VIÑA CONCHA Y TORO

FAMILY OF NEW WORLD WINERIES

Empresa B Certificada

Greenhouse Gas Emissions Inventory Report Viña Concha y Toro.

2023 Assessment Period

Corporate Sustainability Department

Viña Concha y Toro
FAMILY OF WINERIES

Executive Summary

The purpose of this report is to present the work of measuring and managing the annual inventory of Greenhouse Gas (GHG) emissions of Viña Concha y Toro. Specifically, the report covers GHG emissions attributable to the company's operations for the 2023 period.

The organizational boundaries include all operations of Viña Concha y Toro and its subsidiary wineries in Chile—Viña Maipo, Viña Palo Alto, Viña Maycas del Limarí, and Viña Canepa—as well as its subsidiaries VCT Chile (domestic distribution) and Transportes Viconto (wine transportation). The operations of Viña Cono Sur are excluded from this report.

The operational activities covered in the GHG inventory include 46 vineyards, 12 winemaking cellars, and 3 bottling plants. Additionally, product distribution to end customers in the domestic market and to ports of destination for international markets is included. The reporting period spans from January 1 to December 31, 2023.

The measurement encompasses winegrowing activities (such as agricultural and winemaking practices, processes, raw materials, logistics, inputs, etc.) as well as the product value chain (suppliers, destination markets, etc.). It identifies emission sources associated with each activity, including all those that contribute more than 5% of total GHG emissions, considering the reliability and availability of data and the complexity of compiling information that is not directly available.

The methodology used for measuring GHG emissions is based on the GHG Protocol's Corporate Accounting and Reporting Standard, which provides a comprehensive framework for companies to quantify and report their emissions. It covers the six greenhouse gases identified in the Kyoto Protocol: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

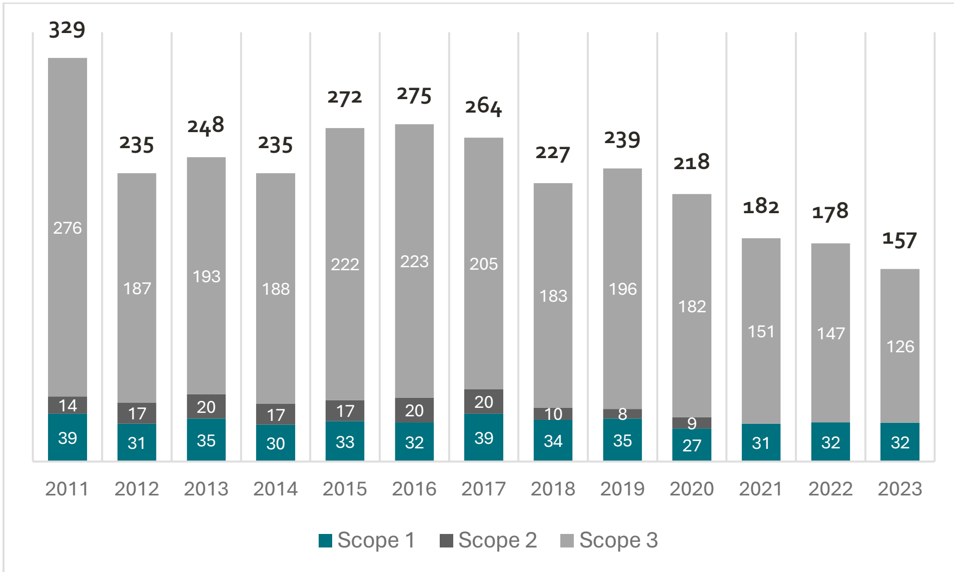
In addition, the International Wine Carbon Calculator (IWCC – Version 1.3, July 2008) guidelines, developed by the Wine Institute of California, New Zealand winemakers, the Winemakers Federation of Australia, and the Integrated Wine Production Program of South Africa, were followed. This widely adopted tool in the global wine industry is designed for use by various types of wine companies, whether focused on vineyard practices, wine production, or bottling and packaging operations.

Furthermore, the guidelines from the Intergovernmental Panel on Climate Change (IPCC) for the preparation of National Greenhouse Gas Inventories and the provisions of ISO 14064 1-3: 2006 for GHG accounting are also applied.

This report reflects the application and adaptation of these standards, guidelines, and methodologies to calculate the GHG emissions of Viña Concha y Toro S.A.

The results of the company's GHG emissions calculation amount to a total of 157,117 tons of CO_2e, with 79.9% originating from indirect emission sources, specifically Scope 3. Figure 1 illustrates the evolution of Viña Concha y Toro's carbon footprint from 2011 to 2023.

Figure 1: Consolidated Carbon Footprint 2011-2023 (thousands of TonCO2e)



Source: Own elaboration

During the 2011-2012 period, there was a significant decrease in Scope 3 emissions due to the adoption of a glass emission factor adjusted to the winery's actual conditions. This factor, obtained directly from its primary bottle supplier, was 0.961 kg CO2 per kg of glass—significantly lower than the 2.2 kg CO2 per kg of glass used in 2011 and prior years.

In 2023, the consolidated carbon footprint decreased by 12% compared to 2022. This reduction is explained by a 0.2% decrease in Scope 1 emissions and a 14.5% decrease in Scope 3 emissions. The reduction in Scope 1 is primarily due to lower emissions from stationary sources and vineyards (specifically, emissions from fertilizers and land use). The decrease in Scope 3 is mainly attributed to a reduction in air, sea, and land transport, as well as fewer purchases of packaging supplies.

No new emission sources were included in the calculation for the 2023 measurement.

Content

Introduction

The Carbon Footprint measures the environmental impact of human activities by quantifying the amount of CO2 and other greenhouse gases (GHG) emitted, either directly or indirectly, by individuals, organizations, or products throughout their lifecycle—manufacturing, distribution, use, and disposal. This tool helps companies assess their contribution to global warming and enables them to manage emissions responsibly, transparently, and efficiently, which is increasingly recognized as a valuable differentiator in the market.

For Viña Concha y Toro, understanding its carbon footprint allows the company to:

1. Precisely identify emissions associated with its value chain.
2. Establish an emissions baseline for its activities.
3. Support internal actions aimed at mitigating or adapting to climate change.
4. Quantify future emissions resulting from new investments for sustainable growth.
5. Implement voluntary carbon offset programs.
6. Identify potential tradable mitigation opportunities in carbon markets (CDM).
7. Guide both public and private emissions disclosure processes.

Recording emissions can highlight the most effective reduction opportunities, increase energy efficiency, improve supply and production chains, and enhance property management.

The Carbon Footprint accounts for the six greenhouse gases identified in the Kyoto Protocol: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). Once GHG emissions are measured, the company can assess the magnitude of its impact, set reduction targets, and commit to managing its GHG emissions.

