

GREENHOUSES
GAS
EMISSIONS
INVENTORY
MULTI X

MAY 2024

MULTI X



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1. EXECUTIVE SUMMARY

This report presents the results of the Greenhouse Gas (GHG) Inventory for Multi X operations during the year 2023. It was prepared with information provided by the company regarding fuel purchase, refrigerant gases, purchased electricity, waste generation, fish feed consumption, packaging, logistics, and commercial logistic.

For quantification, the Greenhouse Gas Protocol was used, which is validated by the World Resources Institute (WRI) and The World Business Council for Sustainable Development (WBCSD). This protocol distinguishes the Carbon Footprint results into three scopes of direct and indirect emission.

SCOPE	TCO ₂ E LOCATION BASED	TCO ₂ E MARKET BASED
Scope 1	80.768	80.768
Scope 2	6.087	593
Scope 3	500.154	500.154
Total general	587.009	581.515

The results of the 2023 carbon footprint quantification indicate that the company emitted 581,515 tons of carbon dioxide equivalent (tCO₂e), considering market-based emissions, which is equivalent to the generation of 5.002 tCO₂e/tWFE. Scope 1 represents 13.9%, Scope 2 represents 0.1%, and Scope 3 represents 86% of the Corporate Carbon Footprint¹.

The results presented below will allow tracking the emission reduction and mitigation strategy through the identification of critical emission points and the implementation of solutions.

2. INTRODUCTION

Aquaculture is part of the solution to create sustainable food systems.

According to the World Resources Institute, feeding the growing population requires addressing three challenges:

1. Bridging the gap between the amount of food available today and the amount needed by 2050, which equates to 56%.
2. Reducing the impact of agriculture on the environment, focusing on water, climate, and ecosystems.
3. Ensuring that agriculture supports economic and social development.

Part of the problem in today's world is that sustainable food production does not meet the needs of a growing global population. Additionally, agriculture uses nearly half of the cultivable land, and food production generates a quarter of the planet's greenhouse gas emissions. Furthermore, diets and menus in many parts of the world are driving the demand for more complete and specific foods.

Our research in recent years shows that aquaculture is key to meeting future food challenges. However, according to our measurements, the real impact on the climate and ecosystems of salmon farming does not occur in the farming cages but in the areas where raw materials for fish feed are produced.

We need to work on joint strategies with the entire supply chain to sustainably increase food production, restore the productivity of degraded lands, increase yields regeneratively, and improve land and water management.

In this context, this report describes the carbon footprint of Multi X's activities in the areas of Freshwater, Sea Water, Processing Plant, and Commercial Logistics. By measuring the annual carbon footprint, Multi X monitors its performance while increasing its standards of transparency and commitment to improving climate-related environmental indicators.

2.1 ABOUT THE COMPANY

Multi X is a Chilean salmon producer company founded in Puerto Montt in the mid-1980s. With over 30 years of experience, they are present in the five southernmost regions of Chile, contributing to the development of their inhabitants and communities. Their production model covers the entire salmon production cycle, from genetics, freshwater breeding, and seawater farming, to processing, sales, and distribution. With globally recognized brands, they develop and market innovative products according to the needs and trends of consumers and markets in over 40 countries.

3. CARBON FOOTPRINT

The carbon footprint is an environmental indicator that measures the impact of an activity or process on climate change. It corresponds to a tool for estimating GHG emissions based on internationally recognized methodologies, serving as a global standard for carbon footprint studies.

This indicator demonstrates environmental commitment by quantifying and reducing emissions through energy efficiency measures and fossil fuel consumption reduction, as well as applying initiatives that increase process efficiency, among others.

To estimate a company's carbon footprint, it is necessary to define operational limits, distinguishing three scopes based on the type of emissions.

SCOPE 1 (MANDATORY)

These are direct emissions resulting from the company's own control activities. Sources include heat, electricity, or steam generated by boilers on the company's premises, as well as chemicals and materials resulting from production processes, emissions from company vehicles, and hydrofluorocarbon (HCFC) emissions from refrigeration and air conditioning equipment.

Two types of emissions are identified: fuel emissions and refrigerant emissions.

Fuel emissions

These are emissions derived from the use of refrigerant gases for industrial refrigeration equipment or air conditioning use in offices or stores.

$$\text{Fuel emissions} = \text{Fuel amount (L,t)} \times \text{Emission factor} \left(\frac{\text{kg CO}_2\text{e}}{\text{L,kg}} \right)$$

Refrigerant use emissions

These are emissions derived from the use of refrigerant gases for industrial refrigeration equipment or air conditioning use in offices or stores.

$$\text{Refrigerant emissions} = \text{Refrigerant amount (kg)} \times \text{Emission factor} \left(\frac{\text{kg CO}_2\text{e}}{\text{kg}} \right)$$

SCOPE 2 (MANDATORY)

These are indirect emissions generated by the use of electricity, heat, or steam from external sources consumed by the organization. This scope includes emissions from the generation of consumed and acquired electricity. The emissions in this scope physically occur at the power generation plant.

$$\text{Electricity emissions} = \text{Electricity consumption (KWh)} \times \text{Emission factor} \left(\frac{\text{kg CO}_2\text{e}}{\text{KWh}} \right)$$

SCOPE 3 (OPTIONAL)

These are emissions resulting from the organization's activities but originating from sources not owned or controlled by it. Examples include emissions from waste disposal, employee transportation, transportation of raw materials and products, among others.

$$GHG\ emissions = Activity\ data \times Emission\ factor$$

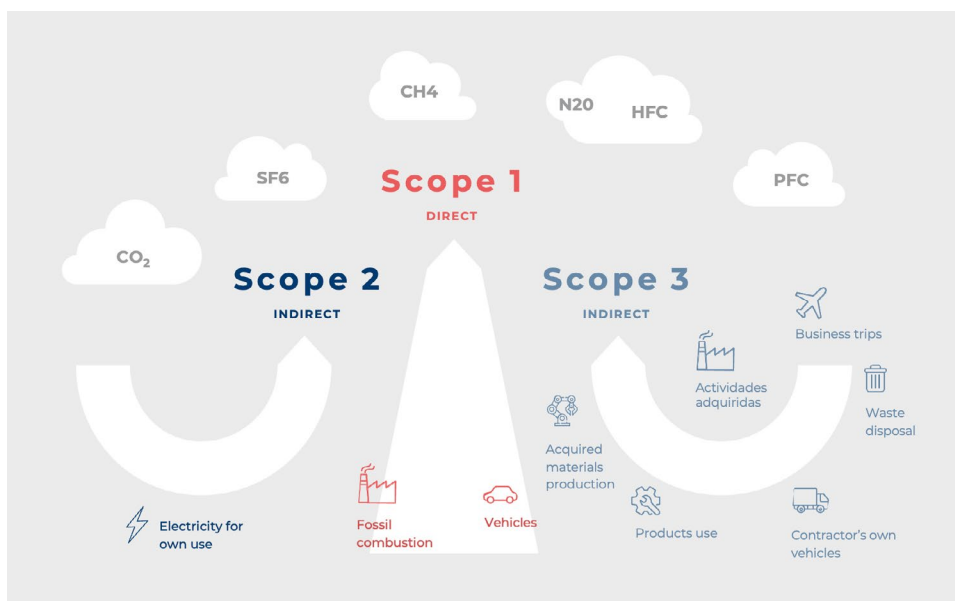


FIGURE 1 : CARBON FOOTPRINT SCOPES

3.1 GREENHOUSE GAS PROTOCOL

The Greenhouse Gas Protocol is a guide detailing the methodology for measuring and reporting GHG emissions and removals, as well as providing information on validation and verification. This protocol has become a widely used tool in carbon footprint estimation, supported by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).

