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1st Edition

Net Zero Strategy Standard for the Agroindustry (Meat)

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Table of Contents

Preface

Dear readers,

It is an honor to present to you the Net Zero strategy standard for the Agro-Industrial sector of the meat industry, on behalf of GreenCloud®. This document acquires critical importance as it addresses the urgent need to decarbonize the sector and its contribution to climate change. It's estimated that meat production is responsible for approximately 8% of global greenhouse gas emissions. This sector plays a fundamental role in decarbonizing our economy, and concrete and strategic measures are necessary to reduce emissions and promote sustainable practices at all stages of the production chain.

The adoption of carbon neutrality strategies becomes essential to ensure the long-term viability and resilience of the sector. By addressing decarbonization in the Agro-Industrial sector of the meat industry, we will work towards mitigating climate change and preserving our natural environment.

This challenge requires active collaboration among producers, processors, distributors, and consumers, with a focus on implementing sustainable technologies, regenerative agricultural practices, and the adoption of renewable energy.

The Net Zero strategy standard for the Agro-Industrial sector of the meat industry is presented as an essential guide to drive this transition towards more sustainable and low-emission production. By adopting this standard, companies and institutions in the sector can align their actions with emission reduction objectives and contribute to achieving a greener and more equitable future.

We appreciate your attention and trust that this standard will be a valuable resource on your path towards sustainability and carbon neutrality in the Agro-Industrial sector of the meat industry.

Sincerely,

Juan Claudio De Oliva Maya Cuellar | CEO & Founder de GreenCloud®

1. Introduction

This standard has been developed by GreenCloud® of Costa Rica with the aim of providing a solid and practical guide for agricultural and industrial institutions that wish to develop a decarbonization strategy on their path towards mitigating climate change. This standard is based on the premise that the Agroindustry (Meat) sector has a fundamental role in the transition to a low-carbon economy and in promoting sustainable practices.

2. Founder's words

As the founder of this initiative, I have dedicated time and effort into the development of this standard with the aim of providing a practical and concise tool for agricultural and industrial institutions that wish to align with emission reduction goals and contribute effectively to the fight against climate change at all stages of the production chain. I recognize the importance of the Agroindustry (Meat) sector taking a leadership role in adopting sustainable practices and in promoting an economy resilient to climate change.

MBIT. & Engineer. Juan Claudio De Oliva Maya | **CEO & Founder of GreenCloud®**

3. Reason for implementing this voluntary, science-based standard

The urgency and magnitude of climate change require decisive and coordinated action in all sectors of society, including the Agroindustry (Meat) sector. The various stages of the production chain generate significant greenhouse gas (GHG) emissions and it is crucial to implement measures to reduce these emissions. This standard has been developed with the purpose of providing a clear and practical guide to assist agricultural and industrial institutions in implementing decarbonization strategies at each specific stage of the production chain, strengthening their commitment to sustainability and contributing to the transformation of the global economy.

4. Scope of application

This standard applies to agricultural, animal farming and industrial institutions seeking to develop a decarbonization strategy to reduce greenhouse gas (GHG) emissions at all stages of the production chain and contribute to mitigating climate change.

5. Approach to Net Zero strategy

The decarbonization strategy in the Agroindustry (Meat) sector is based on the following GHG reduction initiatives and projects, which align with the ISO 14064-1, GHG Protocol and IPCC standards:

a) **Raising, rearing and fattening**: Improve pasture management, livestock genetics, feeding and supplementation, and manure management to reduce methane (CH4) and nitrous oxide (N2O) emissions. Implement sustainable production systems such as silvopastoralism and agroforestry. Reduce fattening time and improve animal health monitoring and management. (Impact Level: 50%)

b) **Transport to slaughterhouse**: Optimize transport routes and use more efficient vehicles. Promote multimodal transport. (Impact Level: 10%)

c) **Slaughterhouse and packing processes**: Optimize the use of resources such as water, energy, and food. Address food waste, recycling, and waste management. Reduce packaging use and promote recycled, recyclable or biodegradable materials. (Impact Level: 5%)

d) **Transport to port for export**: Similar to transport to the slaughterhouse, optimize transport routes, use more efficient vehicles, and promote multimodal transport. (Impact Level: 10%)

e) **Emissions neutralization**: Invest in carbon offset projects such as reforestation, ecosystem conservation, and renewable energies. Develop own carbon removal projects associated with reforestation, afforestation and/or preservation of forest areas in sites at high risk of deforestation. (Impact Level: 10%)

