



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: Increase in electricity costs | |
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| Description | Changes in precipitation, wind, and radiation patterns affect the supply of electricity from renewable sources (hydro, wind, and solar), resulting in the activation of fossil fuel-fired power plants (e.g., thermoelectric power plants) and thus increasing production costs. In addition, in the context of the transition to a low-carbon economy, there may be an imbalance between supply and demand for renewable electricity, which also contributes to higher prices. |
| Classification | Transition risk. |
| Impact | <p>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 electricity used by the industrial units.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, and deboning units located in Brazil and Paraguay.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. Reduce greenhouse gas emissions intensity by 30% by 2030 (Scopes 1 and 2);</p> <p>ii. Achieve net zero emissions, taking into account the market approach for Scope 2; and</p> <p>iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3).</p> |
| Direct mitigation/adaptation efforts | <p>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</p> |

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| | <p>Minerva <i>Energia</i> 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.</p> <p>Scheduled: Economic feasibility studies are under way at business units for projects that will be self-sufficient in clean power generation.</p> |
| <p>Indirect mitigation/adaptation efforts</p> | <p>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.</p> <p>Scheduled: There are no scheduled efforts during the reporting period.</p> |

| Risk 2: Increase in Scope 2 emissions | |
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| Description | Changes in precipitation, wind, and radiation patterns affect the supply of electricity from renewable sources (hydro, wind, and solar), resulting in the activation of fossil fuel-fired power plants (e.g., thermoelectric power plants). A low-carbon economy is designed to reduce greenhouse gas emissions. The increased use of thermoelectric plants, however, has the unintended consequence of increasing scope 2 emissions (localization approach). |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030): A reduction in the Company's profit margins and results due to the increase in electricity costs, since the use of thermoelectric plants (red band) makes electricity production more expensive. With the increase in companies committed to reducing their greenhouse gas emissions in order to adapt to a low carbon economy, there will be a greater demand for the acquisition of Renewable Energy Certificates (I-RECs). This could potentially result in an increase in costs for the company.</p> <p>Long-term (2050): No significant impacts.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, deboning and processing units in Argentina and Brazil.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. Reduce greenhouse gas emissions intensity by 30% by 2030 (Scopes 1 and 2);</p> <p>ii. Achieve net zero emissions, taking into account the market approach for Scope 2; and</p> <p>iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3).</p> |
| Direct mitigation/adaptation efforts | <p>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,</p> |

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| | <p>Australia, producing 474,172 kWh, 1,245,676 kWh and 227,283 kWh respectively in 2023.</p> <p>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 <i>Energia</i> 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.</p> <p>Scheduled: Economic feasibility studies are under way at business units for projects that will be self-sufficient in clean power generation.</p> |
| <p>Indirect mitigation/adaptation efforts</p> | <p>Implemented: not applicable.</p> <p>Scheduled: not applicable.</p> |

| Risk 3: Rising cost of fossil fuels | |
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| Description | An increase in the price of fossil fuels due to the removal of subsidies, increases in taxes, and higher operating costs for the extraction and refining of fossil fuels. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): A reduction in the Company's profit margins and results due to the rise in the price of fossil fuels used to supply industrial equipment and vehicles for transporting raw materials and finished products.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, deboning and processing units located in Argentina and slaughtering and deboning units located in Colombia and Australia.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. Reduce greenhouse gas emissions intensity by 30% by 2030 (Scopes 1 and 2);</p> <p>ii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3).</p> |
| Direct mitigation/adaptation efforts | <p>Implemented: Monitoring of fossil fuel consumption in the boilers of industrial slaughtering, deboning and processing units located in Argentina and slaughtering and deboning units located in Colombia.</p> <p>Scheduled: Technical and economic feasibility studies are currently underway for projects to switch from fossil fuels in the boilers of industrial units in Argentina and Colombia.</p> |
| Indirect mitigation/adaptation efforts | <p>Implemented: As of the reporting period, no initiatives have been implemented.</p> <p>Scheduled: A feasibility study is being conducted to assess the economic viability of logistics services using renewable fuels.</p> |

| Risk 4: Disruption in the supply chain | |
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| Description | The unavailability of renewable fuels and natural gas due to increased demand for these products as a near-term alternative to higher GHG emitting sources (e.g., coal and oil) can lead to disruptions in the supply chain. For example, a shortage of biofuel could affect the Company's operations, as a portion of its vehicles run on ethanol. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030): Higher prices for fuels used to power industrial equipment and vehicles.</p> <p>Long-term (2050): No significant impact.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, boning and processing units in Brazil.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. Reduce greenhouse gas emissions intensity by 30% by 2030 (Scopes 1 and 2);</p> <p>ii. Achieve net zero emissions, taking into account the market approach for Scope 2; and</p> <p>iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3).</p> |
| Direct mitigation/adaptation efforts | <p>Implemented: 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 <i>Energia</i> 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.</p> |