The objective of this protocol is for its standards to serve as certain parameters in terms of GHG emissions measurement across all sectors, standardizing the methodology and allowing comparability between companies. In this way, companies using these documents can identify critical points in their operations and work to reduce the impact.

The Protocol has two standards: the Corporate Accounting and Reporting Standard of the GHG Protocol and the GHG Protocol Project Quantification Standard, where the first provides a detailed guide for companies interested in quantifying and reporting their GHG emissions, while the second is a guide for quantifying GHG emission reductions from specific projects.

This study is conducted in accordance with the Corporate Accounting and Reporting Standard of the Greenhouse Gas Protocol.

3.2 OBJECT DEFINITION AND STUDY LIMITS

3.2.1 OBJECTIVE

Measure the corporate carbon footprint for Multi X.

3.2.2 TIME SCOPE

All data provided by the company corresponds to 2023 consumption.

3.2.3 OPERATIONAL LIMITS

This study considers Scopes 1, 2, and 3, as described in Table 1. It is important to note that no refrigerant gas refills were identified in hatcheries for this period. It also does not have productivity related to emissions from livestock.

BUSSINES AREA	SCOPE 1	SCOPE 2	SCOPE 3
Fresh Water	Fuel and refrigerant consumption	Electricity	Feed, logistic, waste
Sea water	Fuel consumption	Electricity	Feed, logistic, waste
Processing	Fuel and refrigerant consumption	Electricity	Waste, Packaging
Administration	Fuel consumption	Electricity	Waste
Commercial Logistics	-	-	Product transportation

TABLE 1 : OPERATIONAL LIMITS OF THE STUDY BY BUSINESS AREA

3.2.4 CONSIDERED GREENHOUSES GASES

The gases considered in the standards are the same as those listed in the Kyoto Protocol and they are:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFC)
- Perfluorocarbons (PFC)
- Sulfur hexafluoride (SF₆)

These emissions are quantified through a GHG inventory and expressed in metric tons of CO₂ equivalents (tCO₂e).

3.2.5 DATA COLLECTION

The information used in this study comes directly from Multi X. For data collection, the company was provided with an Excel questionnaire to report information on fossil fuel consumption, waste generation, feed usage, electricity, travel, refrigerants, among others.

The emission factors used come from the UK's Department for Environment, Food and Rural Affairs (DEFRA) and the Chilean Ministry of Energy for the National Electric System (SEN) and Aysén Electric System (SEA) in their most updated versions.

4. RESULTS

For the year 2023, Multi X's GHG emissions inventory resulted in a total of 581,515 tCO₂e across the evaluated areas.

The inventory is distributed by scope as shown in the following graph:

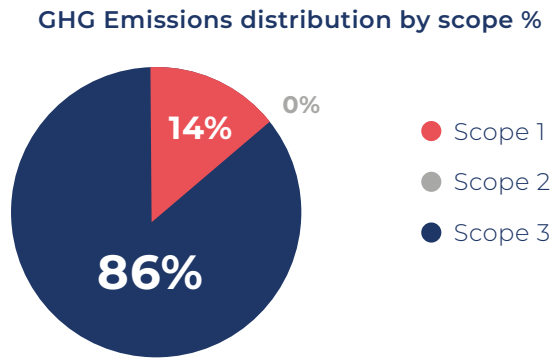


FIGURE 2 : GHG EMISSIONS CONTRIBUTION BY SCOPE

86% of the emissions are concentrated in Scope 3, due to the classification of emissions from feed consumption and customer delivery, which account for 80.37% of the inventory. This is consistent with industry behavior, generally concentrating emissions in these sources. Feed consumption increased by 16% in weight, equivalent to a 9% increase in emissions. Customer delivery emissions increased by 82% compared to the previous year.

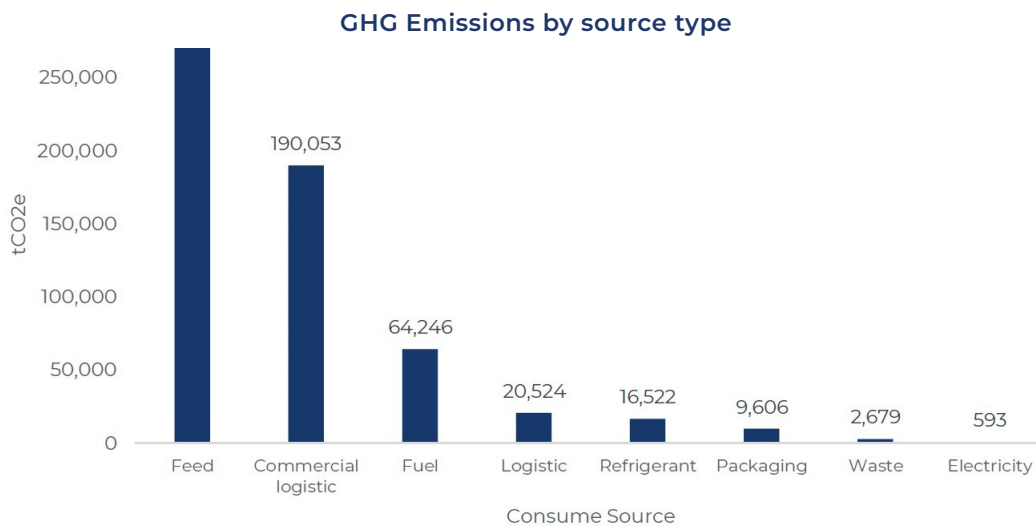


FIGURE 3 : GHG EMISSIONS BY SOURCE TYPE

Since feed is the source contributing the most emissions, the challenge is to engage with suppliers who constantly seek to reduce their emission factors and align with the company's objectives. Small changes in emissions from this source have a significant impact on the final result. Other sources will be addressed in their respective scope sections.

During 2023, production increased to 116,251 tons of WFE, resulting in an emissions intensity indicator of 5.002 tCO₂e/tWFE. This indicator normalizes the result with respect to a productive variable and allows comparison with other years or the industry. Variations in this indicator will be addressed in the comparison section.

SCOPE	EMISSIONS INTENSITY [TCO ₂ E/TWFE]
Scope 1	0,695
Scope 2	0,005
Scope 3	4,302
Total general	5,002

TABLE 2 : EMISSIONS INTENSITY BY SCOPE

Classifying emissions by productive area shows that Sea Water accounts for 58.7% of total emissions, 82.8% of which belong to Scope 3. Corporate emissions follow with 35.5%, all from Scope 3, with the remaining 5.8% divided among Processing Plant, Freshwater, and Administration.