f) **Training and awareness**: Train staff on sustainable and efficient practices. Promote a corporate culture oriented towards sustainability and collaborate with sustainable suppliers. Obtain external verifications and sustainability certifications. (Impact Level: 5%)

g) **Research and development**: Identify and adopt more sustainable and efficient technologies and processes in livestock production and fattening. Improve pasture management systems, feeding and animal health. (Impact Level: 5%)

h) **Communication and alertness**: Communicate and raise awareness among customers about actions to reduce CO2e emissions and promote responsible

consumption. Establish emissions monitoring and reporting systems to measure progress. (Impact Level: 5%)

6. Monitoring and evaluation

To ensure the effectiveness of the decarbonization strategy, it is recommended to monitor the following key performance indicators (KPI):

- *Number of specific projects implemented in each GHG reduction initiative.*
- *Level of compliance with GHG reduction commitments.*
- *Reduction of GHG emissions within the scope of the Agroindustry (Meat) institution.*
- *Level of engagement of key stakeholders in communication and awareness initiatives.*
- *Number of strategic partnerships established with organizations and networks to promote sustainable practices.*
- *Visibility and reach of communication and awareness initiatives.*
- *Number of collaborations with academic institutions and research into sustainable practices.*
- *Impact of climate risk analysis tools on decision making.*
- *Customer satisfaction level with sustainable products and services.*

7. Implementation and continuous improvement

Agricultural and industrial institutions should implement this decarbonization strategy and establish mechanisms for review and continuous improvement to ensure its effectiveness and alignment with climate change mitigation objectives. Active participation of employees, management, and shareholders in the implementation and monitoring of the strategy is recommended.

8. Total Impact

The total impact on GHG mitigation from all the reduction initiatives and projects mentioned in the standard must equal 100%.

This standard provides a concise and practical guide for agricultural and industrial institutions wishing to develop a decarbonization strategy and contribute to climate change mitigation at all stages of the production chain. Institutions are recommended to adapt this standard to their specific needs and contexts.

9. Compliance assessment guide

a. **Initial Analysis and Diagnosis**: Agricultural and industrial institutions should carry out a detailed analysis of their greenhouse gas (GHG) emissions and evaluate their impact on climate change. Furthermore, they should assess their current level of integration of sustainable practices and establish clear goals and objectives for emission reduction.

b. **Development of Decarbonization Strategy**: Agricultural and industrial institutions should develop a decarbonization strategy that includes specific initiatives for each stage of the production chain, as detailed in the standard. This strategy must be aligned with global emission reduction goals and establish ambitious and measurable targets.

c. **Implementation of Initiatives and Projects**: Agricultural and industrial institutions should implement the projects and initiatives described in the standard, allocating appropriate resources and establishing clear action plans. Collaboration with key actors, such as organizations, networks, academic institutions, and media, should be ensured to amplify the impact of the initiatives.

d. **Monitoring and Evaluation**: Agricultural and industrial institutions should establish monitoring and evaluation mechanisms to measure progress towards emission reduction objectives and assess the impact of implemented initiatives. Specific key performance indicators are suggested for each initiative, as detailed in the standard.

e. **Continuous Improvement**: Agricultural and industrial institutions should conduct periodic reviews of their decarbonization strategy and implemented initiatives, identifying areas for improvement and updating.

10. Application and acceleration of transformation

The application of this standard by agricultural and industrial institutions can accelerate the transition towards a low-emission economic model and significantly contribute to the mitigation of climate change.

By adopting sustainable practices, fostering innovation, promoting collaboration, and effectively communicating decarbonization actions, agricultural and industrial institutions can positively influence decision-making and accelerate the adoption of sustainable technologies and practices.

Conclusion

This standard provides a solid and concise guide for agricultural and industrial institutions seeking to adopt a decarbonization strategy and contribute to the mitigation of climate change at all stages of the production chain.

By adhering to this standard, institutions will be able to strengthen their commitment to sustainability, generate a significant impact in reducing emissions, and promote an economy resilient to climate change. The implementation of this standard represents an important step towards a sustainable and safer future for generations to come.

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ANNEXES

ANNEX 1

Guide for the "Breeding, rearing, and fattening" Strategy

Objective: The objective of this strategy is to implement sustainable practices in the breeding, rearing, and fattening stages of livestock to reduce greenhouse gas (GHG) emissions and promote more sustainable agricultural production.

