RESULT OF THE STUDY OF MAPPING AND ANALYSIS OF CLIMATE-RELATED RISKS AND OPPORTUNITIES

ACCORDING TO THE GUIDELINES OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

(TCFD)

Between 2022 and 2023, Minerva Foods, with the support of a specialized consultancy, developed the project to map and analyze climate-related risks and opportunities. The scope of operations considered in the project included 27 assets in the six countries where the Company concentrates its production (Argentina, Australia, Brazil, Colombia, Paraguay, and Uruguay). The project also included an analysis of the physical risks in municipalities within a 300 km radius of each of these assets to assess the potential impacts on the cattle supply chain. The areas of Sustainability, Audit, Risks and Compliance, Animal Welfare, Business Intelligence, Cattle Purchasing, Engineering, Finance, Innovation, Legal, Logistics, Environment, Investor Relations, SESMT and representatives of the Minerva Energia and Minerva Biodiesel divisions and the subsidiary MyCarbon participated in the process of mapping and analyzing climate-related risks and opportunities.

In the process of mapping climate-related physical risks, the history of occurrence of extreme weather events that impacted the assets considered in the scope of the project in the last ten years, sector analysis, bibliographic research, and Company documents, such as reports, booklets and reference form, were surveyed. To analyze the physical risks, the scenarios 'SSP1-2.6', 'SSP2-4.5' and 'SSP3-7.0' of the *Intergovernmental Panel on Climate Change* (IPCC) were used. The scenarios were chosen considering three perspectives of the evolution of the increase in the global average temperature and its potential effects on climate change (optimistic, intermediate, and pessimistic). The 'SSP1-2.6' scenario considers the achievement of the goal of limiting the temperature increase to below 2°C during the 21st century, projecting the efforts that would be required for the transition to a low-carbon economy. The maximum warming would be 1.7°C by 2060. The 'SSP2-4.5' scenario considers that human and technological development is not very different from current trends, whose challenges for mitigation and adaptation are considered moderate. The goal of keeping global warming to 2°C would not be met, the rate of increase could reach 2.5° by 2100. Finally, the 'SSP3-7.0' scenario considers that GHG emissions will rise steadily over the course of the 21st century, presenting greater challenges for both mitigation and adaptation. The rate of global warming could reach almost 4°C by 2100.

In the process of mapping and analyzing transition risks and opportunities, the '*Net Zero 2050'*, '*Divergent Net Zero'* and *'NDC 2020' scenarios* of the *Network of Central Banks and Supervisors for Greening the Financial Systems (NGFS)* were used. The three scenarios were also chosen considering an optimistic, intermediate, and pessimistic perspective on the evolution of the fight against climate change. The 'Net Zero 2050' scenario considers the effective application of public policies to achieve climate goals, evenly distributed among different sectors of the economy. The '*Divergent Net Zero'* scenario also considers the effective application of public policies to achieve climate goals, but distributed with different intensities among the sectors of the economy whose challenges for mitigation and adaptation are considered moderate. The goal of limiting warming to 2°C would be met. Finally, the 'NDC 2020' scenario considers the application of public policies that are ineffective in achieving climate goals.

All scenarios were assessed in the 2030 (medium-term) and 2050 (long-term) horizons. For comparison, the period from 1995 to 2014 was also considered as a baseline. At the end of the process, risks and opportunities were prioritized based on the Company's probability and impact rules.

The result of the project has been classified by type of risk and opportunity.

More information on the project, decarbonization projects and progress on the goals of the Commitment to Sustainability is available in the 2023 Sustainability Report.