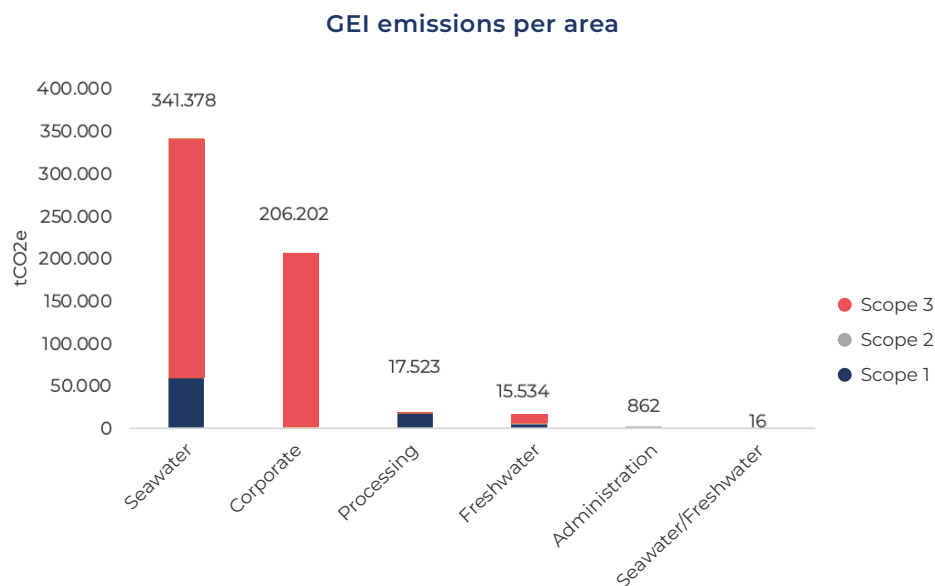


FIGURE 4 : GHG EMISSIONS BY AREA

4.1 SCOPE 1

According to the results obtained, for Scope 1, the Fuel source generates an impact of 64,246 tCO₂e. Additionally, the company reported the use of refrigerant corresponding to Scope 1 emissions with an impact contribution of 16,522 tCO₂e.

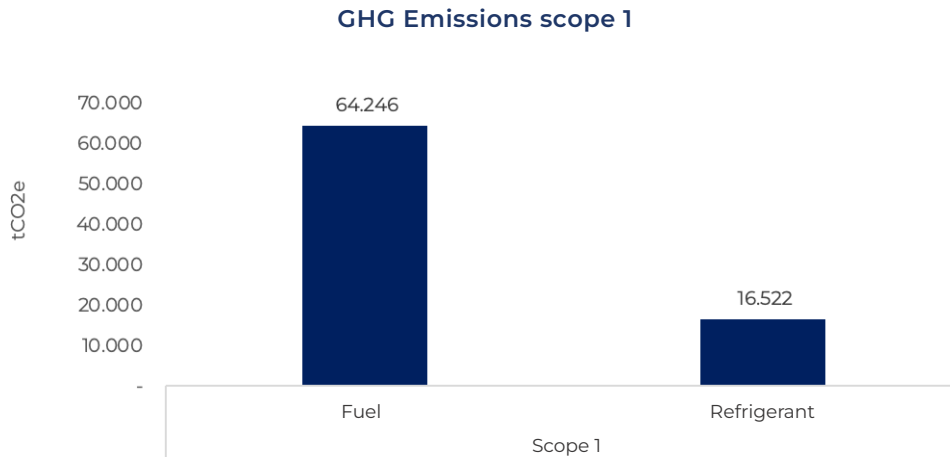


FIGURE 5 : GHG EMISSIONS SCOPE 1 BY SOURCE TYPE

Analyzing the types of sources in detail, oils accounts for 76.5% of the emissions in this scope, significantly above other fuels such as LPG and gasoline. This is mainly because oil is used to power all the fattening centers' generators and for support processes, while LPG is primarily used for habitability and some cranes. Regarding refrigerants, R-22 predominates with 8,160 kg, reaching 94% of the total weight in refrigerant refills.

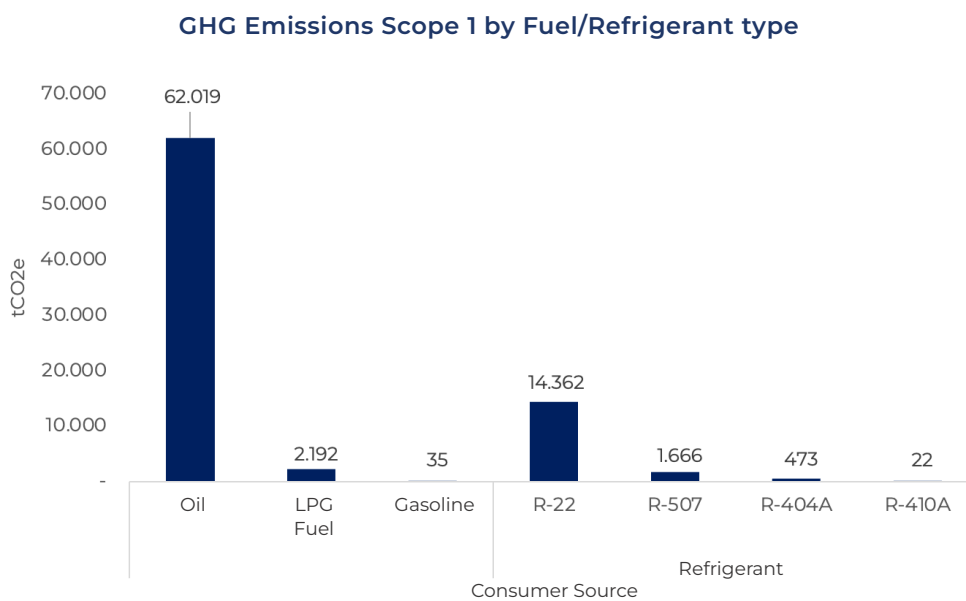


FIGURE 6 : EMISSIONS SCOPE 1 BY FUEL/REFRIGERANT TYPE

GHG Emissions Scope 1 by area

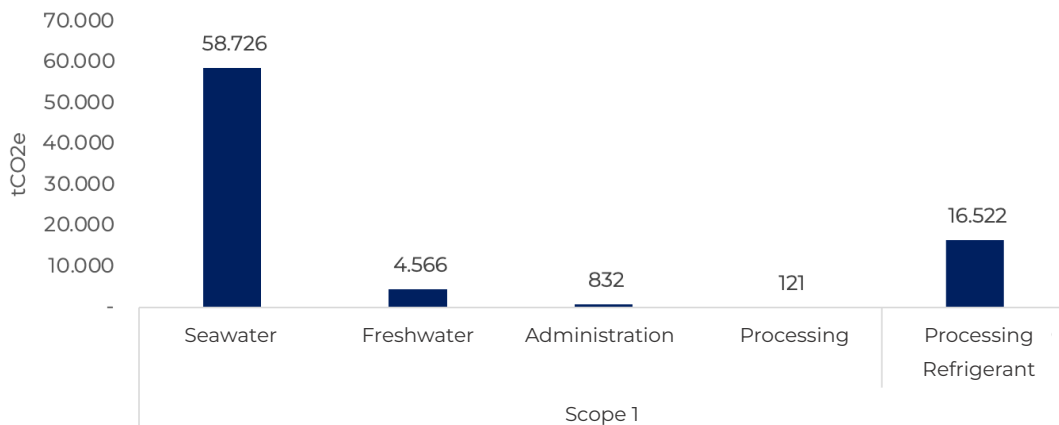


FIGURE 6 : GHG EMISSIONS SCOPE 1 BY SOURCE

Breaking down the GHG impact for Scope 1 by process area, Sea Water generates an impact of 58,726 tCO₂e due to fuel use, followed by 4,566 tCO₂e in Freshwater. Additionally, refrigerant use occurs specifically in the processing plant, contributing the total impact due to this type of source.