Initiatives/Projects in this stage:

1. **Improvement of pastures**

Description: Implement pasture management techniques that maximize productivity and carbon sequestration capacity. This may include pasture rotation, introduction of more productive and resilient grass species, and the application of regenerative management techniques.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 001

2. **Genetic improvement of livestock**

Description: Select and breed livestock with higher feed efficiency and lower methane production. This can be achieved through the selection of livestock breeds and selective breeding.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 002

3. **Optimization of feeding and supplementation**

Description: Improve the quality of feed and supplementation to reduce methane production and increase meat production efficiency. This may include the addition of feed additives that reduce methane production, such as methane inhibitors, and improving the quality and diversity of feed.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 003

4. **Better manure management**

Description: Implement manure management systems that reduce methane and nitrous oxide emissions and allow for the utilization of manure as organic fertilizer. This may include composting, biodigesters, and other manure treatment methods.

Level of Impact on GHG mitigation (%): 10%
Objective Code: 004

5. **Implementation of sustainable production systems**

Description: Promote the implementation of more sustainable production systems such as silvopastoralism and agroforestry. These systems combine livestock production with tree production, which can increase carbon capture, improve biodiversity, and provide additional benefits for livestock such as shade and additional forage.

Level of Impact on GHG mitigation (%): 10%
Objective Code: 005

6. **Reduction of fattening time**

Description: Reducing fattening time can decrease methane emissions per unit of meat produced and increase production efficiency. This can be achieved by improving nutrition, animal health, and management conditions.

Level of Impact on GHG mitigation (%): 10%
Objective Code: 006

7. **Improvement of animal health monitoring and management**

Description: Implement animal health monitoring programs and preventive health measures to improve livestock productivity and reduce greenhouse gas emissions. This may include vaccination, parasite control, proper nutrition, and stress management.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 007

Compliance Evaluation Guide:

Analysis and diagnosis: Conduct a comprehensive analysis of greenhouse gas emissions associated with current breeding, rearing, and fattening practices. Establish clear emission reduction targets.

Development of sustainable practices: Implement the initiatives/projects mentioned above to improve efficiency and reduce GHG emissions in the breeding, rearing, and fattening stages of livestock.

Monitoring and tracking: Establish monitoring and tracking mechanisms to evaluate the performance of implemented practices, identify areas for improvement, and make necessary adjustments.

Disclosure and transparency: Publish regular reports detailing the measures taken, results achieved in terms of emission reductions, and promote transparency in breeding, rearing, and fattening practices.

The application of this guide will improve efficiency and reduce greenhouse gas emissions in the breeding, rearing, and fattening stages of livestock, promoting sustainable practices and more sustainable agricultural production.

***Juan Claudio De Oliva Maya, Founder of the Guide for Agro-Industrial Institutions towards a Net Zero Model.**

ANNEX 2

Guide for the "Transportation to slaughterhouse" Strategy

Objective: The objective of this strategy is to improve efficiency and reduce greenhouse gas (GHG) emissions in the transportation stage of animals to the slaughterhouse, promoting sustainable practices and animal welfare.

Initiatives/Projects in this stage:

1. **Optimization of transport routes**

Description: Use software and analysis technology to identify the most efficient routes, reducing transportation time and associated emissions.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 001

2. **Use of more efficient vehicles**

Description: Invest in modern and efficient vehicles that have higher fuel efficiency and emit less CO2. This may include considering electric or hybrid vehicles.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 002

3. **Promotion of multimodal transportation**

Description: Combine different transportation methods (road, rail, maritime) to reduce CO2 emissions. Each mode has different levels of efficiency and carbon footprint, and the appropriate combination can result in significant emission reductions.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 003

4. **Reduction of transportation time**

Description: Reducing the time animals spend in transport can decrease animal stress and improve animal welfare, resulting in higher meat quality and lower mortality during transportation.

Level of Impact on GHG mitigation (%): 10%
Objective Code: 004

5. **Improvement of livestock handling during transport**

Description: Implement livestock handling practices during transport that minimize stress and discomfort for the animals. This may include training transporters in livestock handling, proper design of transport vehicles, and planning stops for rest, feeding, and hydration of the animals.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 005

6. **Implementation of real-time monitoring systems**

Description: Use real-time monitoring technology to track the location and conditions of animals during transport. This can enable quick problem identification and implementation of solutions, thus improving animal welfare and transport efficiency.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 001

Compliance Evaluation Guide:

Analysis and diagnosis: Conduct a comprehensive analysis of greenhouse gas emissions associated with the current transportation of animals to the slaughterhouse and establish clear emission reduction targets.