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| | <p>Scheduled: Technical and economic feasibility studies are underway for projects to improve wastewater treatment plants and to replace fossil fuels in boilers at industrial units in Argentina and Colombia. Economic feasibility studies are also underway for other clean power generation projects in the Company's operations.</p> |
| Indirect mitigation/adaptation efforts | <p>Implemented: not applicable.</p> <p>Scheduled: not applicable.</p> |

| Risk 5: Adoption of carbon pricing policies in the countries in which we operate | |
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| Description | Should carbon pricing policies be adopted, whether through the imposition of a fee (or tax) on emissions or the establishment of a regulated carbon market, could potentially result in the establishment of limits on the Company's emissions. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): In addition to new fees (or taxes), non-compliance can result in fines and administrative sanctions by the relevant authorities.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, boning and processing units located in Argentina, Brazil, Paraguay, and Uruguay.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. Reduce greenhouse gas emissions intensity by 30% by 2030 (Scopes 1 and 2);</p> <p>ii. Achieve net zero emissions, taking into account the market approach for Scope 2; and</p> <p>iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3).</p> |
| Direct mitigation/adaptation efforts | <p>Implemented: 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 <i>Energia</i> 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.</p> |



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| | Scheduled: Technical and economic feasibility studies are underway for projects to improve wastewater treatment plants and to replace fossil fuels in boilers at industrial units in Argentina and Colombia. Economic feasibility studies are also underway for other clean power generation projects in the Company's operations. |
| Indirect mitigation/adaptation efforts | Implemented: not applicable. Scheduled: not applicable. |

| Risk 6: New trade restrictions and/or carbon tax | |
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| Description | Establishment of new trade restrictions and/or taxes on the international market for products originating from countries with climate policies deemed insufficient (e.g., the absence of a regulated carbon market). |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): Loss of the Company's global ability to compete and reduction in revenue.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, deboning and processing units located in Argentina and Brazil, and slaughtering and deboning units in Uruguay.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. Reduce greenhouse gas emissions intensity by 30% by 2030 (Scopes 1 and 2);</p> <p>ii. Achieve net zero emissions, taking into account the market approach for Scope 2; and</p> <p>iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3).</p> |
| Direct mitigation/adaptation efforts | <p>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.</p> <p>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 <i>Energia</i> 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</p> |

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| | <p>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.</p> <p>Scheduled: Technical and economic feasibility studies are underway for projects to improve wastewater treatment plants and to replace fossil fuels in boilers at industrial units in Argentina and Colombia. Economic feasibility studies are also underway for other clean power generation projects in the Company's operations.</p> |
| <p>Indirect mitigation/adaptation efforts</p> | <p>Implemented: The majority of Scope 3 emissions are related to animals sourced (methane emissions from cattle enteric fermentation and waste management at supplier operations). In 2021, Minerva Foods initiated the Renove Program with the objective of enhancing engagement with rural producers in the implementation of regenerative agricultural practices that enhance productivity and income. Additionally, the program aims to contribute to environmental benefits through the reduction of carbon emissions and the sequestration of carbon, as well as the sustainable intensification of ranching activities.</p> <p>The Renove Program is structured around three fundamental components: training, green finance, and technical and institutional partnerships. Training and technical assistance are essential for ensuring the long-term implementation and maintenance of regenerative practices on ranches. The Program cultivates partnerships and rural extension activities, technology transfer, and training to provide rural technicians and livestock ranchers with the necessary tools and knowledge. In the area of Green Finance, the Renove Program works with financial institutions to enable credit lines and funds that recognize the performance of partner cattle ranchers. Access to differentiated rural credit for cattle ranchers engaged in sustainable cattle ranching is a crucial factor in enabling the widespread implementation of good practices. Finally, the Renove Program collaborates with renowned institutions in South America, including <i>Embrapa</i> (the Brazilian Agricultural Research Corporation) and <i>Imaflora</i> (the Institute for Forest and Agricultural Management and Certification), to guarantee the use of well-known methodologies with international credibility, scientific backing, and innovation.</p> <p>In 2023, the program expanded to include two main projects: (1) certification of carbon-neutral products (Zero Carbon Impact), which began with the process of expanding certification in Brazil. In 2023, more ranches were certified in Brazil, in addition to the five ranches that were certified in 2022. Additionally, new industrial units were added to the program, including the Araguaína (TO) unit, which was certified in 2022. In Uruguay, a total of 108 ranches have been certified, and the Canelones, Carrasco, and Melo (PUL) industrial units have renewed their certification. The new BPU Meat industrial unit in Durazno is currently undergoing certification for 2024. The second project (2), is the origination of carbon credits. This project aims to generate carbon credits from agricultural activities in partnership with the subsidiary MyCarbon.</p> |



