing floors and corrals, being carried out in accordance with the sanitary standards of food production. Promoting water reuse is a positive alternative to replace drinking water, reducing the demand for natural resources and contributing to sustainable development.</p> <p>All industrial units have effluent treatment plants, and these are treated and disposed of according to the guidelines of the licensing guidelines and the appropriate regulatory bodies. When discharged into a receiving body, the discharge limits stipulated by the control body are always complied with. In the event that parameters outside the established limits are identified, the entire treatment system is thoroughly studied to identify and address the problem. Monitoring and improvement actions are maintained, always following the legislation in force for each country.</p>
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	<p>Minerva Foods' sustainability strategy is guided by its commitment to the sustainable future of the planet's food supply. Nevertheless, Minerva Foods considers it essential to manage water resources in its operations, seeking to monitor, reduce and optimize consumption, as well as expand the reuse of water and improve the treatment of effluents. Water withdrawal occurs as provided for in the authorizations issued by the environmental agency, always considering the rational use of the resource and the reduction of possible present and future impacts.</p> <p>Considering that the processes of processes are responsible for approximately 60% of all water consumed in the Company, the search for more efficient use involves optimizing operations, and each meatpacking unit undertakes monthly monitoring of water consumption efficiency per ton of finished product (m3 / TPA). finished product (m3 / TPA), and each country has internal procedures for managing this resource. Each operating unit works to optimize the process and reduce consumption, guided by an annual reduction target, which is based on its own history and the forecast of elements such as increased production or the installation of new equipment. In addition to monitoring daily consumption, a consumption analysis is carried out by plant in monthly commissions, and an improvement plan is drawn up if necessary.</p>
Financial planning	Yes, water-related issues are integrated	11-15	<p>Minerva Foods' sustainability strategy is guided by its commitment to the sustainable future of food on the planet. The Company has strengthened its efforts through continuous investment in technologies to increase efficiency in effluent treatment, contributing to the mitigation of its atmospheric emissions, in addition to projects and initiatives that promote the efficient use of water in its operations.</p> <p>Minerva Foods Brasil: as an example, in 2022, the works to improve the effluent treatment system at the José Bonifácio unit were completed, with the implementation of the effluent treatment system with activated sludge technology that will contribute to reducing methane emissions in the process, the main source of GHG emissions in scope 1. GHG emissions in scope 1.</p> <p>The Company has also invested in the destination of treated effluent in fertigation systems for pastures neighboring the industrial units and in some areas of the Company's own areas. Among the various environmental benefits is the preservation of water bodies and the reduction in the use of nitrogen-based fertilizers that are emitters of greenhouse gases. In 2022, 37.7% of the volume of discarded water was destined for fertigation in Brazil.</p>

**W7.2**

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

**Row 1**

**Water-related CAPEX (+/- % change)**

4.79

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

5

**Water-related OPEX (+/- % change)**

3.5

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

5

**Please explain**

(CAPEX) Projects carried out at Minerva Foods units to improve water consumption and effluent treatment.

(OPEX) Amounts spent on water collection operations and treatment plants.

Percentage-wise, in OPEX, there was a reduction in value compared to 2021, however in absolute values there was an increase of more than 10%. The difference is due to the increase in other costs not related to the environmental area, which proportionally reduced the percentage. Regarding CAPEX, the investment remains at around 5% of the total.

**W7.3**

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

	Use of scenario analysis	Comment
Row 1	Yes	In the ongoing Climate Risk project, risks related to water scarcity, river flooding, heat and cold waves, strong winds and forest fires have been mapped. The Company is considering the greenhouse gas concentration scenarios and socioeconomic strategies prepared by the IPCC (SSP1-2.6, SSP2-4.5 and SSP3-7.0) in the medium and long term (2030 and 2050) that may affect its operations and value chain. The results of this mapping are being analyzed by the responsible teams and will be finalized in 2023.