Development of sustainable transport strategies: Implement the initiatives mentioned above to improve efficiency and reduce GHG emissions in the transportation of animals to the slaughterhouse.

Training and education: Provide training and education to transporters on sustainable practices and proper handling of animals during transport.

Monitoring and tracking: Establish monitoring and tracking mechanisms to evaluate the performance of transportation, identify areas for improvement, and make necessary adjustments.

Disclosure and transparency: Publish regular reports detailing the measures taken, results achieved in terms of emission reductions and animal welfare, and promote transparency in transportation to the slaughterhouse.

The application of this guide will improve efficiency and reduce greenhouse gas emissions in the transportation stage of animals to the slaughterhouse, promoting sustainable practices and animal welfare.

***Juan Claudio De Oliva Maya, Founder of the Guide for Agro-Industrial Institutions towards a Net Zero Model.**

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ANNEX 3

Guide for the "Slaughterhouse and packaging processes" Strategy

Objective: The objective of this strategy is to implement sustainable practices in the slaughterhouse and packaging processes, aiming to reduce greenhouse gas (GHG) emissions and promote more sustainable and responsible agricultural production.

Initiatives/Projects in this stage:

1. **Optimization of water and energy use**

Description: Implement technologies and practices to reduce water and energy consumption in the slaughterhouse and packaging processes. This may include water recirculation and treatment, as well as the installation of energy-efficient equipment.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 001

2. **Waste management and recycling**

Description: Implement strategies to minimize waste generated in the slaughterhouse and packaging processes. This may include material reuse and recycling, as well as proper management of organic waste.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 002

3. **Reduction of packaging usage**

Description: Explore alternatives to reduce the amount of packaging required, or switch to more sustainable packaging materials such as recyclable or biodegradable options.

Level of Impact on GHG mitigation (%): 10%
Objective Code: 003

4. **Training of personnel in sustainable practices**

Description: Implement training programs to ensure that staff understands and applies sustainable and efficient practices in animal handling, food manipulation, and resource usage.

Level of Impact on GHG mitigation (%): 25%
Objective Code: 004

5. **Investment in more sustainable technology and equipment**

Description: Invest in technology and equipment that enables more efficient slaughterhouse and packaging processes with reduced environmental impact. This may include high-tech machinery, more efficient refrigeration systems, and equipment for waste reduction and treatment.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 005

6. **Implementation of emissions monitoring systems**

Description: Utilize monitoring technology to track greenhouse gas emissions generated in the slaughterhouse and packaging processes. This can help identify opportunities for emission reduction and measure progress towards emission reduction goals.

Level of Impact on GHG mitigation (%): 10%
Objective Code: 006

Compliance Evaluation Guide:

Analysis and diagnosis: Conduct a comprehensive analysis of greenhouse gas emissions associated with the slaughterhouse and packaging processes. Establish clear emission reduction goals.

Implementation of sustainable practices: Implement the initiatives/projects mentioned above to improve efficiency and reduce GHG emissions in the slaughterhouse and packaging processes.

Monitoring and tracking: Establish monitoring and tracking mechanisms to evaluate the performance of implemented practices, identify areas for improvement, and make necessary adjustments.

Disclosure and transparency: Publish regular reports detailing the measures taken, results achieved in terms of emission reduction, and promote transparency in the slaughterhouse and packaging processes.

The application of this guide will improve efficiency and reduce greenhouse gas emissions in the slaughterhouse and packaging processes, promoting sustainable practices and responsible agricultural production.

***Juan Claudio De Oliva Maya, Founder of the Guide for Agro-Industrial Institutions towards a Net Zero Model.**

ANNEX 4

Guide for the "Transportation to Export Port" Strategy

Objective: The objective of this strategy is to optimize the transportation of products to the export port, reducing greenhouse gas (GHG) emissions and promoting efficiency in the supply chain.