Emissions in the Sea Water area are due to the dependence on fossil fuels to power generators and support areas, and in the processing plant due to refrigerant refills. The possibility of reducing emissions in this scope includes:

1. Technological replacement of power generators: This involves a feasibility study and is recommended in circumstances where the negative impacts of the change can be reduced. However, replacing oil with biofuels or H2V would significantly reduce emissions in this scope.
2. Operational changes and machinery efficiency improvements: Energy consumption mainly occurs in blowers and photoperiod. A study on blower usage to optimize the quantity according to the number of cages and biomass in process can help reduce usage hours or generator load, decreasing fuel consumption.
3. Refrigerant replacement: Currently, R-22, R-410A, and R-507 refrigerants are used, all with high emission factors between 1760 and 3985 kgCO₂e/kg. They can be replaced by ammonia-based systems with zero emissions, **potentially reducing the total footprint by 2.8%.**

4.2 SCOPE 2

According to the results obtained, for Scope 2, which refers solely to electricity consumption, the impact was 593 tCO₂e. These emissions are considered indirect as they account for emissions produced by electricity generation, distribution, and consumption, depending on the country's energy matrix and the electric system to which it is connected.

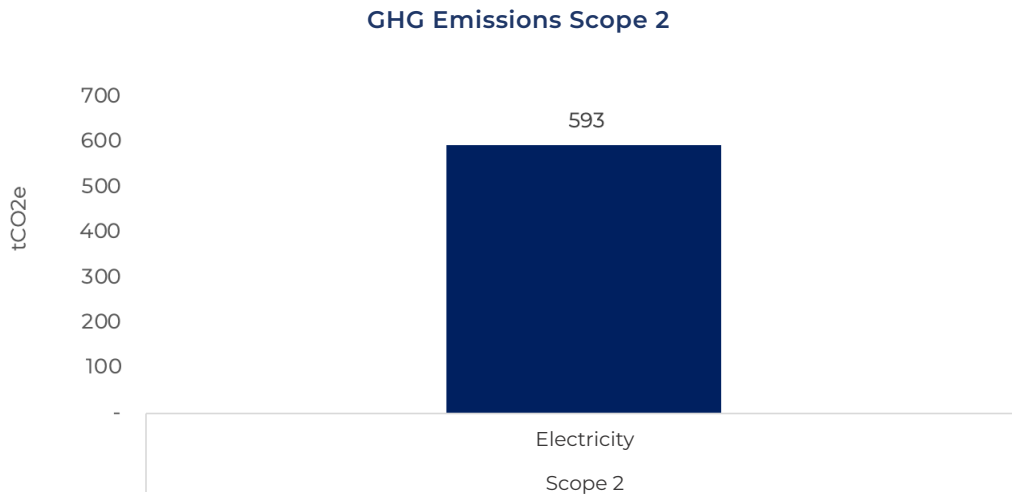


FIGURE 8 : GHG EMISSIONS SCOPE 2 BY SOURCE TYPE (MARKET-BASED)

Breaking down the impact by installations, Freshwater has the highest impact with 544 tCO₂e. Analyzing further, the processing plant has no impact due to the use of renewable energy in certain Multi X facilities.

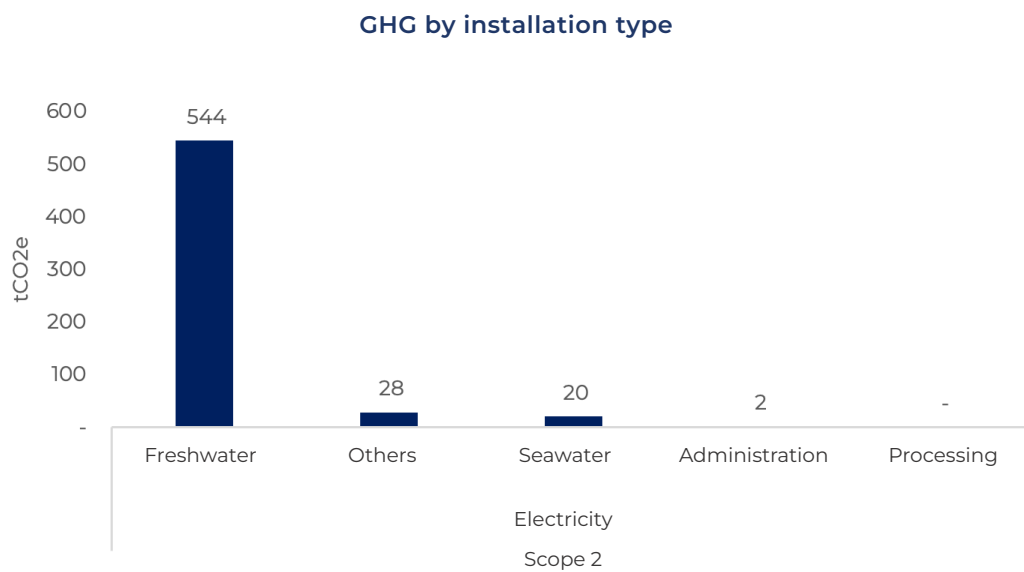


FIGURE 9 : GHG EMISSIONS SCOPE 2 BY INSTALLATION TYPE

Analyzing the origin of consumed electricity, 10% comes from non-renewable sources from the National Electric System (SEN), while the majority comes from NCRE.

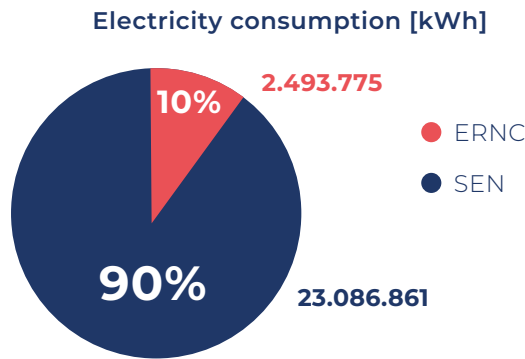


FIGURE 10 : ELECTRICITY CONSUMPTION BY SOURCE

100% of the electricity consumption in processing plants comes from NCRE, and the Freshwater area is almost 52% from NCRE and 48% from SEN, generating 544 tCO₂e. Therefore, the reduction potential lies in reducing these 544 tCO₂e by fully sourcing from NCRE. Although the percentage reduction potential is low, it has communication advantages by demonstrating that an entire scope is reduced to zero.