**W7.3a**

**(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization's business strategy.**

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Water-related Climate-related	<p>Monthly, in addition to discussions in committees with the C-level, a meeting is held with a specialized consultancy where, among other issues, water availability in Brazil (rainfall) is discussed and how its abundance or scarcity can affect the Company's business.</p> <p>In addition, as part of the climate agenda, the climate risk integration project (physical and transition) was initiated at Minerva Foods in 2022. Through the hiring of a specialized consultancy, climate change projections combined with the Company's strategic vision in the medium and long term horizons (2030 and 2050) are being studied in accordance with the TCFD recommendations.</p> <p>As part of the project to map and analyze risks and opportunities related to climate change, the Company is considering the greenhouse gas concentration scenarios and socioeconomic strategies prepared by the IPCC (SSP1-2.6, SSP2-4.5 and SSP3-7.0) in the medium and long term (2030 and 2050) that may affect its operations and value chain. The physical risks assessed include: forest fires, floods, heat and cold waves, windstorms and meteorological droughts. The transition risks assessed include those linked to the political and legal, market, technological and reputational fronts. Eight opportunities were initially mapped, with different applications in each country of operation.</p>	<p>From the data presented at meetings, committees and lectures, the Company can define which unit may be affected positively or negatively. Thus, production planning at the units can be adjusted according to the analyses carried out.</p> <p>Besides that, it is important to mention that in the Climate Risks project, risks related to water scarcity, river floods, heat and cold waves, strong winds and forest fires were mapped. Through the use of software developed by the specialized consultancy, it was possible to map which units will have a higher probability of occurrence of the threats. The results of this mapping are being analyzed by the teams responsible, and will be used in the future in the Company's planning.</p>	<p>From the data presented at meetings, committees and lectures, the Company can define which unit may be affected positively or negatively. Thus, production planning at the units can be adjusted according to the analyses carried out. In addition, with the results of the climate risk mapping that is underway, it will be possible to have an even clearer view of these factors for the Company.</p> <p>Furthermore, the results of the studies of the Minerva Foods value chain will also serve as a basis for mapping the possibility of purchasing cattle, in addition to the participation of partner suppliers in the Renove program, which fosters the engagement of rural producers and their joint action for the implementation of sustainable, profitable and low-carbon agriculture.</p>

**W7.4**

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

Row 1

**Does your company use an internal price on water?**

No, and we do not anticipate doing so within the next two years

**Please explain**

Based on the results of internal studies and the preliminary results of the Climate Risk Project (TCFD), in which the risk of water scarcity, among other risks, was assessed, it was taken into account that most of the Company's operations are located in South America, where there is a high availability of water and low cost for use. In addition, we have only one unit (Mirassol D'Oeste) that is located in a region of water stress and that there are already mitigating measures being implemented.

After the end of the Climate Risks project (TCFD), scheduled for 2023, water risks will be reassessed according to the new results and, if necessary, the analysis of internal water price may be included.

**W7.5**

**(W7.5) Do you classify any of your current products and/or services as low water impact?**

	Products and/or services classified as low water impact	Definition used to classify low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	No, but we plan to address this within the next two years	<Not Applicable>	Other, please specify (In view of the considerable impact that meat production has on water consumption and effluent generation, the Company has increasingly invested in measures to reduce its water consumption and in the treatment of its effluents.)	Minerva Foods has been conducting studies on the subject.

**W8. Targets**

**W8.1**

**(W8.1) Do you have any water-related targets?**

Yes

**W8.1a**

**(W8.1a) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.**

	Target set in this category	Please explain
Water pollution	Yes	<Not Applicable>
Water withdrawals	Yes	<Not Applicable>
Water, Sanitation, and Hygiene (WASH) services	No, and we do not plan to within the next two years	
Other	Yes	<Not Applicable>

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**(W8.1b) Provide details of your water-related targets and the progress made.****Target reference number**

Target 1

**Category of target**

Water pollution

**Target coverage**

Company-wide (direct operations only)

**Quantitative metric**

Increase in proportion of wastewater that is safely treated

**Year target was set**

2021

**Base year**

2021

**Base year figure**

0

**Target year**

2022

**Target year figure**

100

**Reporting year figure**

100

**% of target achieved relative to base year****Target status in reporting year**

Achieved

**Please explain**

The effluent generated was 100% treated and all established analyses were performed.

Annual goal: Treat 100% of the effluent in accordance with the municipal, state, national or international legal standard (if applicable); All effluent generated is properly treated and frequent analyzes were carried out.

The Company does not use absolute volume data to measure collection, consumption or effluent generation targets, but rather analyzes percentages over production volume, which may vary. Thus, the "target year figure" and "reporting year figure" are expressed in percentages.

---

**Target reference number**

Target 2

**Category of target**

Water consumption

**Target coverage**

Company-wide (direct operations only)

**Quantitative metric**

Other, please specify (Reduction in water discharge volumes)

**Year target was set**

2021

**Base year**

2021

**Base year figure**

0

**Target year**

2022

**Target year figure**

100

**Reporting year figure**

100

**% of target achieved relative to base year****Target status in reporting year**

Achieved

**Please explain**

The intake targets of the water discharge were 100% met.