Initiatives/Projects in this stage:

1. **Optimization of transport routes**

Description: Utilize route planning software and technologies to minimize transportation distance and reduce transit time. This can help decrease CO2e emissions and improve transportation efficiency.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 001

2. **Use of more efficient transport vehicles**

Description: Invest in transportation vehicles that are efficient in terms of fuel consumption and greenhouse gas emissions. This may include trucks with high-efficiency engines, electric or hybrid vehicles, or vehicles that use biofuels.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 002

3. **Promotion of multimodal transportation**

Description: Explore the possibility of using different modes of transportation (such as maritime, rail, or air transport) to reduce CO2e emissions and enhance transportation efficiency.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 003

4. **Supply chain management**

Description: Implement strategies to optimize the supply chain and reduce CO2e emissions. This may include collaboration with suppliers and customers to synchronize shipments, load consolidation, and the use of strategically located distribution centers.

Level of Impact on GHG mitigation (%): 25%
Objective Code: 004

5. **Training of personnel in sustainable transportation practices**

Description: Implement training programs to ensure that drivers and logistics personnel understand and apply sustainable transportation practices, such as efficient driving and route planning.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 005

6. **Carbon offsetting**

Description: Invest in carbon offset projects to counterbalance the CO2e emissions generated from the transportation of products to the export port. This may involve investing in reforestation projects, ecosystem conservation, or renewable energy initiatives.

Level of Impact on GHG mitigation (%): 10%
Objective Code: 006

Compliance Evaluation Guide:

Analysis and diagnosis: Conduct a comprehensive analysis of greenhouse gas emissions associated with transportation to the export port and establish clear emission reduction goals.

Implementation of sustainable practices: Implement the aforementioned initiatives/projects to optimize transportation and reduce GHG emissions.

Monitoring and tracking: Establish monitoring and tracking mechanisms to evaluate the performance of implemented practices, identify areas for improvement, and make necessary adjustments.

Disclosure and transparency: Publish regular reports detailing the measures taken, results achieved in terms of emission reduction, and promote transparency in transportation to the export port.

The application of this guide will optimize transportation to the export port, reducing greenhouse gas emissions and promoting efficiency in the supply chain.

***Juan Claudio De Oliva Maya, Founder of the Guide for Agro-Industrial Institutions towards a Net Zero Model.**

ANNEX 5

Guide for the "Neutralization of Emissions in the Agro-Industrial Sector" Strategy

Objective: The objective of this strategy is to neutralize greenhouse gas (GHG) emissions in the agro-industrial sector by implementing sustainable practices and offsetting emissions to achieve carbon neutrality.

Initiatives/Projects in this strategy stage:

1. **Investment in carbon offset projects**

Description: Invest in carbon credits from certified carbon offset projects following recognized standards such as VERRA, Gold Standard, or CDM. These projects may involve reforestation, ecosystem conservation, and investment in renewable energy.

Level of Impact on GHG mitigation (%): 35%
Objective Code: 001

2. **Development of in-house carbon removal projects**

Description: Explore the possibility of developing in-house carbon removal projects, particularly if the company has extensive land and forests. This may involve implementing sustainable forestry practices, ecosystem regeneration, and carbon capture and storage.

Level of Impact on GHG mitigation (%): 45%
Objective Code: 002

3. **REDD+ credit project development**

Description: Participate in the REDD+ (Reducing Emissions from Deforestation and Forest Degradation) market, allowing other organizations to purchase carbon credits from an in-house carbon removal project. This project first neutralizes internal operations' emissions and then offers additional removals to the market by avoiding deforestation and forest degradation in developing countries. These credits can be certified by organizations such as VERRA. *REDD+ projects often involve protecting and managing large forest areas, which may require significant cooperation and coordination with local communities, governments, and other stakeholders. This may pose additional challenges and potential delays but can also present an opportunity.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 003

Evaluation Guide for Compliance:

Analysis and diagnosis: Conduct a comprehensive analysis of greenhouse gas emissions associated with agro-industrial activities. Establish clear emission reduction goals.

Implementation of sustainable practices: Invest in carbon offset projects, develop in-house carbon removal initiatives, and participate in the REDD+ market to neutralize emissions and achieve carbon neutrality.

Monitoring and tracking: Establish monitoring and reporting systems for GHG emissions to measure progress in emissions reduction. Share results with customers and stakeholders to demonstrate commitment to sustainability and carbon footprint reduction.

Disclosure and transparency: Communicate actions taken to reduce CO2e emissions, promote responsible consumption, and conscious choices to customers and stakeholders. This may involve product labeling, sustainability reports, and marketing and communication campaigns.