Objectives

General Objective

Calculate the GHG emissions generated by Viña Concha y Toro's activities in vineyards, winemaking cellars, bottling plants, and distribution from January 1, 2023, to December 31, 2023.

Specific Objectives

1. Continuously improve Viña Concha y Toro's GHG emissions calculation tool.
2. Evaluate the information systems that enable efficient data collection.
3. Develop user-friendly support documents for the calculation tools.
4. Improve and streamline a management system for collecting data.
5. Clearly define the operational and organizational boundaries for conducting Viña Concha y Toro's annual GHG emissions inventory.
6. Regularly update emission factors to ensure accuracy in emissions reporting.

1. Methodology

1.1. GHG Protocol

The methodology used for the measurement is based on the "Greenhouse Gas Protocol Corporate Accounting and Reporting Standard, Revised Edition, WRI & WBCSD" (GHG Protocol). The GHG Protocol is the most widely used international tool for calculating and reporting emissions inventories. It was the first initiative aimed at GHG accounting, developed by government and business leaders to help understand, quantify, and manage greenhouse gas emissions. This standard was created through a collaboration between the World Resources Institute (WRI), the World Business Council for Sustainable Development (WBCSD), and various businesses, governments, and environmental groups worldwide. It aims to establish effective and credible programs to address climate change.

The GHG Protocol provides comprehensive guidance for companies to quantify and report their emissions, covering the six GHGs under the Kyoto Protocol: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

In addition, the International Wine Carbon Calculator (IWCC – Version 1.3, July 2008) guidelines are followed. This calculation tool, developed by the Wine Institute of California, New Zealand winemakers, the Winemakers Federation of Australia, and the Integrated Wine Production Program of South Africa, is widely used in the global wine industry. It is designed to accommodate a range of wine companies, from those focused solely on vineyard practices to those engaged in wine production or packaging operations.

Furthermore, the guidelines for preparing National Greenhouse Gas Inventories by the Intergovernmental Panel on Climate Change (IPCC), along with the provisions of the ISO 14064-1 standard for GHG accounting, are also applied.

1.2. Accounting Principles and Emissions Reporting

The accounting and reporting of greenhouse gas (GHG) emissions are based on the following principles as defined by the GHG Protocol:

- Relevance: Ensures that the GHG inventory accurately reflects the company's emissions and serves as a useful tool in decision-making for both internal and external stakeholders.
- Completeness: Involves fully accounting for and reporting all GHG emission sources and activities within the defined inventory boundary. Any exceptions must be reported and justified.
- Consistency: Requires the use of consistent methodologies over time to enable reliable comparisons. Any changes in data, inventory boundaries, calculation methods, or other relevant factors must be transparently documented over the time series.
- Transparency: All significant or relevant issues must be addressed objectively and consistently, with a transparent audit trail. Significant assumptions should be disclosed, along with appropriate references to accounting and calculation methodologies, as well as information sources used.

- Accuracy: The quantification of GHG emissions should aim to minimize systematic errors or deviations from actual emissions, reducing uncertainty as much as possible. Accuracy is crucial for providing users with reasonable confidence in the completeness and reliability of the reported information.

1.3. Scope of the study

1.3.1. Organizational Perimeter

Business operations vary in their legal and organizational structures; these may include wholly owned operations, partnership operations, joint operations outside of a partnership, subsidiaries, and others. In establishing organizational boundaries, an approach is chosen in which the company will consolidate its GHG emissions, and this approach should be consistently applied to define those business units and operations that constitute the company for GHG accounting and reporting purposes.

This measurement is carried out under an operational control approach, taking into consideration those activities over which the company has the authority to introduce and implement its operating practices. Thus, GHG emissions from operations in which the company owns an interest, but does not control are not accounted for.

The scope of this Carbon Footprint measurement considers the operations of Viña Concha y Toro and its subsidiaries: Viña Maipo, Viña Palo Alto, and Viña Maycas del Limarí. It also includes the operations of the WTC corporate building, VCT Chile (national distribution subsidiary), and Transportes Viconto (internal wine distribution subsidiary).

Accordingly, the operational activities included are 46 owned vineyards, 12 winemaking cellars, and 3 bottling plants. In addition, distribution activities are included from the acquisition of raw materials to the shipment of finished products to customers in the domestic market and to the port of destination in international markets.

1.3.2. Operating Perimeter

Understanding the winemaking activities (agricultural practices, processes, raw materials and inputs, etc.), the product value chain (suppliers, destination markets, etc.), and the description of each stage in terms of GHG emissions, is the first step in establishing the activities to be considered in this exercise. Through interviews conducted in the field, general flow diagrams were designed including most of the activities of the company's value chain, to then establish the operational limits, scopes and the corresponding inclusions of activities to be considered in the calculation. The flow diagrams showing the scope of the measurement can be found in the Annexes. 7.2.1 y 7.2.2.

The scopes represent direct emissions, which are directly controlled by the company, and indirect emissions, which are not controlled by the company. The following classification was established for them:

1. Scope 1 - Direct Emissions
2. Scope 2 - Indirect Emissions
3. Scope 3 - Other Indirect Emissions

Each of the scopes is composed of different emission sources that, depending on the degree of information available and their accuracy, are included or excluded (in the first instance) from the emissions inventory.

1.3.3. Inclusions

The emission sources considered in Viña Concha y Toro's emissions inventory are described below:

a. Raw materials / inputs

i. Agriculture / Oenology

- Fertilizers.
- Electricity.
- Land use.
- Fuels from mobile and stationary sources.
- Bentonite and tartaric acid.
- Barrels and timber.
- Purchase of grapes.
- Purchase of wine.

ii. Packaging

- Dry supplies: bottles, tetra containers, PET containers, BIB (Bag in Box), boxes, partitions, labels, caps, corks and capsules.

b. Production

i. Pressing, Fermentation and Storage

- Electrical consumption.
- Fuel consumption in boilers, generators and pumps.
- Refrigerant gas recharges.

ii. Bottling, Labeling and Packaging

- Electrical consumption.
- Fuel consumption from mobile and stationary sources.

c. Distribution and Transportation

- Fuels in the transportation of the products to the port of shipment (land).
- Fuels in the transportation of products from port of origin to port of destination (maritime).
- Fuels in the transportation of products from Santiago airport to destination airports (air).
- Fuels in the transportation of wine between wineries and company plants (land).
- Fuels used in transportation from packaging plants to distribution centers (land).

- Fuels used in transportation from bottling plants to VCT Chile branches (land).
- Fuels used in domestic distribution by VCT Chile (land).
- Consumption of fuel used in the transportation of the Company's own grapes and those of third parties (land).
- Business travel (air) for short and long distances, in business or economy class, as applicable.