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| | <p>Scheduled: A feasibility study is being conducted to assess the economic viability of logistics services using renewable fuels.</p> |
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| Risk 7: New trade restrictions on products linked to deforestation | |
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| Description | New restrictions imposed on international trade in products from regions with a high risk of illegal (and, in some countries, legal) deforestation. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): Loss of the Company's global ability to compete and reduction in revenue.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughter, boning and processing units in Brazil.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. 100% of direct suppliers monitored against socio-environmental criteria by 2030; and</p> <p>ii. Develop and implement a socio-environmental monitoring program for indirect suppliers in South America by 2030.</p> |
| Direct mitigation/adaptation efforts | <p>Implemented: In 2023, Minerva Foods published its "Acquisition of Agricultural Commodities and Livestock Products" policy, which outlines the company's guidelines for the purchase of these inputs and includes socio-environmental criteria for consideration.</p> <p>Scheduled: There are no scheduled efforts during the reporting period.</p> |
| Indirect mitigation/adaptation efforts | <p>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.</p> <p>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.</p> <p>Scheduled: A monitoring program for indirect suppliers in South America based on socio-environmental criteria is being developed to be implemented by 2030.</p> |

| Risk 8: Inadequate supplier assessment based on environmental performance | |
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| Description | Inadequate evaluation of suppliers based on environmental performance, including climate change, could jeopardize the Company's image by associating it with companies and/or individuals with poor practices in the value chain. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): Loss of access to certain markets, reduced revenues and reduced competitiveness and value of the Company's brands.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, boning and processing units located in Brazil, Paraguay, and Uruguay.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. 100% of direct suppliers monitored against socio-environmental criteria by 2030; and</p> <p>ii. Develop and implement a socio-environmental monitoring program for indirect suppliers in South America by 2030.</p> |
| Direct mitigation/adaptation efforts | <p>Implemented: In 2023, Minerva Foods published its "Acquisition of Agricultural Commodities and Livestock Products" policy, which outlines the company's guidelines for the purchase of these inputs and includes socio-environmental criteria for consideration.</p> <p>Scheduled: There are no scheduled efforts during the reporting period.</p> |
| Indirect mitigation/adaptation efforts | <p>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.</p> <p>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.</p> <p>Scheduled: A monitoring program for indirect suppliers in South America based on socio-environmental criteria is being developed to be implemented by 2030.</p> |

| Risk 9: Ineffectiveness of actions taken to combat illegal deforestation | |
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| Description | The lack of public policy, poor government oversight, and lack of access to information from supplying ranches jeopardize the effectiveness of the Company's efforts to eliminate illegal deforestation from its value chain. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): One of the effects of the loss of native vegetation is the reduction of biodiversity, which increases the susceptibility of plants and animals to pests and diseases, threatening the world's food security. Ineffective monitoring of livestock suppliers with regard to changes in land and water use and management, pollution and over-exploitation of natural resources could damage the image and reputation of Minerva Foods.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, boning and processing units located in Brazil, Paraguay, and Uruguay.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. 100% of direct suppliers monitored against socio-environmental criteria by 2030; and</p> <p>ii. Develop and implement a socio-environmental monitoring program for indirect suppliers in South America by 2030.</p> |
| Direct mitigation/adaptation efforts | <p>Implemented: In 2023, Minerva Foods published its "Acquisition of Agricultural Commodities and Livestock Products" policy, which outlines the company's guidelines for the purchase of these inputs and includes socio-environmental criteria for consideration.</p> <p>Scheduled: There are no scheduled efforts during the reporting period.</p> |
| Indirect mitigation/adaptation efforts | <p>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.</p> <p>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.</p> <p>Scheduled: A monitoring program for indirect suppliers in South America based on socio-environmental criteria is being developed to be implemented by 2030.</p> |