Reduction in water discharge volumes: target for compliance with the legal grant for abstraction and release in addition to the technical target for water consumption per ton (t/m<sup>3</sup>).

The Company does not use absolute volume data to measure collection, consumption or effluent generation targets, but rather analyzes percentages over production volume, which may vary. Thus, the "target year figure" and "reporting year figure" are expressed in percentages.

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**Target reference number**

Target 3

**Category of target**

Water consumption

**Target coverage**

Company-wide (direct operations only)

**Quantitative metric**

Other, please specify (Reduction of water discharges per business unit)

**Year target was set**

2021

**Base year**

2021

**Base year figure**

0

**Target year**

2022

**Target year figure**

100

**Reporting year figure**

100

**% of target achieved relative to base year****Target status in reporting year**

Achieved

**Please explain**

The uptake targets of the grants were 100% met.

Reduction of water discharges by business unit. Annual target: Meet legal water abstraction and release in addition to technical target of water consumption per ton (m<sup>3</sup>/TPA).

The Company does not use absolute volume data to measure collection, consumption or effluent generation targets, but rather analyzes percentages over production volume, which may vary. Thus, the "target year figure" and "reporting year figure" are expressed in percentages.

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**Target reference number**

Target 4

**Category of target**

Water pollution

**Target coverage**

Company-wide (direct operations only)

**Quantitative metric**

Reduction in concentration of pollutants

**Year target was set**

2021

**Base year**

2021

**Base year figure**

0

**Target year**

2022

**Target year figure**

100

**Reporting year figure**

100

**% of target achieved relative to base year****Target status in reporting year**

Achieved

**Please explain**

The effluent generated was 100% treated and all established analyses were performed.

Reduction of the concentration of pollutants: Treat 100% of effluent according to municipal, state, national or international legal standard (if applicable); All effluent generated is properly treated and frequent analyses are performed. As an example, we have a BOD standard target at the Mirassol d'Oeste unit (Brazil) at 22 mg/l, having fully met the analyzes carried out.

The Company does not use absolute volume data to measure collection, consumption or effluent generation targets, but rather analyzes percentages over production volume, which may vary. Thus, the "target year figure" and "reporting year figure" are expressed in percentages.

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**Target reference number**

Target 5

**Category of target**

Water consumption

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**Target coverage**

Company-wide (direct operations only)

**Quantitative metric**

Other, please specify (Reduction in total water withdrawals)

**Year target was set**

2021

**Base year**

2021

**Base year figure**

0

**Target year**

2022

**Target year figure**

100

**Reporting year figure**

100

**% of target achieved relative to base year****Target status in reporting year**

Achieved

**Please explain**

The technical target for reduction in total withdrawal was 100% met.

Reduction in total water withdrawals: technical target, per operational unit, reducing the average percentage by 1 to 5% year on year (m<sup>3</sup>/TPA).

The Company does not use absolute volume data to measure collection, consumption or effluent generation targets, but rather analyzes percentages over production volume, which may vary. Thus, the "target year figure" and "reporting year figure" are expressed in percentages.

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**Target reference number**

Target 6

**Category of target**

Water consumption

**Target coverage**

Company-wide (direct operations only)

**Quantitative metric**

Other, please specify (Reduction of water withdrawals from groundwater)

**Year target was set**

2021

**Base year**

2021

**Base year figure**

0

**Target year**

2022

**Target year figure**

100

**Reporting year figure**

100

**% of target achieved relative to base year****Target status in reporting year**

Achieved

**Please explain**

The technical target for groundwater withdrawal reduction was 100% met.

Reduction of water withdrawals from groundwater: technical target, per operational unit, reducing the average percentage by 1 to 5% year on year (m<sup>3</sup>/TPA).

The Company does not use absolute volume data to measure collection, consumption or effluent generation targets, but rather analyzes percentages over production volume, which may vary. Thus, the "target year figure" and "reporting year figure" are expressed in percentages.