Considering the emission sources included in the calculation, and in accordance with the guidelines provided by the World Resources Institute (WRI), it has been decided to focus this exercise on those activities over which the winery has operational control, and based on these, identify the different scopes to which they are attributable. Table 1 presents the categorization of the emission sources considered in the 2023 period.

Table 1: Categorization of Emission Sources

Scope	Inclusions
Scope 1	Mobile sources: own vehicles and machinery such as vans, trucks, harvesters, tractors, cranes, etc.
	Stationary sources: boilers, burners, electric generators, hydro washing machines, among others.
	Fugitive emissions: refrigerant gases.
	Vineyards: agricultural activities. Emissions from fertilization and land use.
Scope 2	Electricity consumption: farms, warehouses, packaging plants, WTC (central offices) and VCT Chile (offices and national distribution centers).
Scope 3	Packaging: bottles, tetra containers, PET containers, BIB, boxes, partitions, labels, caps, corks and capsules.
	External Packaging: packaging inputs used in products packaged in destination markets.
	Transportation and Distribution: land, sea and air transportation of all exports, transportation to VCT Chile branches, national distribution (VCT Chile), business trips and transportation of own- and third-party grapes, wine transportation.
	Purchase of products: tartaric acid, bentonite, barrels and timber, grapes, etc. purchased, wine purchased, wineries leased.

Source: Prepared internally

1.3.4. Exclusions

The emission sources excluded from Viña Concha y Toro's emissions inventory are described below. These sources are excluded due to their low impact on total GHG emissions and the low reliability and availability of information that would allow them to be included in the measurement.

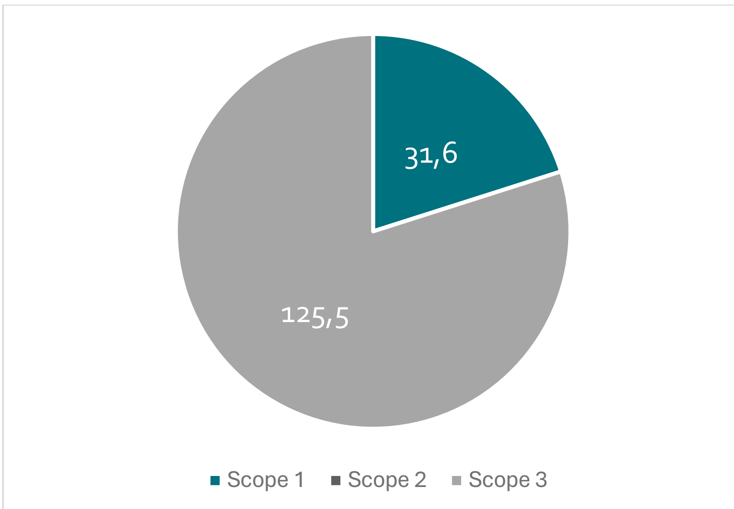
- Transportation of workers to the work site.
- Waste Treatment.
- Type C packaging (pallets, films, sleep sheets, adhesives, etc.)

2. Results

The associated GHG emissions, expressed in tons of CO_2 equivalent (TonCO2e), were calculated based on the data obtained from the information gathered for each of the sources considered.

Thus, the total GHG emissions calculated for Viña Concha y Toro for the period between January 1 and December 31, 2023, amount to 157,117 TonCO2e. As shown in Figure 2, 31,571 TonCO2e corresponds to Scope 1 and represents 20.1% of the total, 0 TonCO2e corresponds to Scope 2 and represents 0%, and finally, 125,547 TonCO2e correspond to Scope 3 and represent 79.9%.

Figure 2: Consolidated Results by Scope (thousands of TonCO2e)



Source: Prepared internally

Within Scope 1, the source of greatest contribution to total emissions corresponds to emissions from vineyard emissions (use of soil and fertilizers), followed by the use of fuels in mobile sources. In the case of Scope 3, packaging contributes the largest share, followed by transportation and distribution of products. Table 2 shows the emissions of each emission source separated by scope.

Table 2: Total Emissions by Source

Scope	Source	Ton CO2e
Scope 1	Mobile Sources	7,971
	Stationary Sources	3,707
	Fugitive Emissions	8,203
	Vineyards	11,690
Scope 2	Electricity Consumption	0
Scope 3	Packaging	41,008
	External Packaging	18,014

Scope	Source	Ton CO2e
	Transportation and Distribution	44,065
	Purchase of Products	22,460
Total		157,117

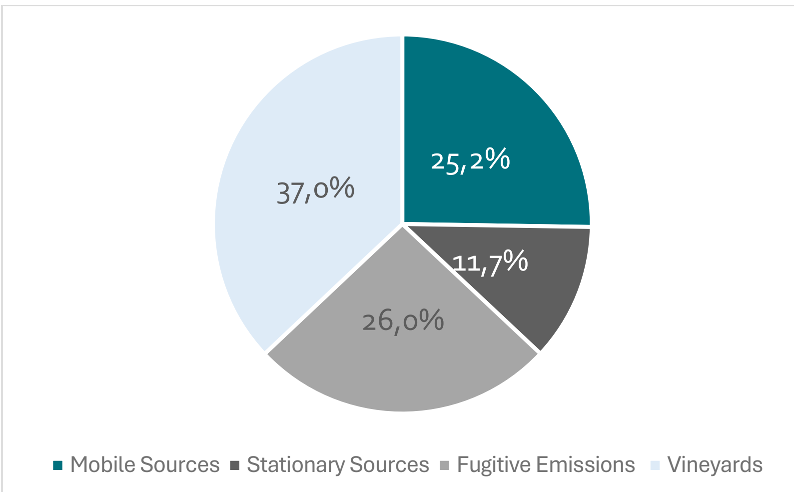
Source: Own elaboration

The details of all emission sources included in the inventory can be found in the file "Calculadora CO2 CYT 2023.xls". In addition, all emission factors used are presented in Annex 7.1 "Emission Factors Considered".

2.1. Scope 1 - Direct Emissions

Scope 1 emissions, equivalent to 31,571 TonCO2e during 2023, refer to those produced in sources owned by the company or over which it has operational control. Figure 3 shows the breakdown of the results obtained according to the operational limits established in the measurement.

Figure 3: Scope 1 Results



Source: Prepared internally

2.1.1. Mobile Sources

CO2e emissions derived from the use of fuels in mobile sources for the period 2023 correspond to 7,971 TonCO2e, representing an increase of 2.8% with respect to the year 2022.

The emission sources included correspond mainly to pickup trucks, agricultural machinery (tractors, harvesters, etc.), wine transport trucks and forklifts used in wineries and bottling plants.