Risk 1: Partial or total interruption of operations at an industrial unit	
Description	Extreme weather events such as forest fires, river floods, or weather-related droughts can threaten the ability of industrial facilities to operate by obstructing access, compromising physical structures, and causing water rationing or shortages.
Classification	Physical risk.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units in Argentina (Rosario) and Brazil (Minerva Foods Industrializados) and slaughtering and deboning units in Brazil (Mirassol d'Oeste, Palmeiras de Goiás and Rolim de Moura), Paraguay (Belén - Planta 23), and Uruguay (Canelones). **Value chain:** Not applicable.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the partial or total interruption of operations at an industrial unit. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. Additionally, the Company has implemented controlled firebreaks to prevent fires from neighboring properties to impact the industrial units, along with internal and external fire suppression systems, as well as periodic training of the Fire Brigades. There is also an Emergency Response Plan (ERP) for each of the industrial units. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 2: Infrastructure and equipment damage	
Description	High winds, wildfires and flooding can damage the physical structure of industrial plants, as well as both stationary and mobile equipment.
Classification	Physical risk.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing plants located in Argentina (Rosario) and slaughtering and deboning plants in Brazil (Palmeiras de Goiás), and Paraguay (Belén - Planta 23). **Value chain:** Cattle ranches located within a 300 km radius of the industrial units in Argentina, Australia, Brazil, Colombia, Paraguay, and Uruguay.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to increased maintenance and repair costs and expenses. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. Additionally, the Company has implemented controlled firebreaks to prevent fires from neighboring properties to impact the industrial units, along with internal and external fire suppression systems, as well as periodic training of the emergency response teams. There is also an Emergency Response Plan (ERP) for each of the industrial units. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 3: Access to industrial units becomes difficult or not possible at all	
Description	Floods and wildfires can make it difficult or impossible for employees, suppliers, and service providers to access industrial facilities due to road closures.
Classification	Physical risk.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning units in Brazil (Barretos, Janaúba, Palmeiras de Goiás and Rolim de Moura). **Value chain:** not applicable.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to increased freight costs and delays in production. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. Additionally, the Company has implemented controlled firebreaks to prevent fires from neighboring properties to impact the industrial units, along with internal and external fire suppression systems, as well as periodic training of the Fire Brigades. There is also an Emergency Response Plan (ERP) for each of the industrial units. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 4: Increased incidence and severity of employee-acquired infectious diseases	
Description	Low temperatures and cold snaps, as well as high temperatures and heat waves, can lead to physical discomfort and may facilitate the transmission of infectious diseases in closed and crowded spaces.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** An increase in the frequency and severity of infectious diseases among employees, which may result in absenteeism and the need to increase preventive measures, which may impact production levels. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning plants in Brazil (Barretos, Janaúba, Palmeiras de Goiás, Paranatinga and Rolim de Moura), Colombia (Ciénega de Oro), Paraguay (Assunção – Planta 2, San António – Planta 3 e Belén – Planta 23) e Uruguay (Carrasco). **Value Chain:** not applicable.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. During the COVID-19 pandemic, Minerva Foods developed health protocols for its operations based on guidance from Hospital Israelita Albert Einstein. These protocols were voluntarily submitted to health and legal bodies and ensured the sustainability of operations during this period. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 5: Accidental physical and mental injury	
Description	High winds, wildfires, and floods can threaten the physical and mental well-being of employees and suppliers through the displacement of structures and equipment, excessive heat, and smoke inhalation.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** Accidents that cause physical and mental harm can result in lost time and the need to increase preventive measures, which can affect production levels. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning plants in Brazil (Araguaína, Barretos, Janaúba, Palmeiras de Goiás, Paranatinga and Rolim de Moura). **Value Chain:** not applicable.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. Additionally, the Company has implemented controlled firebreaks to prevent fires from neighboring properties to impact the industrial units, along with internal and external fire suppression systems, as well as periodic training of the Fire Brigades. There is also an Emergency Response Plan (ERP) for each of the industrial units. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 6: Loss of grazing land for livestock	
Description	Wildfires and floods on the ranches that supply the Company may result in partial or total loss of pastureland, increasing the cost of maintenance and restoration of degraded areas. These events may increase the cost of purchased animals or affect the availability of animals in certain regions.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increase in the price of the main raw material. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** not applicable. **Value chain:** Cattle ranches located within a 300 km radius of the industrial units in Australia, Brazil, Colombia, Paraguay and, Uruguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

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Risk 7: Loss of nutritional quality of pastures	
Description	Heat waves can affect the nutritional quality of pastures on the ranches that supply the Company. As a result, cattle will require supplemental feed, which will impact the cost of the product.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increase in the price of the main raw material. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** not applicable. **Value chain:** Cattle ranches located within a 300 km radius of the industrial units in Australia, Brazil, Colombia, and Paraguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 8: Lack of grain available for use as a feed supplement	
Description	Wildfires can affect crop development, reducing the supply of grain for feed supplementation and increasing costs for livestock producers, which may be then passed on to meatpackers.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increase in the price of the main raw material. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning plants in Brazil (Palmeiras de Goiás and Rolim de Moura), Colombia (Ciénega de Oro), Paraguay (Asunción - Planta 2, San Antonio - Planta 3 and Belén - Planta 23), and Uruguay (Carrasco). **Value chain:** Cattle ranches located within a 300 km radius of the industrial units in Brazil, Colombia, Paraguay e Uruguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 9: Longer transport times for purchased animals	
Description	Wildfires and/or flooding can degrade and/or render impassable roads that provide access to supplier ranches and industrial facilities, resulting in increased live animal transportation times and worsening animal welfare indicators.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increase in freight costs. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, and deboning units located in Argentina (Venado Tuerto), Brazil (Janaúba), Colombia (Bucaramanga e Ciénega de Oro) e Paraguay (Assunção – Plantas 2, 8 e 13, San António – Planta 3, and Belén – Planta 23). **Value chain:** Cattle ranches located within a 300 km radius of the industrial units in Argentina, Brazil, Colombia, Paraguay and, Uruguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