| Risk 10: New environmental requirements for obtaining credit | |
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| Description | New environmental criteria for lending, such as full traceability of the cattle supply chain with the adoption of zero deforestation (legal and illegal) criteria for purchases, could lead to restrictions on access to finance. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): A reduction in the Company's profit margins and results due to higher costs of raising funds in the market. In addition, it may have an impact on Minerva Foods' ability to invest.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: The Company as a whole.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <p>i. 100% of direct suppliers monitored against socio-environmental criteria by 2030; and</p> <p>ii. Develop and implement a socio-environmental monitoring program for indirect suppliers in South America by 2030.</p> |
| Direct mitigation/adaptation efforts | <p>Implemented: In 2023, Minerva Foods published its "Acquisition of Agricultural Commodities and Livestock Products" policy, which outlines the company's guidelines for the purchase of these inputs and includes socio-environmental criteria for consideration.</p> <p>Scheduled: There are no scheduled efforts during the reporting period.</p> |
| Indirect mitigation/adaptation efforts | <p>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.</p> <p>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.</p> <p>Scheduled: A monitoring program for indirect suppliers in South America based on socio-environmental criteria is being developed to be implemented by 2030.</p> |

| Risk 11: Rating Agency Downgrade | |
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| Description | The 2023 credit ratings of Minerva Foods from the world's most traditional credit rating agencies, Fitch (AA+ on a Brazilian scale/BB on an international scale), Standard & Poor's (brAAA on a Brazilian scale/BB on a global scale) and Moody's (Ba3 on a global scale), allow the company to access funds at more favorable terms and costs. It is possible that the local ratings established by these agencies could be impacted by a change in Brazil's sovereign rating and/or a worsening in operational and financial performance. Physical climate risks threaten credit quality in various geographic regions and sectors, especially in Latin America. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): A reduction in the Company's profit margins and results due to higher costs of raising funds in the market. In addition, it may have an impact on Minerva Foods' ability to invest.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: The Company as a whole.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <ul style="list-style-type: none"> 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; iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3); iv. Purchase at least 50% of animals from ranchers participating in the Renove program; v. 100% of direct suppliers monitored against socio-environmental criteria by 2030; and vi. Develop and implement a socio-environmental monitoring program for indirect suppliers in South America by 2030. |
| Direct mitigation/adaptation efforts | <p>Implemented: 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 <i>Energia</i> business division, the Company aims to promote the production of energy generated from renewable sources</p> |

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| | <p>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.</p> <p>Scheduled: Technical and economic feasibility studies are underway for projects to improve wastewater treatment plants and to replace fossil fuels in boilers at industrial units in Argentina and Colombia. Economic feasibility studies are also underway for other clean power generation projects in the Company's operations.</p> |
| <p>Indirect mitigation/adaptation efforts</p> | <p>Implemented: The majority of Scope 3 emissions are related to animals sourced (methane emissions from cattle enteric fermentation and waste management at supplier operations). In 2021, Minerva Foods initiated the Renove Program with the objective of enhancing engagement with rural producers in the implementation of regenerative agricultural practices that enhance productivity and income. Additionally, the program aims to contribute to environmental benefits through the reduction of carbon emissions and the sequestration of carbon, as well as the sustainable intensification of ranching activities.</p> <p>The Renove Program is structured around three fundamental components: training, green finance, and technical and institutional partnerships. Training and technical assistance are essential for ensuring the long-term implementation and maintenance of regenerative practices on ranches. The Program cultivates partnerships and rural extension activities, technology transfer, and training to provide rural technicians and livestock ranchers with the necessary tools and knowledge. In the area of Green Finance, the Renove Program works with financial institutions to enable credit lines and funds that recognize the performance of partner cattle ranchers. Access to differentiated rural credit for cattle ranchers engaged in sustainable cattle ranching is a crucial factor in enabling the widespread implementation of good practices. Finally, the Renove Program collaborates with renowned institutions in South America, including <i>Embrapa</i> (the Brazilian Agricultural Research Corporation) and <i>Imaflora</i> (the Institute for Forest and Agricultural Management and Certification), to guarantee the use of well-known methodologies with international credibility, scientific backing, and innovation.</p> <p>In 2023, the program expanded to include two main projects: (1) certification of carbon-neutral products (Zero Carbon Impact), which began with the process of expanding certification in Brazil. In 2023, more ranches were certified in Brazil, in addition to the five ranches that were certified in 2022. Additionally, new industrial units were added to the program, including the Araguaína (TO) unit, which was certified in 2022. In Uruguay, a total of 108 ranches have been certified, and the Canelones, Carrasco, and Melo (PUL) industrial units have renewed their certification. The new BPU Meat industrial unit in Durazno is currently undergoing certification for 2024. The second project (2), is the origination of carbon credits. This</p> |

project aims to generate carbon credits from agricultural activities in partnership with the subsidiary MyCarbon.