** A conversion factor of 1.82(lts/Kg) was used for LPG consumption (Source: Ministry of Energy).*

2.1.2. Stationary Sources

CO2e emissions derived from the use of fuels in stationary sources for the period 2023 correspond to 3,707 TonCO2e, representing a decrease of 18.1% compared to the previous year.

Emissions from stationary sources include both diesel and LPG boilers, generators used during peak hours, and other stationary equipment used in the company's warehouses and packaging plants.

2.1.3. Fugitive Emissions

For the calculation of GHG emissions resulting from refrigerant gas leaks, the criterion used is the amount of gas replaced as an input during the period evaluated (recharges). Fugitive emissions from the use of refrigerant gases during the period correspond to 8,203 TonCO2e, representing an increase of 29.4% over the previous year.

2.1.4. Vineyards

a. Fertilizer Emissions

Emissions generated from nitrogen fertilizers in vineyard practices are particularly important due to the release of N_2O from both fertilizer application and soil cultivation. In most soils, increased nitrogen availability accelerates nitrification and denitrification processes, which in turn increase N_2O production. This increase in nitrogen can result from human-induced nitrogen additions or changes in land use and/or management practices that mineralize organic nitrogen in the soil.

For 2023, emissions related to the application of nitrogen fertilizers totaled 1,486 TonCO2e. The calculation was based on the technical datasheets for each product, which indicate the percentage of nitrogen contained, allowing for the precise calculation of nitrogen applied and, thus, the related emissions.

b. Soil Emissions

Likewise, within the vineyard emissions, emissions derived from land use during the period are considered. In 2023, the productive area of the company’s 46 estates amounted to 8,168 hectares, and emissions related to land use totaled 10,204 TonCO2e. This calculation was based on the area under productive use as of December 31, 2023.

Thus, total emissions from vineyards, derived from soil use and fertilizer application during the reference period evaluated correspond to 11,690 TonCO2e, representing a decrease of 10.3% compared to the previous year.

2.2. Scope 2 - Indirect Emissions

Indirect emissions under Scope 2 are generated from the consumption of purchased electricity used in various company operations. For Viña Concha y Toro, these emissions are mainly calculated from the energy consumption in its bottling plants, winemaking cellars, vineyards (including the energy used for irrigation), and administrative facilities.

Electricity consumption for the year 2023 was recorded for three bottling plants and 12 winemaking cellars. Energy consumption was also recorded across 46 agricultural estates and included electricity for the company's headquarters at the World Trade Center and the distribution subsidiary, VCT Chile.

When monthly electricity consumption data was not available, the calculation was based on the average consumption for the rest of the period.

Since Viña Concha y Toro has secured renewable energy contracts through its agreement with Colbún, the company achieved zero Scope 2 emissions from electricity consumption in 2023. This contract covers all facilities with more than 500 kVA of connected power, and it uses hydroelectric power as its energy source, with an emission factor of 0.0 kgCO2e/kWh.

To account for GHG emissions from electricity consumed within the national grid, the emission factor of the National Electric System (SEN) for 2023, which is 0.2384 kgCO2e/kWh, was applied. However, these emissions were neutralized through the purchase of I-RECs (International Renewable Energy Certificates).

Consequently, the total indirect GHG emissions generated from electricity consumption during the 2023 reporting period amounted to 0 TonCO2e.

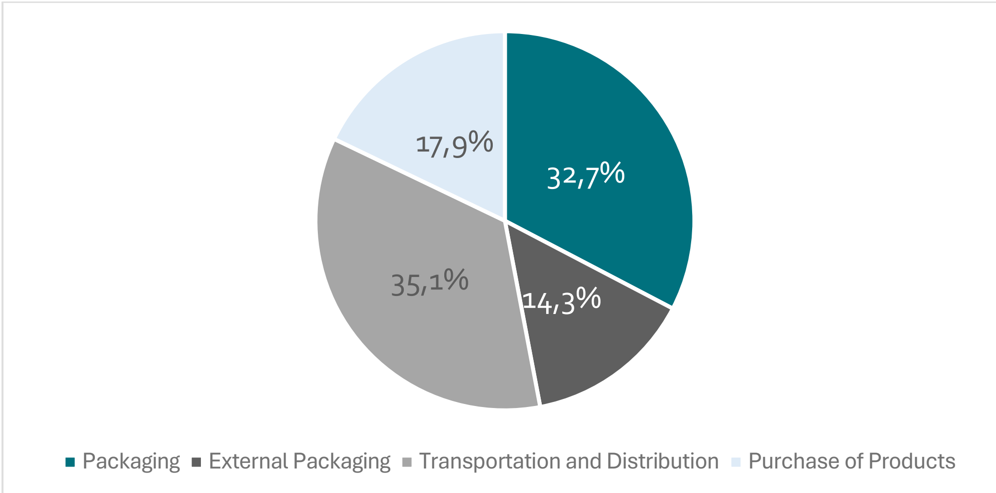
2.3. Scope 3 - Other Indirect Emissions

Scope 3 emissions, equivalent to 125,547 TonCO2e during 2023, represent emissions from sources that are not directly controlled by the company (indirect emissions). Following the guidelines of the GHG Protocol, this scope includes emissions from relevant sources that meet the following criteria:

- They represent a high percentage of the company's Scope 1 and 2 emissions.
- They contribute to the company's GHG risk exposure.
- Are considered critical by key stakeholders (feedback from customers, suppliers, investors or civil society).
- There are potential emission reductions that can be managed.

Figure 4 shows the breakdown of the consolidated results for all emission sources included in Scope 3.

Figure 4: Scope 3 Results



Source: Prepared internally

2.3.1. Packaging and Containers

Emissions from the use of packaging materials such as glass bottles, Tetra Pak containers, PET containers, BIB (Bag in Box), boxes, partitions, labels, caps, corks, and capsules are calculated based on the quantities of these inputs used in the company's packaging operations in 2023. The emission factors for glass bottles, Tetra Pak containers, cartons, labels, caps, and corks are obtained directly from the company's suppliers, who provide periodic reports on the carbon footprint of their products.

For other packaging materials such as capsules, plastic containers, handles, and BIB packaging, international emission factors from the Department for Environment, Food & Rural Affairs (DEFRA) of the United Kingdom (2023) are used. For tin capsules, the emission factor for aluminum is used due to the lack of a specific factor for tin. Packaging emissions during 2023 amounted to 41,008 TonCO2e.

2.3.2. External Packaging

In addition to the packaging inputs used by the company in Chile, emissions from packaging materials used in destination markets for products sold internationally are also accounted for. These external packaging emissions in 2023 amounted to 18,014 TonCO2e, representing a 62.0% increase compared to 2022. This increase is attributed to a greater volume of packaging conducted in the United Kingdom due to logistical and operational factors.