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Risk 10: Animal purchase costs increase	
Description	The cost of purchasing cattle, which is the Company's primary raw material, can fluctuate significantly due to factors such as the livestock cycle, input costs at supplier ranches, trade and health embargoes, among others. Extreme weather events, like heat waves, cold spells, and droughts, can lead to an increase in the incidence of infectious diseases in animals, reduce the availability of drinking water on supplier ranches, and cause losses in the production of agricultural commodities used in feed. These factors can result in increased costs for rural producers, which may then be passed on to meat packers
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increase in the price of the main raw material. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning plants in Brazil (Palmeiras de Goiás and Rolim de Moura), Colombia (Ciénega de Oro), Paraguay (Asunción - Planta 2, San Antonio - Planta 3 and Belén - Planta 23), and Uruguay (Carrasco). **Value chain:** Cattle ranches located within a 300 km radius of the industrial units in Argentina, Australia and Uruguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 11: Contusions, bruises and animal deaths	
Description	Flooding can cause animals to become trapped, and high winds can dislodge structures and threaten the physical integrity of the herd. Both events have the ability to increase stress levels in animals and the likelihood of injury, contusions and hematomas. Crush injuries cause blood to pool in the injured area, increasing the risk of bacterial contamination of carcasses and rendering the meat unfit for sale and consumption, requiring it to be discarded. Wildfires can cause high levels of stress to animals, as well as smoke inhalation and carcass injuries, which can increase the final pH of the meat and damage the hide.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increase in the price of the main raw material. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning plants in Brazil (Palmeiras de Goiás), and Paraguay (Belén - Planta 23). **Value chain:** Cattle ranches located within a 300 km radius of the industrial units in Argentina, Australia, Brazil, Colombia, Paraguay, and Uruguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. Additionally, the Company has implemented controlled firebreaks to prevent fires from neighboring properties to impact the industrial units, along with internal and external fire suppression systems, as well as periodic training of the Fire Brigades. There is also an Emergency Response Plan (ERP) for each of the industrial units. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 12: Reduced level of animal welfare	
Description	Extreme weather events, such as cold snaps and droughts, can increase the incidence of infectious diseases in animals, reduce the availability of drinking water on supplier ranches, and cause losses in the production of agricultural commodities used in feed. To mitigate the impact of extreme events on animal welfare, suppliers may need to invest in infrastructure and activities to protect animals, increasing costs on ranches and raising the price of the animal to meatpackers.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increase in the price of the main raw material. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning plants in Brazil (Palmeiras de Goiás and Rolim de Moura), Paraguay (Belén - Planta 23), and Uruguay (Carrasco). **Value chain:** Cattle ranches located within a 300 km radius of the industrial units in Argentina, Australia and Uruguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

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Risk 13: Impact on Company Image and Reputation	
Description	Forest fires occurring on supplier ranches may be tied to the practice of deforestation (legal or illegal), resulting in damage to the Company's image and reputation.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** Devaluation of the Company's brands. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, and deboning units located in Brazil (Mirassol d'Oeste and Paranatinga). **Value chain:** Cattle ranches located within a 300 km radius of the industrial units in Brazil, Colombia e Paraguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The Company has implemented controlled firebreaks to prevent fires from neighboring properties to impact the industrial units, along with internal and external fire suppression systems, as well as periodic training of the Fire Brigades. There is also an Emergency Response Plan (ERP) for each of the industrial units. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods' pioneering efforts to combat illegal deforestation in the value chain have led to the monitoring of 100% of direct suppliers using socio-environmental criteria in Brazil since 2020 and in Paraguay since 2021. The Company achieved its goal of monitoring the same percentage of direct suppliers in Colombia by December 2023, six months ahead of schedule. In 2023, approximately 90% of direct suppliers in Argentina were monitored, and over 60% in Uruguay. In 2021, Minerva Foods took steps to improve traceability in the value chain by engaging partner ranchers through the transfer of its geomonitoring technology. The SMGeo Prospec® application, developed in partnership with Niceplanet Geotecnologia, enables rural producers to verify the socio-environmental compliance of their suppliers, similar to the industry's practices. This ensures that monitoring practices extend to indirect suppliers. In 2023, Minerva Foods distributed over 3,000 vouchers free of charge to around 1,000 partner ranchers to use the tool. This group supplied over 40% of the animals purchased in Brazil. **Scheduled:** A monitoring program for indirect suppliers in South America based on socio-environmental criteria is being developed to be implemented by 2030.