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: Feasibility study to assess the economic viability of logistics services using renewable fuels. In addition, a monitoring program for indirect suppliers in South America based on socio-environmental criteria is being developed to be implemented by 2030.

| Risk 12: Exposure to climate change litigation | |
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| Description | Any failure to comply with climate-related environmental legislation and non-compliance with disclosed commitments may result in litigation against the Company. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): Increased legal costs, potential civil and administrative judgments, potential civil, administrative and criminal liability of officers, and damage to the Company's image.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: The Company as a whole.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <ul style="list-style-type: none"> 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; iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3); iv. Purchase at least 50% of animals from ranchers participating in the Renove program.; v. 100% of direct suppliers monitored against socio-environmental criteria by 2030; and vi. Develop and implement a socio-environmental monitoring program for indirect suppliers in South America by 2030. |
| Direct mitigation/adaptation efforts | <p>Implemented: 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 <i>Energia</i> 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</p> |

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| | <p>differentiated practices in the social and community relations aspects by the electric power generation plants.</p> <p>Scheduled: Technical and economic feasibility studies are underway for projects to improve wastewater treatment plants and to replace fossil fuels in boilers at industrial units in Argentina and Colombia. Economic feasibility studies are also underway for other clean power generation projects in the Company's operations.</p> |
| <p>Indirect mitigation/adaptation efforts</p> | <p>Implemented: The majority of Scope 3 emissions are related to animals sourced (methane emissions from cattle enteric fermentation and waste management at supplier operations). In 2021, Minerva Foods initiated the Renove Program with the objective of enhancing engagement with rural producers in the implementation of regenerative agricultural practices that enhance productivity and income. Additionally, the program aims to contribute to environmental benefits through the reduction of carbon emissions and the sequestration of carbon, as well as the sustainable intensification of ranching activities.</p> <p>The Renove Program is structured around three fundamental components: training, green finance, and technical and institutional partnerships. Training and technical assistance are essential for ensuring the long-term implementation and maintenance of regenerative practices on ranches. The Program cultivates partnerships and rural extension activities, technology transfer, and training to provide rural technicians and livestock ranchers with the necessary tools and knowledge. In the area of Green Finance, the Renove Program works with financial institutions to enable credit lines and funds that recognize the performance of partner cattle ranchers. Access to differentiated rural credit for cattle ranchers engaged in sustainable cattle ranching is a crucial factor in enabling the widespread implementation of good practices. Finally, the Renove Program collaborates with renowned institutions in South America, including <i>Embrapa</i> (the Brazilian Agricultural Research Corporation) and <i>Imaflora</i> (the Institute for Forest and Agricultural Management and Certification), to guarantee the use of well-known methodologies with international credibility, scientific backing, and innovation.</p> <p>In 2023, the program expanded to include two main projects: (1) certification of carbon-neutral products (Zero Carbon Impact), which began with the process of expanding certification in Brazil. In 2023, more ranches were certified in Brazil, in addition to the five ranches that were certified in 2022. Additionally, new industrial units were added to the program, including the Araguaína (TO) unit, which was certified in 2022. In Uruguay, a total of 108 ranches have been certified, and the Canelones, Carrasco, and Melo (PUL) industrial units have renewed their certification. The new BPU Meat industrial unit in Durazno is currently undergoing certification for 2024. The second project (2), is the origination of carbon credits. This project aims to generate carbon credits from agricultural activities in partnership with the subsidiary MyCarbon.</p> <p>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.</p> |

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: Feasibility study to assess the economic viability of logistics services using renewable fuels. In addition, a monitoring program for indirect suppliers in South America based on socio-environmental criteria is being developed to be implemented by 2030.