Electricity consumption by area and source

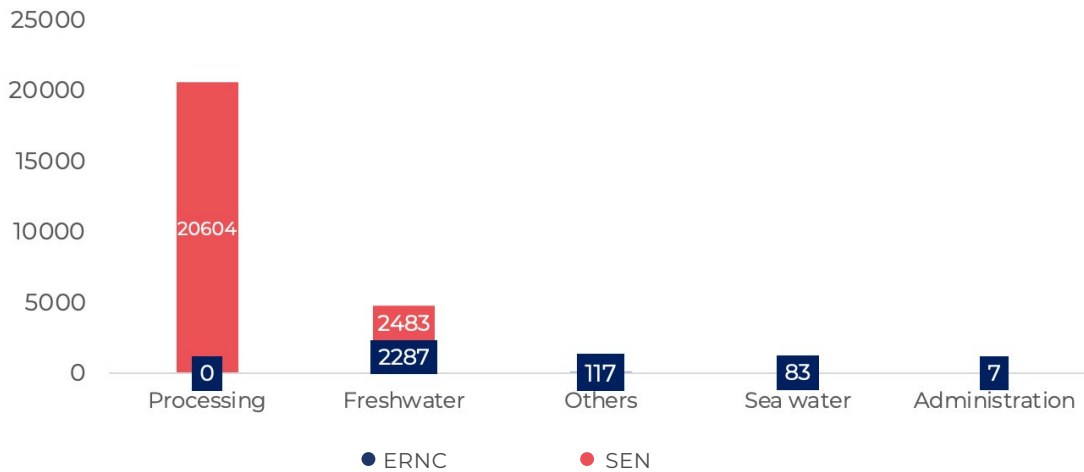


FIGURE 11 : ELECTRICITY CONSUMPTION BY AREA AND SOURCE MWh

4.3 SCOPE 3

According to the results obtained, for Scope 3, the source corresponding to Feed has an impact of 277,292 tCO₂e, followed by Commercial Logistics with 190,053 tCO₂e.

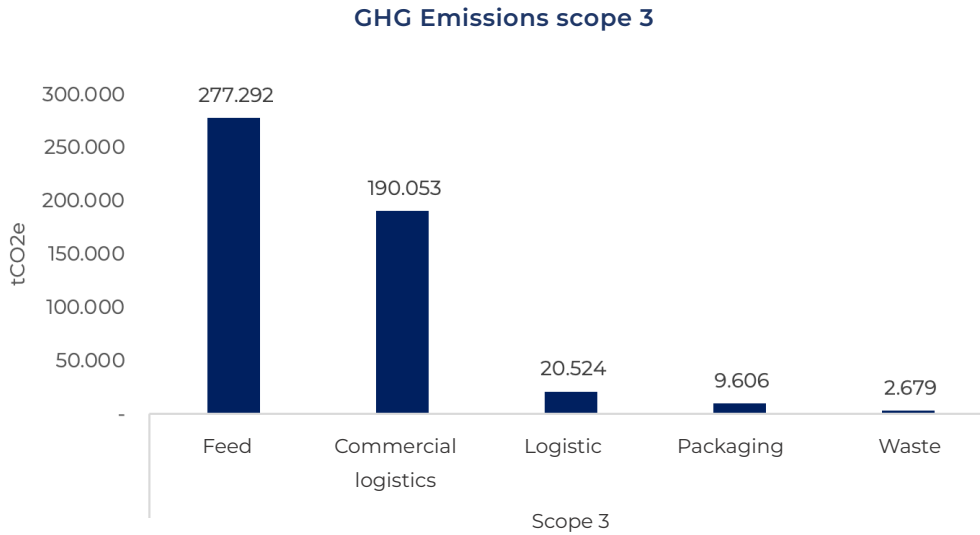


FIGURE 12 : GHG EMISSIONS SCOPE 3 BY SOURCE TYPE

Feed, being the source with the highest GHG emissions impact within Scope 3, shows that the Sea Water area generates the highest emissions with 267,089 tCO₂e, and Freshwater with 10,203 tCO₂e. Subsequently, regarding Commercial Delivery, the impact is attributed to the Corporate area with 190,053 tCO₂e, being the total impact of this source.

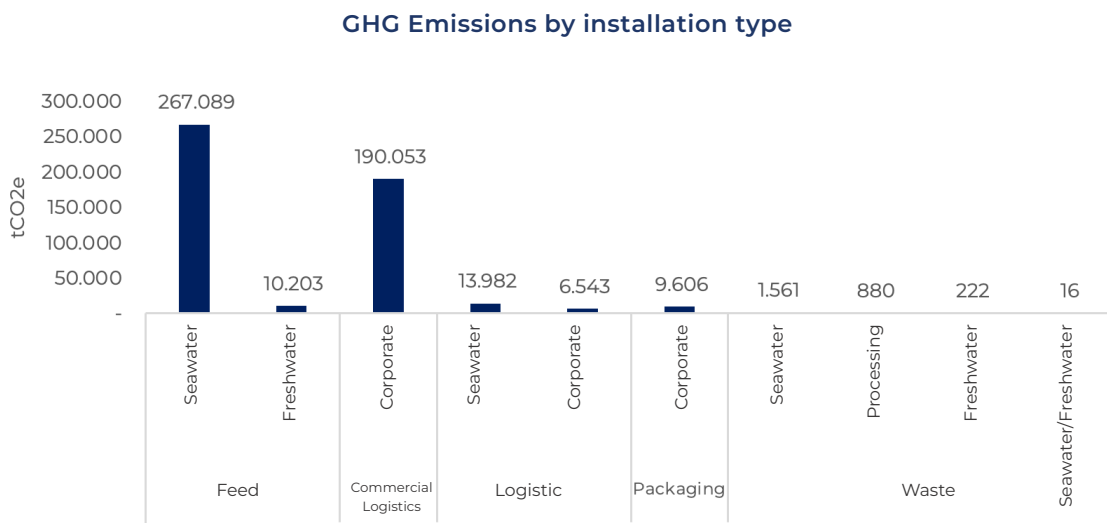


FIGURE 13 : GHG EMISSIONS SCOPE 3 BY INSTALLATION TYPE

Analyzing Scope 3 emission sources in detail, the Feed source is detailed, showing that 137,069 tons of feed were consumed, with 34.5% belonging to P1 and 38.5% to P2, being the largest suppliers and concentrating 69.5% of this source's emissions.

SUPPLIER	UNIT	FE [KGCO ₂ E /KG]	CONSUMED FEED [TON]	EMISSIONS [TCO ₂ E]
P1	kg	1.97	47,304	93,189
P1 Total			47,304	93,189
P2	kg	2.43	26,879	65,317
P2	kg	1.311	25,942	34,226
P2 Total			52,821	99,543
P3	kg	2.51	8,756	21,977
P3	kg	2.48	7,998	19,836
P3	kg	2.61	5,163	13,475
P3 Total			21,917	55,288
P4	kg	1.94	4,816	9,343
P4	kg	2.01	3,681	7,999
P4	kg	1.96	2,521	4,942
P4	kg	1.77	2,515	4,451
P4	kg	2.1	1,494	3,137
P4 Total			15,027	29,272
Grand Total			137,069	277,292

TABLE 3 : CONSUMED FEED, EMISSION FACTOR, AND EMISSIONS BY SUPPLIER

The Commercial Logistic source is also analyzed. This source is crucial as it accounts for 32.7% of total emissions, and within these emissions, 93.6% are from goods transported by air. Air transport is undoubtedly the most polluting mode of goods transport, as this 93% of emissions correspond to only 30.8% of the transported weight, while the 5,404 tons of products transported by sea produce only 2.13% of the emissions.