The application of this guide will enable the agro-industrial sector to neutralize emissions, promote sustainability, and work towards carbon neutrality.

***Note**: *It is important to consider that the implementation of REDD+ projects may present additional challenges and potential delays, but it also represents an opportunity to have a significant impact on forest conservation and GHG emissions reduction.*

***Juan Claudio De Oliva Maya, Founder of the Guide for Financial Institutions towards a Net Zero Model.**

ANNEX 6

Guide for the "Training and Awareness" Strategy

Objective: The objective of this strategy is to promote training and awareness in sustainable practices across all areas of the company, fostering a sustainability-oriented corporate culture, and generating a significant impact on the mitigation of greenhouse gas (GHG) emissions.

Initiatives/Projects in this strategy stage:

1. **Sustainable practices training programs**

Description: Develop and provide training programs for employees on sustainable and resource-efficient practices, including waste management, energy efficiency, and water conservation.

Level of Impact on GHG mitigation (%): 25%
Objective Code: 001

2. **Sustainability-oriented corporate culture**

Description: Foster a sustainability-oriented corporate culture by incorporating sustainability values and principles into all company operations and encouraging employees to adopt sustainable practices in their daily work.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 002

3. **Collaboration with sustainable suppliers**

Description: Collaborate with suppliers who also follow sustainable practices, which may involve selecting suppliers based on their sustainability performance and including sustainability criteria in supply contracts.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 003

4. **Sustainability certifications**

Description: Obtain external verification of GHG inventories and pursue internationally recognized sustainability certifications such as Global Roundtable for Sustainable Beef (GRSB), Rainforest Alliance, or participate in programs like the Science Based Targets initiative.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 004

5. **Customer and stakeholder education**

Description: Communicate with customers and stakeholders about the actions the company is taking to reduce CO2e emissions, promote responsible and conscious consumption. This may involve the use of product labels, sustainability reports, and marketing and communication campaigns.

Level of Impact on GHG mitigation (%): 10%
Objective Code: 005

6. **CO2e emissions monitoring and reporting system**

Description: Establish a CO2e emissions monitoring and reporting system to measure progress in emissions reduction. Sharing results with customers and other stakeholders demonstrates commitment to sustainability and carbon footprint reduction.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 006

Evaluation Guide for Compliance:

Design of training programs: Develop suitable training programs that address key sustainability areas and are tailored to the needs and roles of employees.

Integration of sustainability into corporate culture: Promote the adoption of sustainable practices in all areas of the company, from top management to operational-level employees, through clear policies, objectives, and communications.

Evaluation and selection of sustainable suppliers: Establish sustainability criteria for supplier selection and work closely with them to promote sustainable practices in the supply chain.

Attainment of sustainability certifications: Conduct a GHG inventory and seek recognized certifications that validate the company's efforts in emissions reduction and commitment to sustainability.

Effective communication with customers and stakeholders: Develop communication strategies that inform customers and stakeholders about the company's sustainable practices and promote the adoption of responsible behaviors.

Implementation of monitoring and reporting systems: Establish CO2e emissions monitoring and reporting systems to evaluate progress in emissions reduction and provide transparency in the company's efforts.

The application of this guide will enable the training and awareness of employees, suppliers, customers, and stakeholders, promoting sustainable practices across all areas of the company and generating a significant impact on the reduction of greenhouse gas emissions.

***Juan Claudio De Oliva Maya, Founder of the Guide for Agro-Industrial Institutions towards a Net Zero Model.**

ANNEX 7

Guide for the "Research and Development" Strategy

Objective: The objective of this strategy is to drive research and development of innovative solutions that promote sustainability and reduce greenhouse gas (GHG) emissions in all stages of agricultural production. The aim is to generate knowledge and develop technologies that will advance towards a more sustainable and climate-resilient industry.

Initiatives/Projects in this strategy stage:

1. **Research on pasture management systems**

Description: Invest in research on more sustainable and efficient pasture management systems that increase productivity and reduce GHG emissions.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 001

2. **Development of improved feeding systems**

Description: Conduct research to develop and adopt feeding and supplementation systems that are more sustainable and efficient, which may include the use of alternative feed, methane-reducing supplements, among others.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 002

3. **Innovation in animal health**

Description: Research the development of animal health management programs that improve production efficiency, reduce methane emissions per unit of meat produced, and increase resilience to climate change.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 003

4. **Technologies for emission reduction**

Description: Identify and adopt innovative technologies that reduce GHG emissions in all stages of the production chain, including cattle rearing, transportation, slaughterhouse processing, and product distribution.