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**Target reference number**

Target 7

**Category of target**

Water consumption

**Target coverage**

Company-wide (including suppliers)

**Quantitative metric**

Other, please specify (Reduction of total water consumption)

**Year target was set**

2021

**Base year**

2021

**Base year figure**

0

**Target year**

2022

**Target year figure**

100

**Reporting year figure**

100

**% of target achieved relative to base year**

**Target status in reporting year**

Achieved

**Please explain**

The reduction of total water consumption through the targets for promoting water reuse were 100% met.

Reduction of total water consumption: target to promote water reuse in all operational units, according to quality validation. Comply with the legal grant for abstraction and release in addition to the technical target of water consumption per ton (m<sup>3</sup>/TPA).

The Company does not use absolute volume data to measure collection, consumption or effluent generation targets, but rather analyzes percentages over production volume, which may vary. Thus, the "target year figure" and "reporting year figure" are expressed in percentages.

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**Target reference number**

Target 8

**Category of target**

Water recycling/reuse

**Target coverage**

Company-wide (direct operations only)

**Quantitative metric**

Other, please specify (Reduction by product)

**Year target was set**

2021

**Base year**

2021

**Base year figure**

0

**Target year**

2022

**Target year figure**

100

**Reporting year figure**

100

**% of target achieved relative to base year**

**Target status in reporting year**

Achieved

**Please explain**

The reduction of total water consumption through the targets for promoting water reuse were 100% met.

Reduction by product: target to promote water reuse in all operational units, according to quality validation. Comply with the legal grant for abstraction and release in addition to the technical target for water consumption per ton (m<sup>3</sup>/TPA).

The Company does not use absolute volume data to measure collection, consumption or effluent generation targets, but rather analyzes percentages over production volume, which may vary. Thus, the "target year figure" and "reporting year figure" are expressed in percentages.

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## W9. Verification

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### W9.1

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

Yes

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### W9.1a

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

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	W1.2 – audited volumes of collection by source, disposal by destination and water consumption by source in all operating units in all countries; volume of reused water and water used for fertigation of pastures audited for the units in Brazil (Brazil division is equivalent to 31% of the operations); Audited volumes of water captured and discarded in areas of water stress, by source and type of destination.	AA1000AS	Assurance was carried out on a sample basis, by independent auditors from SGS do Brasil LTDA, in accordance with the practices and guidelines of the GRI (Global Reporting Initiative) and with the principles of AA1000AS and NBC TO 3000.
W3 Procedures	W3 - The procedures for managing risks, impacts and opportunities in the environmental area, including water resources management, were audited on a sample basis.	AA1000AS	Assurance was carried out on a sample basis, by independent auditors from SGS do Brasil LTDA, in accordance with the practices and guidelines of the GRI (Global Reporting Initiative) and with the principles of AA1000AS and NBC TO 3000.
W6 Governance	W6.1- The procedures for managing risks, impacts and opportunities in the environmental area, including water resources management, were audited on a sample basis.	AA1000AS	Assurance was carried out on a sample basis, by independent auditors from SGS do Brasil LTDA, in accordance with the practices and guidelines of the GRI (Global Reporting Initiative) and with the principles of AA1000AS and NBC TO 3000.
W8 Targets	W-8- consumption reduction targets in the Brazil and Latam divisions.	AA1000AS	Assurance was carried out on a sample basis, by independent auditors from SGS do Brasil LTDA, in accordance with the practices and guidelines of the GRI (Global Reporting Initiative) and with the principles of AA1000AS and NBC TO 3000.

**W10. Plastics**

**W10.1**

**(W10.1) Have you mapped where in your value chain plastics are used and/or produced?**

	Plastics mapping	Value chain stage	Please explain
Row 1	Yes	Direct operations Product use phase	In South America, Minerva Foods ensures that 100% of the plastic generated in its direct operations is mapped, collected, and disposed of, with almost all of it being recycled. The Company's solid waste management plans outline the generation, collection, and disposal flow for these materials. Regarding the use phase of the product, in Brazil, Minerva Foods annually participates in reverse logistics, facilitating the return of approximately 22% of the total packaging placed on the Brazilian market, in accordance with the goals set by the National Policy on Solid Waste.