Risk 14: Increased water consumption	
Description	High temperatures and heat waves cause physical discomfort in humans and animals and increase the demand for water.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** Increased water use at livestock supplier ranches and industrial facilities to reduce the heat to which employees and animals may be exposed (e.g., more frequent sprinkling in stalls to ensure animal welfare). The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing plants in Argentina (Rosario) and slaughtering and deboning plants in Brazil (Barretos). **Value chain:** Sheep and cattle ranches located within a 300 km radius of the industrial units in Australia, Brazil, Colombia, and Paraguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. In addition, the Company has implemented water reuse projects in its industrial units for cleaning outdoor areas, trucks and corrals, with performance indicators monitored weekly in a meeting with engineering, environmental and sustainability representatives. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** In 2024, the company will begin mapping livestock suppliers located in water-stressed areas.

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Risk 15: Increased water costs	
Description	Meteorological droughts may result in water supply interruptions or rationing by concessionaires, as well as a decrease in the flow of underground (wells) and surface (rivers and lakes) water for industrial operations. Additionally, these events can lower the levels of springs, dams, and reservoirs that are used to collect water for animal feed on supplying ranches. In this scenario, it may be necessary to acquire water from alternative sources, (e.g., water trucks) to maintain critical industrial activities and for human use (e.g., drinking fountains, restrooms, and cafeterias).
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increase in the cost of water. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, and deboning units located in Brazil (Barretos, Janaúba, Mirassol d'Oeste and Rolim de Moura). **Value chain:** Sheep and cattle ranches located within a 300 km radius of the industrial units in Australia, Brazil, Colombia, and Paraguay.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. In addition, the Company has implemented water reuse projects in its industrial units for cleaning outdoor areas, trucks and corrals, with performance indicators monitored weekly in a meeting with engineering, environmental and sustainability representatives. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** In 2024, the company will begin mapping livestock suppliers located in water-stressed areas.

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Risk 16: Conflicts concerning water allocation	
Description	In Brazil, Law No. 9.433/97 establishes that in situations of water shortages, the priority use of water resources is for human consumption and livestock drinking. In the event of weather-related droughts, conflicts may arise with local communities, rural producers and other parties over the use of water in industrial operations.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increase in the cost of water. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, and deboning units located in Brazil (Janaúba and Mirassol d'Oeste). **Value chain:** not applicable.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. In addition, the Company has implemented water reuse projects in its industrial units for cleaning outdoor areas, trucks and corrals, with performance indicators monitored weekly in a meeting with engineering, environmental and sustainability representatives. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** In 2024, the company will begin mapping livestock suppliers located in water-stressed areas.

Risk 17: Failure to ensure water quality	
Description	The occurrence of weather-related droughts and floods may result in the degradation of water quality from surface and/or groundwater sources, which may lead to increased treatment costs, regulatory fines for inadequate quality parameters, and damage to the Company's image and reputation.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to increased water treatment costs. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning units in Brazil (Barretos, Janaúba, Palmeiras de Goiás and Rolim de Moura) and Paraguay (Belén - Planta 23). **Value chain:** not applicable.
Relevant target(s)	-
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. **Scheduled:** There are no scheduled efforts during the reporting period.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 18: Increased electrical energy use	
Description	High temperatures and heat waves require heavy use of cooling and ventilation equipment in industrial units (e.g. compressors, fans and motors) to ensure thermal comfort of employees and to meet food quality and safety standards.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** An increase in the energy consumption of equipment that is essential to the operation of industrial refrigeration systems. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning units in Brazil (Palmeiras de Goiás). **Value chain:** not applicable.
Relevant target(s)	i. Reduce greenhouse gas emissions intensity by 30% by 2030 (Scopes 1 and 2); ii. Achieve net zero emissions, taking into account the market approach for Scope 2; and iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3).
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. In addition, the company has implemented energy efficiency projects in its industrial units (e.g. regular maintenance of cold room seals; installation of frequency converters to modulate compressors in machine rooms; shutting down equipment when it is not in use or when the room temperature has reached the required level), with performance indicators monitored weekly in a meeting with representatives from Engineering, Environmental and Sustainability. In addition, there are initiatives aimed at generating our own clean electricity, such as those implemented at the industrial units in Bucaramanga, Colombia, and Colac and Sunshine, Australia, producing 474,172 kWh, 1,245,676 kWh and 227,283 kWh respectively in 2023. Since 2020, all of Minerva Foods' operations have been powered by renewable sources of electricity, which are traceable through Renewable Energy Certificates (I-REC). Additionally, hydroelectric energy certificates were acquired in 2023. It is worth noting that in Paraguay, all of the energy consumed is already from renewable sources, so there is no need to acquire certificates. Through this initiative, carried out in partnership with the Minerva *Energia* business division, the Company aims to promote the production of energy generated from renewable sources with high