Level of Impact on GHG mitigation (%): 25%
Objective Code: 004

5. **Research on renewable energy**

Description: Invest in research and development of renewable energy technologies that can be implemented in company operations with the goal of reducing CO2e emissions and advancing towards Carbon Neutrality.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 005

6. **Development of climate change adaptation strategies**

Description: Conduct research to develop climate change adaptation strategies that enable the company and its supply chains to withstand and adapt to changing climatic conditions.

Level of Impact on GHG mitigation (%): 5%
Objective Code: 006

Evaluation Guide for Compliance:

Establishment of research programs: Allocate resources and collaborate with research institutions to carry out studies and research projects aligned with the established initiatives.

Promotion of innovation: Foster a culture of innovation and internal and external collaboration for the development of sustainable solutions and cutting-edge technologies.

Feasibility assessment and adoption: Evaluate the technical, economic, and environmental feasibility of the developed solutions and ensure their effective implementation in operations.

Collaboration with strategic partners: Establish partnerships and collaborations with strategic partners such as universities, research centers, and other organizations to leverage their expertise and knowledge in the field of sustainable research and development.

Monitoring and continuous improvement: Implement monitoring and evaluation systems to measure progress, identify areas for improvement, and make adjustments in the research and development strategy.

The application of this guide will drive research and development of innovative solutions that contribute to the reduction of GHG emissions and strengthen the sustainability of the agro-industrial sector.

***Juan Claudio De Oliva Maya, Founder of the Guide for Agro-Industrial Institutions towards a Net Zero Model.**

ANNEX 8

Guide for the "Communication and alertness" Strategy

Objective: The objective of this strategy is to effectively and transparently communicate the company's sustainability actions, promote awareness of the importance of reducing greenhouse gas (GHG) emissions, and encourage responsible consumption. The goal is to engage customers, employees, and other stakeholders in the company's commitment to sustainability and combating climate change.

Initiatives/Projects in this strategy stage:

1. **Communication of sustainability actions**

Description: Transparently and effectively communicate the actions the company is taking to reduce CO2e emissions and advance towards Carbon Neutrality, using various communication channels and formats.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 001

2. **Education for responsible consumption**

Description: Develop educational and awareness programs to promote responsible and conscious consumption of the company's products, emphasizing the importance of sustainability and carbon footprint reduction.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 002

3. **Communication of emission reduction progress**

Description: Establish CO2e emission monitoring and reporting systems and regularly communicate progress in emission reduction to customers and other stakeholders.

Level of Impact on GHG mitigation (%): 20%
Objective Code: 003

4. **Participation in sustainability initiatives**

Description: Participate in internationally recognized sustainability initiatives and programs such as the Global Roundtable for Sustainable Beef (GRSB), Rainforest Alliance, or Science Based Targets initiative, and communicate participation in these initiatives to customers and the general public.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 004

5. **Collaboration with media outlets**

Description: Work with media outlets to disseminate the company's sustainability efforts and achievements in terms of GHG emissions reduction.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 005

6. **Participation in sustainability events and forums**

Description: Participate in sustainability events and forums to share the company's experiences and learnings in implementing sustainable and efficient practices in meat production.

Level of Impact on GHG mitigation (%): 15%
Objective Code: 006

Evaluation Guide for Compliance:

Development of a communication strategy: Establish a clear communication strategy that defines key messages, appropriate communication channels, and target stakeholder groups.

Creation of informative and engaging content: Develop informative and engaging content that highlights the company's sustainability actions, environmental benefits, and the importance of emission reduction.

Collaboration with experts and organizations: Establish partnerships with sustainability experts and recognized organizations to support and strengthen the company's messages, as well as to obtain advice and support in communication efforts.

Measurement and evaluation of impact: Implement mechanisms to measure and evaluate the impact of communication activities, such as opinion surveys and analysis of reach and engagement metrics.

Internal communication: Engage employees in sustainability communication, ensuring they are informed and committed to the company's emission reduction objectives and actions.

The application of this guide will enable the company to effectively communicate its sustainability actions, raise awareness among stakeholders about the importance of emission reduction, and promote responsible and conscious consumption.

***Juan Claudio De Oliva Maya, Founder of the Guide for Agro-Industrial Institutions towards a Net Zero Model.**