| Risk 13: New greenhouse gas disclosure requirements | |
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| Description | Growing market pressure for transparent information on GHG emissions and mitigation targets and strategies has led major frameworks, rating agencies and regulators to standardize the data that companies must provide. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): Failure to comply with the relevant regulations may result in fines and administrative sanctions being imposed by the responsible bodies.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: The Company as a whole.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | - |
| Direct mitigation/adaptation efforts | <p>Implemented: Since 2015, the Company has published its corporate greenhouse gas (GHG) emissions inventory annually in accordance with the guidelines of the Brazilian GHG Protocol Program and ISO 14064. The inventory covers Scope 1, 2, and 3 emissions. The inventory is verified by a third party and is available in the Public Emissions Registry of the Brazilian GHG Protocol Program. In 2023, the Company received the "Gold Seal," the highest recognition of the program, for the 3rd consecutive year. The Company's Sustainability Report, which is also updated annually, complies with the main market reporting methodologies, such as GRI, SASB and TCFD.</p> <p>Scheduled: There are no scheduled efforts during the reporting period.</p> |
| Indirect mitigation/adaptation efforts | <p>Implemented: not applicable.</p> <p>Scheduled: not applicable.</p> |

| Risk 14: New Disclosure Requirements for Climate Strategies | |
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| Description | In Brazil, the Brazilian Securities and Exchange Commission (CVM) has updated its disclosure requirements for the 2021 Reference Form. According to CVM Resolution 59, companies will have to disclose whether they follow the disclosure standard of the Task Force on Climate-Related Disclosures (TCFD), identify climate-related physical and transition risks, inventory their GHG emissions and list the scopes covered. Although the new rules are intended to be market guidance rather than mandatory, the approach adopted is to "demonstrate or justify", i.e. companies that respond that they do not disclose this information will have to justify their reasons for not doing so. Failure to disclose material information as a result of not incorporating these aspects into the business strategy could therefore jeopardize the company's image and its relationship with investors. |
| Classification | Transition risk. |
| Impact | Medium-term (2030) and long-term (2050): Failure to comply with the relevant regulations may result in fines and administrative sanctions being imposed by the responsible bodies. 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: The Company as a whole. Value chain: not assessed. |
| Relevant target(s) | - |
| Direct mitigation/adaptation efforts | Implemented: Since 2015, the Company has published its corporate greenhouse gas (GHG) emissions inventory annually in accordance with the guidelines of the Brazilian GHG Protocol Program and ISO 14064. The inventory covers Scope 1, 2, and 3 emissions. The inventory is verified by a third party and is available in the Public Emissions Registry of the Brazilian GHG Protocol Program. In 2023, the Company received the "Gold Seal," the highest recognition of the program, for the 3rd consecutive year. The Company's Sustainability Report, which is also updated annually, complies with the main market reporting methodologies, such as GRI, SASB and TCFD. Furthermore, between 2022 and 2023, the Company engaged specialized consultants to map and analyze the physical and transition risks for industrial assets and the physical risks for the cattle supply chain. Scheduled: Develop climate adaptation and resilience plans for the Company's most exposed assets. |
| Indirect mitigation/adaptation efforts | Implemented: not applicable. Scheduled: not applicable. |

| Risk 15: Contractual changes to insurance services | |
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| Description | SUSEP Circular No. 666/2022 introduces climate variables into insurance underwriting processes and sets higher requirements for high climate risk assets. This may result in the unavailability of certain insurance coverage or an increase in premiums for existing contracts. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): Increases in the cost of insurance contracts for the Company's assets.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, deboning and processing units in Brazil and slaughtering and deboning units in Paraguay and Uruguay.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | - |
| Direct mitigation/adaptation efforts | <p>Implemented: Between 2022 and 2023, the Company engaged specialized consultants to map and analyze the physical and transition risks for industrial assets and the physical risks for the cattle supply chain.</p> <p>Scheduled: Develop climate adaptation and resilience plans for the Company's most exposed assets.</p> |
| Indirect mitigation/adaptation efforts | <p>Implemented: not applicable.</p> <p>Scheduled: not applicable.</p> |

| Risk 16: Failure to keep pace with new low carbon technologies | |
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| Description | Failure to incorporate new, less carbon-intensive technologies into the Company's products and services could result in a loss of competitive advantage in a low-carbon economy. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): Loss of the Company's global competitiveness and failure to meet established climate targets.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: The Company as a whole.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <ul style="list-style-type: none"> 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 | <p>Implemented: 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 <i>Energia</i> 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.</p> <p>Scheduled: Technical and economic feasibility studies are underway for projects to improve wastewater treatment plants and to replace fossil fuels in boilers at industrial units in Argentina and Colombia. Economic</p> |