To calculate the CO2e emissions derived from the use of glass, cardboard, paper, aluminum and cork of the products packaged at destination, the quantity of inputs used is estimated from the bulk wine exported. The most representative wine bottled in Chile in the destination market by variety and brand exported in bulk is used as a base, and the inputs (and respective weights) used in Chile are standardized to estimate the amount and type of inputs used to make the packaging abroad.

In addition, the international emission factors for each material provided by the Department for Environment, Food & Rural Affairs (DEFRA) of the United Kingdom in 2023 are used, since currently there are no emission factors provided directly by the suppliers of each packaging material, as is the case in Chile for some materials.

2.3.3. Transportation and Distribution

a. Air Travel

Emissions from business travel are calculated based on the distance traveled by company employees for international trips. Each trip's distance is calculated using the IATA codes of the airports and the distances between them, which are obtained through the website http://www.world-airport-codes.com.

The emission factors for air travel were provided by Cocha, a travel agency collaborating with the company. These factors are based on the distance traveled and the class of travel (business or economy). In 2023, GHG emissions generated by business travel amounted to 679 TonCO2e.

b. Transportation of Products (Land / Sea / Air)

Product transportation refers to the distribution of the company's products in local and international markets. All product shipments for the year 2023 were considered, including land, sea, and air transportation as appropriate.

First, we consider the transportation of products (packaged and bulk) for export, which can be carried out by land, sea or air. Land transportation considers products that go from the production plants to the ports of origin in Chile, to the Santiago airport, and to the final customer in South American countries. All products are transported in articulated trucks with a capacity greater than 17 tons and for all cases the distances of the route are obtained through Google Maps, always using the shortest distance provided by the platform. For maritime transport, the distances between ports of origin and destination are considered, always using the shortest distance for the journey obtained through the Sea Rates website. In the case of air transport, the distance considered is from Santiago airport to the different airports in the destination markets.

In addition, the measurement includes the transportation of finished product between packaging plants and the company's external distribution centers, transportation from packaging plants to the national distribution subsidiary (VCT Chile) and subsequent distribution nationwide, including all trips made between distribution branches throughout Chile and delivery trips to end customers. The distances traveled are obtained through Google Maps, except for the distances used for transportation to final customers within the country, which are provided directly by VCT Chile according to the estimate of the average distance traveled by the distribution vehicles in each region of the country.

Given the above, GHG emissions generated by final and intermediate transportation of products during 2023 correspond to 38,225 TonCO2e.

c. Grape and Wine Transportation

This subsection includes the transportation of grapes and wine within Chile. The transport of both own grapes and those purchased from third-party producers is calculated based on the distance between the point of extraction or purchase to the destination winery. Distances are calculated using Google Maps.

Additionally, emissions from the transportation of wine purchased from external wineries, as well as all internal movements of wine between company wineries and bottling plants, are included.

In 2023, GHG emissions generated from the transportation of grapes and wine amounted to 5,161 TonCO2e.

2.3.4. Purchase of Products

Emissions from the purchase of oenological products include the use of bentonite and tartaric acid, the purchase of barrels and other wood, grapes purchased, wine purchased and external winemaking cellars used in the period.

For grape purchases, wine purchases and external wineries, emission factors calculated on the basis of each one's own production are used, under the assumption that the company's suppliers maintain production practices and standards similar to its own.

To obtain the emission factor for purchased grapes, all emission sources from the company's agricultural process are included, allowing for the calculation of kgCO2e per kg of grapes produced during the period, which is then applied to each kg of grapes purchased.

For the external winery emission factor, all emission sources from the company's winemaking process are included, obtaining the kgCO2e per liter of wine vinified in the company's own wineries, which is then applied to each liter of wine vinified in external wineries.

Finally, the emission factor of the purchased wine is the combination of the emission factor of the company's winemaking process and the emission factor of the grapes produced.

Given the above, GHG emissions derived from the purchase of wine products during 2023 amount to 22,460 tCO2e.

3. Emissions Comparison: 2022 – 2023

Based on the results obtained from the carbon footprint measurement for the years 2022 and 2023, a comparative analysis of CO2e emissions by source is presented for each of the three scopes.

As a basis for analysis, total variations for each emission source are expected to be within a range of ±20%. Any values outside this range may require more detailed analysis due to the possibility of errors in data collection or calculations, resulting in significant variations.

3.1. Scope 1 - Direct Emissions

Table 3: Direct Emissions from Scope 1 (tCO2e)

Source	2022	2023	Variation
Combustion Mobile Sources	7,752	7,971	2.8%
Combustion Stationary Sources	4,525	3,707	-18.1%
Fugitive Emissions	6,340	8,203	29.4%
Vineyards	13,031	11,690	-10.3%
Total	31,648	31,571	-0.2%

Source: Prepared internally

As shown in Table 3, the company's direct emissions for 2023 decreased by 0.2% compared to the previous year. This decrease is mainly due to reductions in emissions associated with stationary sources (18.1% decrease) and vineyard emissions (10.3% decrease).

The reduction in emissions related to stationary sources, such as boilers and generators, is explained by lower liquefied petroleum gas (LPG) consumption in winemaking and operations, which is largely due to the decrease in wine production in 2023. Similarly, a decrease in LPG consumption in the agricultural sector is explained by fewer frost events during the period and the implementation of electrified frost towers, which reduced the need for LPG.

The reduction in vineyard emissions can be attributed to the reduction in the area of vineyards under management in 2023, leading to lower levels of production and, consequently, lower emissions from agricultural activities.

3.2. Scope 2 - Indirect Emissions

Table 4: Indirect Emissions from Scope 2 (tCO2e)

Source	2022	2023	Variation
Electricity Consumption (Market Based)	0	0	0%
Electricity Consumption (Location Based)	15,610	13,171	-15.6%

Source: Prepared internally

Scope 2 emissions decreased by 15.6% in 2023 compared to 2022. This decrease is mainly due to the reduction in the National Electric System (SEN) emission factor, which decreased from 300.6 gCO2/kWh in 2022 to 238.4 gCO2/kWh in 2023. Although there was only a slight reduction in the company's total electricity consumption (from 56,810,262 kWh in 2022 to 56,685,900 kWh in 2023), the lower emission factor accounts for the reduction in Scope 2 emissions.

It is important to highlight that Viña Concha y Toro has successfully neutralized its Scope 2 emissions since 2021 by sourcing renewable electricity and purchasing International Renewable Energy Certificates (I-RECs).