	performance while also achieving zero scope 2 emissions from the purchase of electricity using the market approach. Minerva Foods was the first company in Brazil to obtain the Renewable Energy Seal, issued by the Totum Institute in partnership with the Brazilian Wind Energy Association (ABEEólica) and the Brazilian Clean Energy Association (Abragel). This seal ensures the renewable origin of the energy and the adoption of differentiated practices in the social and community relations aspects by the electric power generation plants. **Scheduled:** Economic feasibility studies are under way at business units for projects that will be self-sufficient in clean power generation.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.

Risk 19: Interruption in the supply of electrical power	
Description	Damage to power lines from wildfires and/or high winds could disrupt power to industrial facilities, resulting in increased use of generators.
Classification	Physical risk.
Impact	**Medium-term (2030) and long-term (2050):** A reduction in the Company's profit margins and results due to the increased cost of power generators. The financial impact of this risk could not be assessed at the time of reporting due to the lack of sufficient, reasonable and reliable information.
Susceptibility	**Company-owned operations:** Slaughtering, deboning and processing units located in Argentina (Rosario) and slaughtering and deboning units in Brazil (Palmeiras de Goiás). **Value chain:** not applicable.
Relevant target(s)	i. Reduce greenhouse gas emissions intensity by 30% by 2030 (Scopes 1 and 2); ii. Achieve net zero emissions, taking into account the market approach for Scope 2; and iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3).
Direct mitigation/adaptation efforts	**Implemented:** The geographic diversification of business units is essential to Minerva Foods' strategy of consolidating its position in the animal protein export market. This allows for: i. Capitalize on the abundance of grazing land and reduce the dependence of the herd's diet on agricultural commodities; ii. Implement basis arbitrage to minimize raw material acquisition costs; iii. Mitigate health risks; and iv. mitigate climate risks. It is important to note that the plants in Australia provide a unique addition to the South American operations, maximizing commercial opportunities and operational synergies as well as reducing exposure to different risks. Additionally, the Company has implemented controlled firebreaks to prevent fires from neighboring properties to impact the industrial units, along with internal and external fire suppression systems, as well as periodic training of the Fire Brigades. There is also an Emergency Response Plan (ERP) for each of the industrial units. Furthermore, the Company has implemented energy efficiency projects in its industrial units (e.g. regular maintenance of cold room seals; installation of frequency converters to modulate compressors in machine rooms; shutting down equipment when it is not in use or when the room temperature has reached the required level), with performance indicators monitored weekly in a meeting with representatives from Engineering, Environmental and Sustainability. In addition, there are initiatives aimed at generating our own clean electricity, such as those implemented at the industrial units in Bucaramanga, Colombia, and Colac and Sunshine, Australia, producing 474,172 kWh, 1,245,676 kWh and 227,283 kWh respectively in 2023. Since 2020, all of Minerva Foods' operations have been powered by renewable sources of electricity, which are traceable through Renewable Energy Certificates (I-REC). Additionally, hydroelectric energy certificates were acquired in 2023. It is worth noting that in Paraguay, all of the energy consumed is already from renewable sources, so there is no need to acquire certificates. Through this initiative, carried out in partnership with the

	Minerva *Energia* business division, the Company aims to promote the production of energy generated from renewable sources with high performance while also achieving zero scope 2 emissions from the purchase of electricity using the market approach. Minerva Foods was the first company in Brazil to obtain the Renewable Energy Seal, issued by the Totum Institute in partnership with the Brazilian Wind Energy Association (ABEEólica) and the Brazilian Clean Energy Association (Abragel). This seal ensures the renewable origin of the energy and the adoption of differentiated practices in the social and community relations aspects by the electric power generation plants. **Scheduled:** Economic feasibility studies are under way at business units for projects that will be self-sufficient in clean power generation.
Indirect mitigation/adaptation efforts	**Implemented:** Minerva Foods has achieved advances by incorporating the "seller's option" clause in contracts with its customers. This allows the company to maximize the competitive advantages of its geographic diversification by allowing for the possibility of transferring production to other locations in the event of operational risks. **Scheduled:** There are no scheduled efforts during the reporting period.