DESTINATION TYPE	TRANSPORTATION TYPE	TRANSPORTED WEIGHT [TON]	% TRANSPORTED WEIGHT	EMISSIONS [TCO ₂ E]	% EMISSIONS [TCO ₂ E]
Final destination	Air	2.912	30,81%	177,916	93.61%
	Maritime	5.404	57,18%	4,054	2.13%
	Land	554	5,87%	3,792	2.00%
Preliminary destination	Land	580	6,14%	4,292	2.26%
Grand Total		9.452	100,00%	190,053	100.00%

Therefore, the most direct way to reduce this section of the carbon footprint and the entire inventory is to reduce the use of air transport in favor of maritime transport. A theoretical exercise on the reduction potential of this replacement is shown in the following table:

TRANSPORTATION TYPE	FE	VALUE [KM.TON]	TRANSPORTED WEIGHT [TON]	EMISSIONS [TCO ₂ E]	POTENTIAL EMISSIONS [TCO ₂ E]
AIR	0.64874	274,247	2,912,307	177,916	-
MARITIME	0.01306	310,359	5,404,875	4,054	7,636
Grand Total		584,606	8,317,182	181,969	7,636

As observed, this change could reduce emissions from 181,969 tCO₂e to 7,636 tCO₂e, representing a 96% reduction in emissions from air and maritime transport, which translates to a 43% reduction in the total inventory, decreasing from 581,515 tCO₂e a 407,182 tCO₂e.

5. COMPARISON 2022-2023

When comparing with the previous period's results, there is a 32% increase in the overall result, resulting from a 22% and 35% increase in Scope 1 and 3, respectively. Regarding Scope 2, there was a 58% decrease in market-based emissions and a 16% decrease in location-based emissions.

SCOPE	MARKET BASED EMISSIONS [TCO ₂ E]			LOCATION BASED EMISSIONS [TCO ₂ E]		
	2022	2023	% DIFFERENCE	2022	2023	% DIFFERENCE
Scope 1	66,022	80,768	22%	66,022	80,768	22%
Scope 2	1,416	593	-58%	7,272	6,087	-16%
Scope 3	370,178	500,154	35%	370,178	500,154	35%
Total general	437,616	581,515	33%	443,472	587,009	32%

TABLE 4 : COMPARISON OF EMISSIONS 2022 – 2023 BY SCOPE

It is important to compare the emission intensity as it provides a normalized average relative to production, considering that as the company produces more, more emissions are generated to sustain the operation. It is observed that the indicator remained relatively constant, decreasing by 0.12%. There was a decrease in Scope 1 and 2 emissions by 8% and 68%, respectively, while Scope 3 saw a 2% increase. This indicates that despite the increase in emissions in 2023, it is not due to inefficiencies in emissions but due to increased production.

YEAR	2022		2023	
PRODUCTION	87.378 TON WFE		116.251 TON WFE	
SCOPE	EMISSIONS [TCO ₂ E]	EMISSIONS INTENSITY [TCO ₂ E/TWFE]	EMISSIONS [TCO ₂ E]	EMISSIONS INTENSITY [TCO ₂ E/TWFE]
Scope 1	66,022	0.756	80,768	0.695
Scope 2	1,416	0.016	593	0.005
Scope 3	370,178	4.237	500,154	4.302
Total general	437,616	5.008	581,515	5.002

TABLE 5 : COMPARISON OF EMISSION INTENSITY 2022-2023 BY SCOPE

Comparing by type of source, there is a significant increase in Commercial Logistic and Logistics by 82%, due to the increase in the sale of fresh product via air, and a 1291% increase respectively, where

the latter increased due to the full incorporation of oil-related sources with wellboats. Packaging and fuel increased by 36% and 31%. In the case of feed, there was a 9% increase in its emissions; however, 16% more feed was consumed, indicating that emissions per kg of feed have decreased compared to 2022. Corporate travel was not included in Scope 3 as its contribution is less than 1% of the footprint.

SOURCE TYPE	EMISSIONS 2022 [TCO ₂ E]	EMISSIONS 2023 [TCO ₂ E]	% DIFFERENCE
Feed	254,178	277,292	9%
Commercial Logistics	104,690	190,053	82%
Fuel	49,108	64,246	31%
Refrigerant	16,913	16,522	-2%
Packaging	7,046	9,606	36%
Waste	2,393	2,679	12%
Logistics	1,476	20,524	1291%
Electricity	1,416	593	-58%
Corporate travel	395	-	-100%
Production	87,378	116,251	33%
Total general	437,615	581,515	33%

TABLE 6 : COMPARISON OF EMISSIONS 2022-2023 BY TYPE OF SOURCE

6. ACTION PLANS

Multi X has reset its goals related to Scope 1 and 2 greenhouse gases with a 50% reduction of its emissions by 2030. Scope 3 emissions are expected to be reduced by 20% by 2030.

55.44% of Scope 3 emissions are associated with salmon feed, of which 44% of emissions are due to land-use change, meaning 120,833 tons of carbon dioxide equivalent. Before setting the goal, the existing mechanisms and future steps to reduce greenhouse gas emissions were discussed with various feed suppliers. It was decided to continue incorporating innovative ingredients in salmon feed, such as bacterial fermentation, insect meal, nuseed, among other ingredients. The aim is to diversify the existing ingredients in the feed formulation matrix to ensure price stability in the future. Additionally, the plan is to open research lines with academia, inviting agricultural suppliers, traders, and feed suppliers to promote farming practices that reduce negative externalities on the soil, such as water use, soil erosion, nutrient excess, greenhouse gas emissions, among others.

7. CONCLUSION AND RECOMMENDATIONS

The analysis of the results of the 2023 Corporate Carbon Footprint or GHG Inventory of Multi X constitutes a study of environmental performance, identifying critical emission points for implementing measures and solutions to reduce the emissions generated by operations.

The total corporate carbon footprint was 581,515 tCO₂e, distributed across the areas of Commercial Logistic – Hatcheries – Sea water – Processing Plants – Corporate-Administration.

It is suggested to constantly monitor the company's environmental performance, identify market trends that tend to reduce corporate or product emissions, and communicate the results to stakeholders to demonstrate Multi X's commitment to industry sustainability at both national and international levels. This strengthens the company's image and encourages the supply chain to join the measurement of their greenhouse gases.

Additionally, prefer using ammonia in hatcheries and processing plants to avoid increasing Scope 1 emissions, continue implementing the use of unconventional renewable energy sources to reduce fuel use, involve company personnel in better environmental and sustainability practices, and work together with the supply chain to move towards a low-emission industry.

The main sources of emissions by type are as follows:

SOURCE TYPE	GHG EMISSIONS (TCO ₂ E)
Feed	47.68%
Commercial Logistics	32.68%
Fuel	11.05%
Refrigerant	2.84%
Packaging	1.65%
Waste	0.46%
Logistics	3.53%
Electricity	0.1%
Total general	100,00%

When analyzing the variables independently without considering emissions generated by Scope 3, the key variables to monitor in order of priority should be fuel and electricity consumption.

Main sources of scope 1 and 2 emissions:

EMISSION SOURCE	TCO ₂ E	CONTRIBUTION TO SCOPE 1 AND 2 (%)
Gasoline	68,562	78.56%
R-22	14,362	16.46%
GLP	2,192	2.1%
R507	1,666	1.91%
Others	2,596	0.57%
Total	67,437	100%

8. REFERENCES

Department of Environment Food and Rural Affairs, Department for Energy and Climate Change, (2022). *Guidelines to Defra's GHG conversion factors for company reporting*,

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World Resources Institute and World Business Council for Sustainable Development. (2004). *A Corporate Accounting and Reporting Standard*.