3.3. Scope 3 - Other Indirect Emissions

Table 5: Indirect Emissions from Scope 3 (tCO2e)

Source	2022	2023	Variation
Packaging	56,634	41,008	-27.6%
External Packaging	11,121	18,014	62.0%
Transportation and Distribution	55,874	44,065	-21.1%
Purchase of Products	23,200	22,460	-3.2%
Total	146,829	125,547	-14.5%

Source: Prepared internally

Table 5 shows an increase of 62.0% in external packaging emissions. This is mainly explained by the increase in packaging being carried out in the United Kingdom due to logistical and operational factors. In parallel, the decrease in packaging (-27.6%) is explained by the lower levels of wine production in 2023 compared to the previous year and the respective increase in packaging in the destination market.

Another factor that increases emissions from external packaging is linked to the fact that packaging suppliers in the United Kingdom do not have their own emission factors, therefore, DEFRA 2023 factors are used for measurement (of higher value than those of our suppliers in Chile).

Finally, there was a 21.1% decrease in emissions from the transportation of products and business trips, due to a reduction in the transportation of own and third-party grapes, transportation of third-party wine, transportation between branches and wine exports, mainly explained by lower levels of wine production.

3.4. Unitary Emissions

In terms of unitary emissions, which refers to the carbon footprint per bottle sold during the period, a reduction of 10.4% was observed, as shown in Table 6.

Table 6: Unitary Footprint per Bottle Sold

	2022	2023	Var
Carbon Footprint (TonCO2)	178,478	157,117	-12.0%
Boxes of 9 Liters	25,039,738	24,022,854	-4.1%
Unit Footprint (gr)	0.594	0.545	-8.2%

Source: Prepared internally

Although the corporate footprint decreased by 12%, it is possible to observe that the unitary footprint (functional unit) was reduced by only 8.2%. Lower wine production due to the previous year's stock implied a significant decrease in the corporate carbon footprint. However, sales decreased by only 4.1%. Thus, the decrease in the footprint per functional unit is mainly explained by the lower production and the stock of certain inputs and products in 2022.

4. Forest Carbon Sequestration Quantification

One of the initiatives within the environmental pillar of Viña Concha y Toro's sustainability strategy is the promotion of nature-based solutions. The company seeks to regenerate life in forest ecosystems and vineyards, contributing to the natural resilience of these environments.

Currently, the winery has a native forest conservation program aimed at regenerating and conserving 4,272 hectares of native forest in Chile. These forests provide essential ecosystem services, particularly in the central zone of the country, including soil protection, water cycle regulation, particulate matter capture, and carbon dioxide absorption.

The native forests managed by Viña Concha y Toro primarily consist of sclerophyllous species, along with Chilean palms and Oak-Hualo.

To quantify the carbon sequestration carried out by these forests during the year 2023, a methodology was applied based on the National Geographic Information System (Sistema Nacional de Información Territorial, SNIT). The procedure involved the following steps:

1. By crossing the information of the appraisal roles provided by VCT, we superimposed the coverage of the SII base on the Cadastre of Vegetation Resources of Chile, CONAF (Updated August 2020). Based on this information, current uses were obtained with a focus on native forest use by forest type, structure and vegetation cover.
2. Once the areas of current uses of interest were obtained, the areas whose current use corresponds to native forest were determined. For these areas, the Annual Periodic Increase (IPA) data were assigned for each type of native forest (Source: INGEI 2020).
3. Based on the cartographic information presented, a cross-check was made with the INGEI coverages to determine the annual increases by area. By multiplying the surface area by the respective IPA of each area, the result of capture is obtained according to forest type, structure, cover and surface area.

Thus, based on the most conservative estimates, the total carbon sequestration carried out by the native forests managed by Viña Concha y Toro in 2023 was 15,035 TonCO2e/year. Table 7 below presents the balance of CO2e for Viña Concha y Toro during the year 2023:

Table 7: CO2e Balance Concha y Toro Winery 2023

Category	Ton CO2e
Scope 1	31,571
Scope 2 (Market Based)	-
Scope 3	125,547
Carbon sequestration	(15,035)

Source: Prepared internally

5. Uncertainty

Uncertainty is evaluated from the emission factors. In information systems, uncertainty is represented by the way the data is obtained, i.e. whether it is measured (according to the number of measurements, their frequency, etc.), calculated (formulas, variables, conversion units, etc.) or estimated. In our case, the uncertainty calculation is an estimate according to theoretical uncertainty ranges. The following tables summarize the uncertainty levels associated with the calculation for Viña Concha y Toro and its subsidiaries.

Table 8: Uncertainty Emission Factors

Scope	Emission Sources	Uncertainty Emission Factor	Quality Range
Scope 1	Mobile Sources	+/- 5 %	A
	Stationary Sources	+/- 5 %	A
	Fugitive Emissions	+/- 5 %	A
	Vineyards	+/- > 200 %	F
Scope 2	Electrical consumption	+/- 20 %	B
Scope 3	Packaging	+/- 20 %	See Table 7
	External Packaging	+/- 20 %	See Table 7
	Transportation and Distribution	+/- 50 %	C
	Purchase of Products	+/- 200 %	E

Source: Prepared internally

Table 9: Emission Factors Uncertainty - Packaging

Emission Sources: Packaging	Uncertainty Emission Factor	Quality Range
Glass Bottles	+/- 5 %	A
Tetra package	+/- 5 %	A
Boxes	+/- 5 %	A
BIB Case Box	+/- 5 %	A
BIB Bag and Handles	+/- 20 %	B
Partitions	+/- 20 %	B
Tags	+/- 5 %	A
Covers	+/- 5 %	A
PVC capsules	+/- 20 %	B
ALUP and Tin Capsules	+/- 20 %	B
Corks	+/- 5 %	A

Source: Prepared internally

6. Conclusions

The results of Viña Concha y Toro's GHG emissions inventory for the period from January 1 to December 31, 2023, show a 12% decrease in CO2e emissions compared to the 2022 period.

During the period from 2017 to 2023, Viña Concha y Toro achieved a 46.4% reduction in Scope 1 and 2 emissions, as well as a 40.8% reduction in Scope 3 emissions. In 2017, Scope 1 and 2 emissions amounted to 58.8 thousand tons of CO2e, while in 2023, they were reduced to 31.6 thousand tons of CO2e. These reductions demonstrate the effectiveness of the company's efforts to reduce and mitigate its internal emissions.

Similarly, Scope 3 emissions in 2017 amounted to 212.1 thousand tons of CO2e, while in 2023, they were reduced to 125.5 thousand tons of CO2e, showcasing the company's commitment to mitigating and reducing indirect emissions through direct collaboration with its suppliers.

a. Scope 1:

The main sources of reduction between 2017 and 2023 were as follows:

i. Fuels

- Decrease of 55.1% in LPG consumption from the company's mobile sources, mainly from the cranes of the packaging plants.
- Reduction of 86.0% in diesel consumption at stationary sources, since generators are no longer used in the production process and are now only used as a back-up in the event of a power outage.

ii. Fugitive Emissions

- Since 2019 the company has sought to privilege refrigerant gases that have a lower conversion factor to CO2 equivalent (R22).
- This has been reinforced with maintenance programs for refrigeration equipment to prevent leaks.

b. Scope 2:

Between 2017 and 2023, the company achieved zero emissions from electric energy use through a combination of actions.