**W10.2**

**(W10.2) Across your value chain, have you assessed the potential environmental and human health impacts of your use and/or production of plastics?**

	Impact assessment	Value chain stage	Please explain
Row 1	Not assessed – but we plan to within the next two years	<Not Applicable>	The use of primary plastic is currently of great importance in Minerva Foods' operations, as it serves as a critical input for vacuum packaging products, providing enhanced microbiological protection to food. In the event of unavailability of this input, the production process would be impacted. However, the Company is actively evaluating new alternatives to replace plastic.  <ul style="list-style-type: none"> <li>Minerva Foods Brasil: In 2022, for another consecutive year, Minerva Foods received the Eureciclo seal, which attests to the Company's practices promoting reverse logistics for product packaging. Minerva Foods is the first company in the meat sector to receive the seal for all product lines sold in the country, demonstrating its commitment to offsetting environmental impacts. More than just a seal, the Eureciclo platform connects cooperatives and collection and recycling operators to companies, generating additional resources for recycling agents, promoting reverse logistics for post-consumer packaging, and reducing the environmental impacts of this waste. Annually, Minerva Foods sends approximately 22% of the total packaging placed on the Brazilian market to reverse logistics, aligning with the targets of the National Solid Waste Policy.</li> <li>Minerva Foods Latam: The Company conducts campaigns to reduce waste generation and provides training on the proper disposal for each type, including recyclable materials that can be reused for other purposes.</li> </ul>

**W10.3**

**(W10.3) Across your value chain, are you exposed to plastics-related risks with the potential to have a substantive financial or strategic impact on your business? If so, provide details.**

	Risk exposure	Value chain stage	Type of risk	Please explain
Row 1	Yes	Direct operations	Regulatory Reputational	The utilization of primary plastic is of paramount importance in Minerva Foods' operations, as it serves as a critical input for vacuum packaging products, providing enhanced microbiological protection to food. In the event of unavailability of this input, the production process would be impacted. The Company has been actively evaluating new alternatives for replacing plastic.

**W10.4**

**(W10.4) Do you have plastics-related targets, and if so what type?**

	Targets in place	Target type	Target metric	Please explain
Row 1	No – but we plan to within the next two years	<Not Applicable>	<Not Applicable>	The company is mapping practices and opportunities related to the theme.

**W10.5**

**(W10.5) Indicate whether your organization engages in the following activities.**

	Activity applies	Comment
Production of plastic polymers	No	
Production of durable plastic components	No	
Production / commercialization of durable plastic goods (including mixed materials)	No	
Production / commercialization of plastic packaging	No	
Production of goods packaged in plastics	Yes	The products produced in the operation (chilled/frozen meat) are packaged in plastic.
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	

**W10.8**

**(W10.8) Provide the total weight of plastic packaging sold and/or used, and indicate the raw material content.**

	Total weight of plastic packaging sold / used during the reporting year (Metric tonnes)	Raw material content percentages available to report	% virgin fossil-based content	% virgin renewable content	% post-industrial recycled content	% post-consumer recycled content	Please explain
Plastic packaging sold	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Plastic packaging used	280	% virgin fossil-based content	100	<Not Applicable>	<Not Applicable>	<Not Applicable>	The products produced in the operation (chilled/frozen meat) are packaged in plastic. Due to health regulations, the raw material must be virgin, and it is not possible to use packaging with recyclable and/or reusable materials for this purpose.

**W10.8a**

**(W10.8a) Indicate the circularity potential of the plastic packaging you sold and/or used.**

	Percentages available to report for circularity potential	% of plastic packaging that is reusable	% of plastic packaging that is technically recyclable	% of plastic packaging that is recyclable in practice at scale	Please explain
Plastic packaging sold	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Plastic packaging used	% technically recyclable	<Not Applicable>	100	<Not Applicable>	<p>The plastic used in the primary packaging of products has the technical potential of being 100% recyclable.</p> <ul style="list-style-type: none"> <li>• Minerva Foods Brasil: In 2022, once again, Minerva Foods received the Eureciclo seal, which attests to the company's commitment to promoting reverse logistics for product packaging. The Eureciclo platform not only provides a seal but also facilitates connections between cooperatives, collection and recycling operators, and companies, generating additional resources for recycling agents. Annually, approximately 22% of the total packaging placed on the Brazilian market by Minerva Foods is directed towards reverse logistics, aligning with the objectives of the National Solid Waste Policy.</li> <li>• Minerva Foods Latam: Campaigns are conducted to reduce waste generation and educate on the proper disposal of each type, including recyclable materials that can be reused for other purposes.</li> </ul>

**W11. Sign off**

**W-FI**

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

**W11.1**

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Chief Executive Officer (CEO)	Chief Executive Officer (CEO)

Submit your response

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In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

Yes, CDP may share our Main User contact details with the Pacific Institute

Please confirm below

I have read and accept the applicable Terms