ANNEX

CONFORMANCE LETTER

To whom it may concern

Control Union Chile Spa confirms that it has carried out the assessment of
Scope 1, 2 and 3 Carbon Measurement
for the Greenhouse Gas (GHG) Protocol, Corporate Accounting and Reporting Standard, version 2015,
from the World Business Council for Sustainable Development and World Resources Institute,
with information of the
January – December 2023 period of:

MULTI X S.A.


Avenida Cardonal Nº 2501, Puerto Montt - Chile.

The results of the evaluation carried out on 19TH, 20th and 21st of March, 2024

Further details are provided overleaf

The evaluation has been performed under the supervision of Marcos Tricallotis, Lead Assessor of CU Chile.



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**JORGE EDUARDO RIOS
ALVEAL**
2024.05.09 10:01:44 -0400

Declared by: Jorge Ríos Alveal
Country Manager
Date of decision: 03-05-2024
Printed on: 03-05-2024

Scope

In this report, you will find the outcomes of the revision of scope 1, 2 and 3 Carbon Measurement for the Greenhouse Gas (GHG) Protocol, Corporate Accounting and Reporting Standard, version 2015 (World Business Council for Sustainable Development and World Resources Institute). This 2023 report is the responsibility of and has been approved by the top management of Multi X S.A. The responsibility of Control Union is to draw a conclusion based on our own review.

Evaluation process

The revision consisted of requesting data from different management areas, which have been involved in the development of the 2023 corporate report for its GHG – focused on carbon measurement of scope 1, 2 and 3 – as well as in the application of audit procedures which are described below:

- Face-to-face meetings with sustainability and logistics professionals representing the areas related to the carbon measurements of scope 1, 2 and 3.
- Receipt of the data and emission factors for each of these and evidence about the traceability data that were considered for each carbon source.
- Review of consistency and coherence of the data and final calculations.
- Establishment of conclusions associated with the audit process.

For more details about the evidence that was verified, the document "Greenhouse Gas (GHG) Protocol, Corporate Accounting and Reporting Standard, version 2015 (World Business Council for Sustainable Development and World Resources Institute)", was used as a guideline to evaluate the data, traceability and final calculations reported by Multi X S.A.

Conclusions

Considering the information obtained from face-to-face meetings and the cross-checking process by examining the database used to validate each calculation and final scope 1, 2 and 3 carbon measurements and greenhouse gases, there is no evidence to suggest that the information provided by the company considering, and guided by, the "Greenhouse Gas (GHG) Protocol, Corporate Accounting and Reporting Standard, version 2015", contains significant deviations.

Table 1 below shows the results for the metrics defined for each GHG related to Scope 1, 2 and 3 carbon measurement of Multi X S.A. for the January – December 2023 period.

Scope 1: Direct GHG emissions during 2023					
Fuels	Source	Unit	Sum of values	Sum of MWh	Sum of Kg CO ₂ eq
	Gasoline	Liters	16,613	161	34,845
	LPG	Liters	1,407,626	10,248	2,191,854
	Diesel	Liters	22,508,054	238,540	62,018,893

	Total		23,932,293	248,949	64,245,592
Refrigerants	Source	Unit	Sum of values	Sum of Kg CO₂ eq	
	R-22	Kg	8,160	14,361,600	
	R-404A	Kg	120	472,766	
	R-410A	Kg	11	21,741	
	R-507	Kg	418	1,666,129	
	Total		8,709	16,522,535	
Total of Scope 1 emissions	80,767,827 Kg CO ₂ eq 80,767-ton CO₂eq				
Scope 2: Electricity indirect GHG emissions during 2023					
Electricity use (kWh)	Source	Sum of KWh	Sum of MWh	Sum of Kg CO₂ eq	
	Purchased electricity (Medium-sized network)	1,275,482	1,275	303,525	
	Purchased electricity (SIC)	24,305,154	24,305	5.783.868	
	Total	25,580,636	25,581	6,087,393	
Total of location-based Scope 2 emissions	6,087,393 Kg CO ₂ eq* 6,087-ton CO₂eq*				
Scope 3: Other indirect GHG emissions during 2023					
Product logistics	Transport type	Sum of tons	Sum of ton CO₂ eq		
	Air	20,770.37	190,053		
	Sea	21,499.53			
	Land	23,090.24			
	Total	65,360.15	190,053-ton CO₂eq		
Internal product logistics	20,524-ton CO₂eq				
Feed	Supplier	Kg CO₂ eq	Sum of ton CO₂ eq		
	S1	93,180	93.18		
	S2	55,280	55.28		
	S3	29,770	29.77		
	S4	99,320	99.32		
	Total	277,292,000	277,292-ton CO₂eq		
Packaging	9,602-ton CO₂eq				
Waste	2,609-ton CO₂eq				

Table 1: Results for the metrics defined for each GHG related to Scope 1, 2 and 3 carbon measurement of Multi X S.A. for the January – December 2023 period.

Appendix 2: Details of evidence verified during the validation assessment.

Scope		Objective evidence / comments
Scope 1 emissions	CO ₂	<p>To calculate Multi-X S.A.'s scope 1 CO₂ emissions, the company included its fuel and industrial refrigerants consumption across all its facilities. During the verification process the sustainable officer showed a 2023 Excel summary containing the consumption of fuel (mostly diesel) and refrigerants: for each facility (sea farms, freshwater farm systems, and processing plants), its use in liters, and the emission factors; and (b) refrigerants, mainly used in its processing plants, as they were bought in kilograms. The company also provided the emission factor to verify the accuracy of its direct GHG CO₂ emissions – scope 1; all of which was inspired in the GHG Protocol Corporate Accounting and Report Standard v.2015, and the “emissions factors for cross-sector tools.” No significant deviations were found.</p> <p>The traceability of the data was verified in a two-ways fashion: first, the company presented an Excel summary of all its 2023 consumptions, tracing back the specific invoice, the facility, the type of source (mobile/fixed), the specific use, date, and measure unit. Second, the abovementioned data was crossed-checked with the general summary of the company for its Scope 1 CO₂ emissions and main sources in liters and kilograms. During the verification process the company traced back its fuels and refrigerants consumption through an SAP software system. It is noteworthy that the company scope 1 emissions are corporate calculations considering the emissions across the entire year (January-December 2023).</p>
Scope 2 emissions	CO ₂	<p>To calculate the scope 2 CO₂ emissions, the company considered the sum of KWh of electricity (23,580,636 KWh or 23.58 GWh) consumed during the 2023 period for all its facilities; all of which was provided by two external electricity suppliers. The total figure was 6,087-ton CO₂eq for the 2023 period; however, it must be clarified that the total renewable energy input of Multi X to the grid cannot be obtained yet since the “I-REC certificate” of the electricity supplier has not yet been delivered to the company to calculate market-based scope. It is noteworthy that Multi X contributes to the grid (SIC) with renewable energies sources to reduce its consumption of fossil fuels and thus to lower its CO₂ emissions¹. During the verification process all the electricity consumption could be traced back through the invoices provided by the company and letters of energy consumption provided by its main supplier. The calculation of CO₂ emissions and the emission factors were based – but not exactly – on the GHG Protocol Corporate Accounting and Report Standard v.2015, and the “emissions factors for cross-sector tools.” No significant deviations were found.</p>
Scope 3 emissions	CO ₂	<p>To calculate Multi-X S.A.'s scope 3 CO₂ emissions, the company considered the product logistics (international commerce), internal logistics, feed, packaging, and waste.</p> <p>The data from product logistics (international commerce) was obtained from the department of international commerce of Multi X by examining and cross-</p>

¹ **Important note:** For the 2023 period, 23,087 MWh are from renewable energy sources that once the certificate be available, it will be published on the company website. Therefore, according to this figure, scope 2 market-based emissions will reach 593-ton CO₂eq.

checking the information summarized in an Excel spreadsheet including the fuel consumption and the distance in kilometers – departure and arrival points calculated by using GPS coordinates – as per the transport type (air, land, and sea). Similarly, the data source from internal product logistics was obtained from dispatch guides and an Excel summary file including the traveled distances, GPS coordinates, and fuel efficiency. A python application was used by the company to filter the great volume of data.