1. Power Purchasing Agreement (Power Purchasing Agreement). Since 2017, the company has been purchasing energy directly from renewable generators. During 2023, 72.0% of the company's supply came from this source.
2. Photovoltaic panels. Since 2018, it began installing solar panels mainly in the vineyard areas, which today represent 8.0% of total electricity consumption.
3. Purchase of renewable energy certificates (I-RECs). Since 2021 and in order to achieve 100% renewable energy supply for Viña Concha y Toro, the remaining non-renewable energy has been acquired through I-REC's from the San Pedro III solar plant.

c. Scope 3:

Viña Concha y Toro has worked since 2011 on a program to reduce emissions from its inputs, mainly packaging. Between 2011 and 2020 suppliers measured their carbon footprint and committed to reductions by 2020. For the period 2021-2025 the program has moved towards committing to science-based emission reductions using the Science Based Targets Initiative methodology. Also, the main reduction initiatives between 2017 and 2023 were as follows:

1. Purchase of grapes: Emissions associated with the purchase of grapes from third parties are extrapolated from the Company's own emission factors. This extrapolation, which is favorable from the perspective of the magnitude of the bibliographic emission factors, is feasible given that the management of third party vineyards follow the same practices and guidelines as the Company's own vineyards thanks to the deployment of Technical Advisors.
2. Packaging inputs: Considering that glass bottles are one of our main inputs, we have been working since 2010 to reduce the weight of our packaging. This added to the work of our glass suppliers in reducing their emission factor, has allowed us to reduce by 34.6% the carbon footprint since 2017 associated with this concept.
3. Carriers: To improve transportation efficiency with our carriers, the company is part of the Clean Turn initiative of the Energy Sustainability Agency, which is implementing strategies, best practices and fuel-saving technologies that are expected to reduce the carbon footprint associated with transportation more significantly over the coming years.

7. Annexes

7.1. Emission Factors Considered

7.1.1. Scope 1

a. Mobile Sources

	Kg CO2	Kg CH4	Kg N2O	Emission Factor (Kg CO2 e/Lts)	Source
Gasoline	2.24	1.23E-04	1.84E-04	2.29	IPCC, 2006 - Guidelines for National Greenhouse Gas Inventories / Volume 2 - Ch. 3 - Tables 3.2.1 and 3.2.2.
Diesel	2.68	1.41E-04	1.41E-04	2.72	IPCC, 2006 - Guidelines for National Greenhouse Gas Inventories / Volume 2 - Ch. 3 - Tables 3.2.1 and 3.2.2.
LPG	1.64	1.61E-03	5.20E-06	1.69	IPCC, 2006 - Guidelines for National Greenhouse Gas Inventories / Volume 2 - Ch. 3 - Tables 3.2.1 and 3.2.2.

b. Stationary Sources

	Kg CO2	Kg CH4	Kg N2O	Emission Factor (Kg CO2e/Lts)	Source
Diesel	2.68	3.60E-04	2.20E-05	2.69	IPCC, 2006 - Guidelines for National Greenhouse Gas Inventories / Volume 2 - Ch. 2 - Table 2.5
LPG	1.64	1.30E-04	2.60E-06	1.65	IPCC, 2006 - Guidelines for National Greenhouse Gas Inventories / Volume 2 - Ch. 2 - Table 2.5

c. Fugitive Emissions Refrigerant Gases

	Global Warming Potential (Kg CO2e/Kg Refrigerant)	Source
HCFC-22/R22	1,760	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
HFC-134a	1,300	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
HCFC-141b	782	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
R404A	3,943	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
R507A	3,985	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting

	Global Warming Potential (Kg CO2e/Kg Refrigerant)	Source
R407A	1,923	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
R407C	1,624	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
R410A	1,924	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting

7.1.2. Scope 2

System	Emission Factors (Kg CO2e/kWh)	Source
SEN Electricity 2023	0.2384	National Electric Coordinator
Renewable Energy	0.0000	Covenant of Mayors for Climate Energy, 2020.

7.1.3. Scope 3

a. Packaging Emission Factor per Kg of Material

Packaging	Type	Emission Factors (Kg CO2e/Kg material)	Source
Glass Bottles	Glass	0.439	Cristalerías Chile Carbon Footprint, 2021 Verallia Carbon Footprint, 2023.
PET Bottles	PET	4.018	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
Cardboard Box	Cardboard	0.802	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
Wooden Box	Wood	0.313	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
BIB Case Box	Cardboard	0.802	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
BIB Bag	Low Density Polyethylene	2.587	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
Partitions	Cardboard	0.802	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
BIB handles	High Density Polyethylene	3.256	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
ADH label	Tags ADH	3.700	Carbon Footprint ACRUS CCL 2016, AENOR.
PPL Tags	PPL Tags	4.000	Carbon Footprint ACRUS CCL 2016, AENOR.
Covers	Stelvin cap	4.500	Carbon Footprint INESA 2015, AENOR
Plastic covers	PET	4.018	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
PVC capsule	PVC	3.399	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
ALUP Capsule	Aluminum	9.109	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
Tin capsule	Aluminum	9.109	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting

b. Packaging Emission Factor per Unit of Material

Packaging	Type	Emission Factors (Kg CO2e/material unit)	Source
Tetra	TETRA 500 cc	0.037	Carbon Footprint Tetra Pak Chile 2023 - Carbon Trust
Tetra	TETRA 1000 cc	0.071	Carbon Footprint Tetra Pak Chile 2023 - Carbon Trust
Tetra	TETRA 1500 cc	0.089	Carbon Footprint Tetra Pak Chile 2023 - Carbon Trust
Tetra	TETRA 2000 cc	0.127	Carbon Footprint Tetra Pak Chile 2023 - Carbon Trust
Cork	Natural	0.010	Cork Industry Footprint 2018 - Green Solutions
Cork	Agglomerate	0.017	Cork Industry Footprint 2018 - Green Solutions
Technical Cork	Technician	0.013	Cork Industry Footprint 2018 - Green Solutions

c. Transportation - Passenger Travel

Transportation	Type	Emission Factor (Kg CO2e/Km)	Source
Passenger Travel	International	0.071	Emission Factor as reported by Cocha 2023