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| | <p>feasibility studies are also underway for other clean power generation projects in the Company's operations.</p> |
| <p>Indirect mitigation/adaptation efforts</p> | <p>Implemented: The majority of Scope 3 emissions are related to animals sourced (methane emissions from cattle enteric fermentation and waste management at supplier operations). In 2021, Minerva Foods initiated the Renove Program with the objective of enhancing engagement with rural producers in the implementation of regenerative agricultural practices that enhance productivity and income. Additionally, the program aims to contribute to environmental benefits through the reduction of carbon emissions and the sequestration of carbon, as well as the sustainable intensification of ranching activities.</p> <p>The Renove Program is structured around three fundamental components: training, green finance, and technical and institutional partnerships. Training and technical assistance are essential for ensuring the long-term implementation and maintenance of regenerative practices on ranches. The Program cultivates partnerships and rural extension activities, technology transfer, and training to provide rural technicians and livestock ranchers with the necessary tools and knowledge. In the area of Green Finance, the Renove Program works with financial institutions to enable credit lines and funds that recognize the performance of partner cattle ranchers. Access to differentiated rural credit for cattle ranchers engaged in sustainable cattle ranching is a crucial factor in enabling the widespread implementation of good practices. Finally, the Renove Program collaborates with renowned institutions in South America, including <i>Embrapa</i> (the Brazilian Agricultural Research Corporation) and <i>Imaflora</i> (the Institute for Forest and Agricultural Management and Certification), to guarantee the use of well-known methodologies with international credibility, scientific backing, and innovation.</p> <p>In 2023, the program expanded to include two main projects: (1) certification of carbon-neutral products (Zero Carbon Impact), which began with the process of expanding certification in Brazil. In 2023, more ranches were certified in Brazil, in addition to the five ranches that were certified in 2022. Additionally, new industrial units were added to the program, including the Araguaína (TO) unit, which was certified in 2022. In Uruguay, a total of 108 ranches have been certified, and the Canelones, Carrasco, and Melo (PUL) industrial units have renewed their certification. The new BPU Meat industrial unit in Durazno is currently undergoing certification for 2024. The second project (2), is the origination of carbon credits. This project aims to generate carbon credits from agricultural activities in partnership with the subsidiary MyCarbon.</p> <p>Scheduled: A feasibility study is being conducted to assess the economic viability of logistics services using renewable fuels.</p> |

| Risk 17: Failure to build resilience into operations by adopting climate change adaptation strategies | |
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| Description | The effects of climate change have led to an increase in the intensity and frequency of extreme weather conditions (e.g., high winds, droughts, flooding, cold and heat waves, etc.) that could potentially impact the integrity and availability of the Company's physical assets. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): The Company's assets, which are more exposed to weather-related physical risks, are compromised in terms of integrity and availability, which makes operations less resilient and unsafe. This also has the effect of reducing the value of the Minerva Foods brand.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: Slaughtering, and deboning units located in Paraguay, and Uruguay.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | - |
| Direct mitigation/adaptation efforts | <p>Implemented: From 2022 to 2023, the Company has engaged the services of specialized consultants to map and analyze physical and transition risks for industrial assets. In addition, the Company has established dedicated governance structures to manage the sustainability agenda, including climate risks and opportunities. These include Executive Sustainability Management, aligned with the Institutional Relations Board, the Sustainability Committee, the Sustainability and Innovation Advisory Board, and the Decarbonization & Climate Risks Working Group. The Decarbonization & Climate Risks Working Group was established in 2023 and includes a cross-functional team of employees from various departments, including Cattle Purchasing, Controllershship, Engineering, Logistics, Environment and Sustainability, as well as representatives from the Renove program, which engages rural producers in implementing regenerative agricultural practices; the MyCarbon subsidiary, which focuses on the origination and sale of carbon credits; and the Minerva Energia division. The group meets monthly to monitor climate-related risks and opportunities, develop response strategies, and align projects and resources.</p> <p>Scheduled: Develop climate adaptation and resilience plans for the Company's most exposed assets.</p> |
| Indirect mitigation/adaptation efforts | <p>Implemented: The majority of Scope 3 emissions are related to animals sourced (methane emissions from cattle enteric fermentation and waste management at supplier operations). In 2021, Minerva Foods initiated the Renove Program with the objective of enhancing engagement with rural producers in the implementation of regenerative agricultural practices that enhance productivity and income. Additionally, the program aims to contribute to environmental benefits through the reduction of carbon</p> |

emissions and the sequestration of carbon, as well as the sustainable intensification of ranching activities.

The Renove Program is structured around three fundamental components: training, green finance, and technical and institutional partnerships.

Training and technical assistance are essential for ensuring the long-term implementation and maintenance of regenerative practices on ranches.