To obtain the data from (4) feed suppliers Multi X held four statement letters declaring the kg of CO₂ per Kg of feed; and thus, the environmental staff of the company could calculate the tons of CO₂eq yielded by its feed suppliers. All of which was verified during the assessment.

The packaging and waste CO₂ footprint were calculated by measuring the weight (in kilograms and tons) of such materials and then calculating the respective emission factors for each specific material. A cross-check examination considered a sample of dispatch guides for waste (final disposal) and packaging – by type. Therefore, the total emissions of CO₂eq were obtained.

The calculation of CO₂ emissions and the emission factors were based – but not exactly – on the GHG Protocol Corporate Accounting and Report Standard v.2015, and the “emissions factors for cross-sector tools.” No significant deviations were found.



THE INTERNATIONAL
REC STANDARD

Esta declaración de redención ha sido preparada para

MULTI X S.A.

por

SOCIEDAD GENERADORA AUSTRAL S.A.

confirmando la redención de

2 483.217000

Certificados I-REC, que representan 2 483.217000 MWh de
electricidad generada a partir de fuentes renovables

Esta declaración se refiere a la electricidad consumida en

**Piscicultura Molco
Chile**

en el período informado

2023-01-01 to 2023-12-31

El propósito declarado es

Certificados 100% Renovables Equivalentes al Consumo Eléctrico Operación 2023

Ev. **saesa**
INNOVA



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Certificados Redimidos

Dispositivo de Producción

Planta de Producción	Dominio de Origen	Fuente de Energía	Tecnología	Tipo de Apoyo	Fecha de Puesta en Marcha	Carbono (CO ₂ / MWh)
PEUCHEN	Chile	Hydro-electric	Run of river	No	2000-03-30	0.000000

Certificados Redimidos

Número inicial de Identificación de Certificados	Número final de Identificación de Certificados	Número de Certificados	Atributos de compensación	Período de Producción Desde/Hasta	Emisor
0000-0219-5446-6810.489000	0000-0219-5446-9293.705999	2 483.217000	Incl	2023-01-01 - 2023-06-30	SCX Santiago Climate Exchange

Notas del auditor

Esta declaración es prueba de la redención segura y única de los I-REC indicados anteriormente para que el beneficiario designado se informe sobre el consumo en el país durante el año de referencia indicado.

Los I-REC se asignan a un beneficiario en el momento del canje y no se pueden asignar a un tercero. Ningún otro uso de estos I-REC es válido bajo el I-REC Standard.

Cuando los atributos de compensación son "inc", el registrante del dispositivo, que posee exclusivamente los derechos de los atributos ambientales, se ha comprometido a nunca liberar compensaciones de carbono en asociación con estos MWh; "excl" significa que las compensaciones de carbono relacionadas con estos MWh pueden negociarse independientemente en algún momento en el future.

Para obtener información sobre el esquema de etiquetado, consulte el sitio web del esquema. El listado del esquema de etiquetado puede no ser exhaustivo.



THE INTERNATIONAL
REC STANDARD

Esta declaración de redención ha sido preparada para

SEA FLAVORS S.A.

por

SOCIEDAD GENERADORA AUSTRAL S.A.

confirmando la redención de

4 379.111000

Certificados I-REC, que representan 4 379.111000 MWh de
electricidad generada a partir de fuentes renovables

Esta declaración se refiere a la electricidad consumida en

**Puerto Montt
Chile**

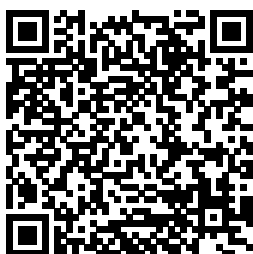
en el período informado

2023-01-01 a 2023-12-31

El propósito declarado es

La energía consumida en el periodo 2023 proviene de fuentes 100% renovables

Ev. **saesa**
INNOVA



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Certificados Redimidos

Dispositivo de Producción

Planta de Producción	Dominio de Origen	Fuente de Energía	Tecnología	Tipo de Apoyo	Fecha de Puesta en Marcha	Carbono (CO ₂ / MWh)
RALCO	Chile	Hydro-electric	Dam	No	2004-09-06	0.000000

Certificados Redimidos

Número inicial de Identificación de Certificados	Número final de Identificación de Certificados	Número de Certificados	Atributos de compensación	Período de Producción Desde/Hasta	Emisor
0000-0219-3923-9691.962000	0000-0219-3924-4071.072999	4 379.111000	Incl	2023-01-01 - 2023-12-31	SCX Santiago Climate Exchange

Notas del auditor

Esta declaración es prueba de la redención segura y única de los I-REC indicados anteriormente para que el beneficiario designado se informe sobre el consumo en el país durante el año de referencia indicado.

Los I-REC se asignan a un beneficiario en el momento del canje y no se pueden asignar a un tercero. Ningún otro uso de estos I-REC es válido bajo el I-REC Standard.

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THE INTERNATIONAL
REC STANDARD

Esta declaración de redención ha sido preparada para

ALIMENTOS MULTIEXPORT S.A.

por

ENEL GENERACION CHILE SA

confirmando la redención de

16 225.000000

Certificados I-REC, que representan 16 225.000000 MWh de
electricidad generada a partir de fuentes renovables

Esta declaración se refiere a la electricidad consumida en

**Puerto Montt
Chile**

en el período informado

2023-01-01 a 2023-12-31

El propósito declarado es

La energía del periodo 2023 proviene de fuentes 100% renovables

Ev. 



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Certificados Redimidos

Dispositivo de Producción

Planta de Producción	Dominio de Origen	Fuente de Energía	Tecnología	Tipo de Apoyo	Fecha de Puesta en Marcha	Carbono (CO ₂ / MWh)
ABANICO	Chile	Hydro-electric	Run of river	No	1959-01-01	0.000000

Certificados Redimidos

Número inicial de Identificación de Certificados	Número final de Identificación de Certificados	Número de Certificados	Atributos de compensación	Período de Producción Desde/Hasta	Emisor
0000-0219-3697-9262.000000	0000-0219-3699-5486.999999	16 225.000000	Incl	2023-01-01 - 2023-12-31	SCX Santiago Climate Exchange

Notas del auditor

Esta declaración es prueba de la redención segura y única de los I-REC indicados anteriormente para que el beneficiario designado se informe sobre el consumo en el país durante el año de referencia indicado.

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