The Program cultivates partnerships and rural extension activities, technology transfer, and training to provide rural technicians and livestock ranchers with the necessary tools and knowledge. In the area of Green Finance, the Renove Program works with financial institutions to enable credit lines and funds that recognize the performance of partner cattle ranchers. Access to differentiated rural credit for cattle ranchers engaged in sustainable cattle ranching is a crucial factor in enabling the widespread implementation of good practices. Finally, the Renove Program collaborates with renowned institutions in South America, including *Embrapa* (the Brazilian Agricultural Research Corporation) and *Imaflora* (the Institute for Forest and Agricultural Management and Certification), to guarantee the use of well-known methodologies with international credibility, scientific backing, and innovation.

In 2023, the program expanded to include two main projects: (1) certification of carbon-neutral products (Zero Carbon Impact), which began with the process of expanding certification in Brazil. In 2023, more ranches were certified in Brazil, in addition to the five ranches that were certified in 2022. Additionally, new industrial units were added to the program, including the Araguaína (TO) unit, which was certified in 2022. In Uruguay, a total of 108 ranches have been certified, and the Canelones, Carrasco, and Melo (PUL) industrial units have renewed their certification. The new BPU Meat industrial unit in Durazno is currently undergoing certification for 2024. The second project (2), is the origination of carbon credits. This project aims to generate carbon credits from agricultural activities in partnership with the subsidiary MyCarbon.

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.



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| | <p>Scheduled: A monitoring program based on socio-environmental criteria is in development for indirect suppliers in South America, with an anticipated launch in 2030.</p> |
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| Risk 18: Failure to meet the climate targets set in a public commitment | |
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| Description | Failure to meet the climate targets set out in the public commitment could damage the Company's image and reputation with strategic stakeholders and raise doubts about the Company's ability to adapt and be resilient to climate change. |
| Classification | Transition risk. |
| Impact | <p>Medium-term (2030) and long-term (2050): Loss of access to certain markets, reduced revenues and loss of competitiveness and value of the Company's brands.</p> <p>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.</p> |
| Susceptibility | <p>Company-owned operations: The Company as a whole.</p> <p>Value chain: not assessed.</p> |
| Relevant target(s) | <ul style="list-style-type: none"> 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; iii. Zero the Company's net emissions by 2035 (Scopes 1, 2, and 3); iv. Purchase at least 50% of animals from ranchers participating in the Renove program; v. 100% of direct suppliers monitored against socio-environmental criteria by 2030; and vi. Develop and implement a socio-environmental monitoring program for indirect suppliers in South America by 2030. |
| Direct mitigation/adaptation efforts | <p>Implemented: 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 <i>Energia</i> 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</p> |

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| | <p>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.</p> <p>Scheduled: Technical and economic feasibility studies are underway for projects to improve wastewater treatment plants and to replace fossil fuels in boilers at industrial units in Argentina and Colombia. Economic feasibility studies are also underway for other clean power generation projects in the Company's operations.</p> |
| <p>Indirect mitigation/adaptation efforts</p> | <p>Implemented: The majority of Scope 3 emissions are related to animals sourced (methane emissions from cattle enteric fermentation and waste management at supplier operations). In 2021, Minerva Foods initiated the Renove Program with the objective of enhancing engagement with rural producers in the implementation of regenerative agricultural practices that enhance productivity and income. Additionally, the program aims to contribute to environmental benefits through the reduction of carbon emissions and the sequestration of carbon, as well as the sustainable intensification of ranching activities.</p> <p>The Renove Program is structured around three fundamental components: training, green finance, and technical and institutional partnerships. Training and technical assistance are essential for ensuring the long-term implementation and maintenance of regenerative practices on ranches. The Program cultivates partnerships and rural extension activities, technology transfer, and training to provide rural technicians and livestock ranchers with the necessary tools and knowledge. In the area of Green Finance, the Renove Program works with financial institutions to enable credit lines and funds that recognize the performance of partner cattle ranchers. Access to differentiated rural credit for cattle ranchers engaged in sustainable cattle ranching is a crucial factor in enabling the widespread implementation of good practices. Finally, the Renove Program collaborates with renowned institutions in South America, including <i>Embrapa</i> (the Brazilian Agricultural Research Corporation) and <i>Imaflora</i> (the Institute for Forest and Agricultural Management and Certification), to guarantee the use of well-known methodologies with international credibility, scientific backing, and innovation. By 2023, the Renove Program already had XX participating ranches in Argentina, Brazil, Colombia, Paraguay and Uruguay.</p> <p>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.</p> <p>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</p> |



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: Feasibility study to assess the economic viability of logistics services using renewable fuels. In addition, a monitoring program for indirect suppliers in South America based on socio-environmental criteria is being developed to be implemented by 2030.