d. Product Transportation

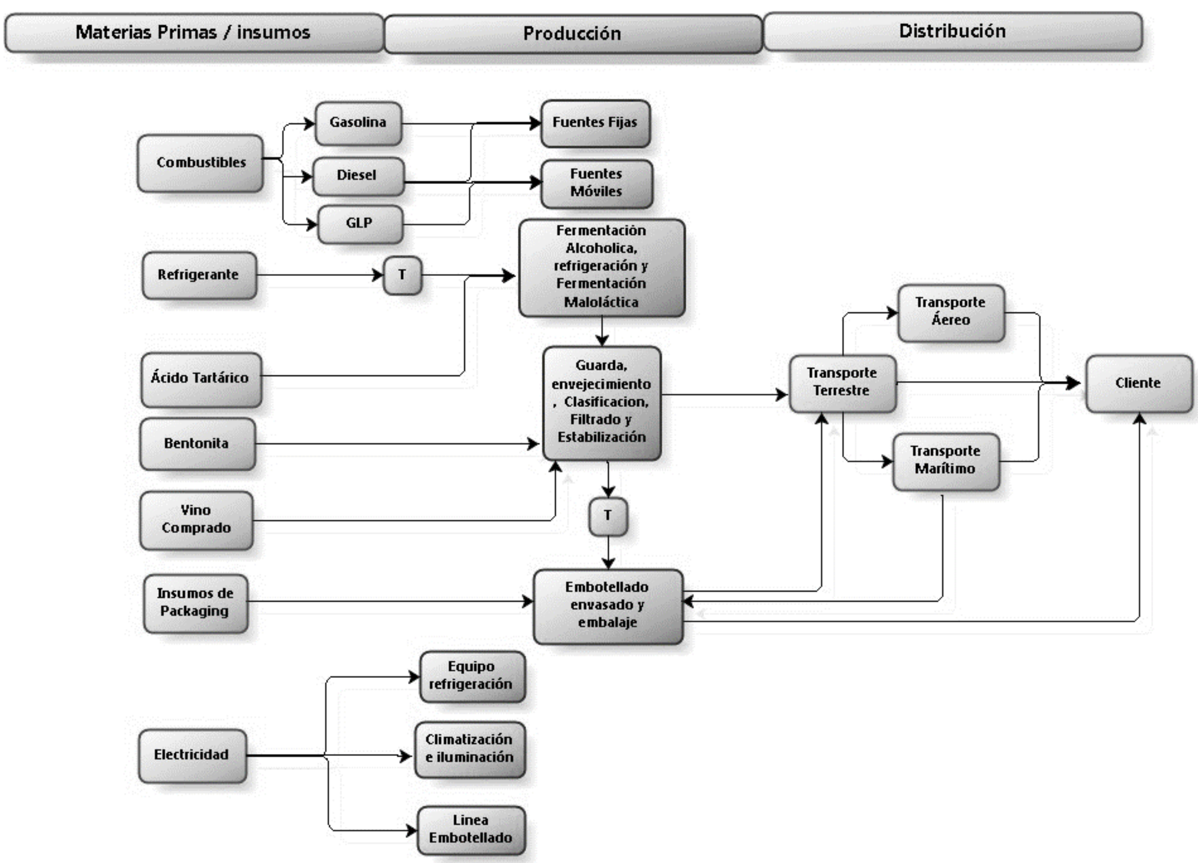
Transportation	Type	Emission Factor (Kg CO2e/Ton*Km)	Source
Maritime	Exports Packaged	0.013	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
	Bulk Exports	0.013	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
Terrestrial	Exports Packaged	0.119	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
	Bulk Exports	0.119	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
	Exports Packaged - Train	0.028	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
	Links between Plants and CDs	0.119	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
	Shipments from VCT Chile	0.119	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
	Wine Transportation	0.141	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
	Grape Transportation	0.141	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
	National Distribution	0.241	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting
Aerial	Exports Packaged	0.649	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting

e. Purchase of Products

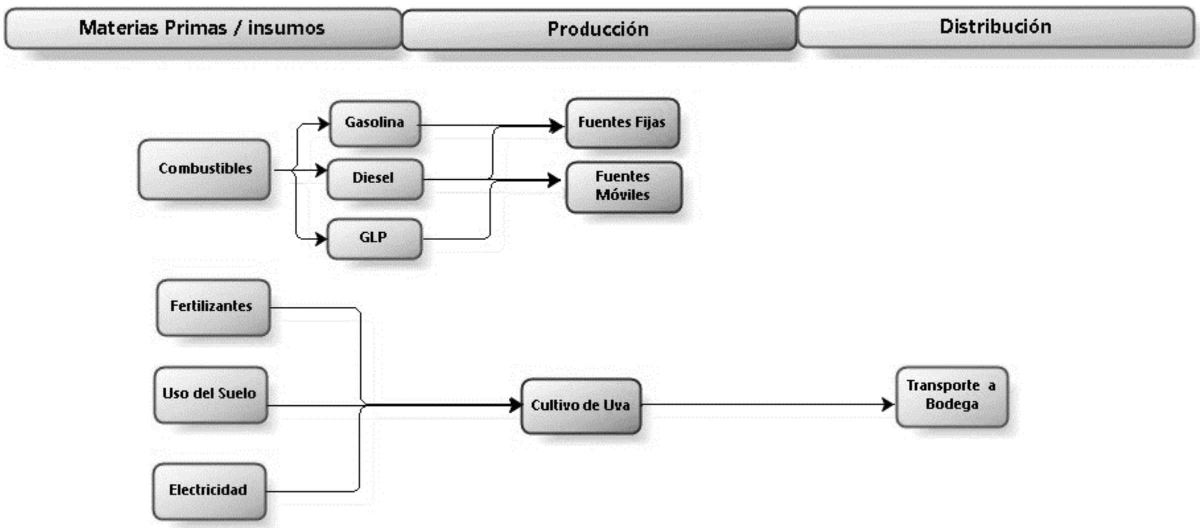
Products	Emission Factor (Kg CO2e/Unit)	Unit	Source
Grapes Purchased	0.123	Kg	Estimate based on own grape production.
Wine Purchased	0.199	Lt	Estimate based on own winemaking.
External Warehouses	0.036	Lt	Estimate based on the winemaking process of the winery's own cellars.
Bentonite	1.100	Kg	International Organisation of Vine and Wine - ADEME (2014)
Tartaric Acid	3.300	Kg	International Organisation of Vine and Wine - ADEME (2014)
Wood	0.313	Kg	DEFRA 2023 - UK Government GHG Conversion Factors for Company Reporting

7.2. Flow Diagrams

7.2.1. Production / Distribution Flow



7.2.2. Agricultural Flow



7.3. Growth and CO2 Capture Quantification Report

7.3.1. Current Use and Forest Type by Property - Cadastre

Current Use	Surface per property (ha)									
	Ucuquer	Palo Santo	Peumo	Rucahue	Idahue	Rauco	Saint Rachel	Lourdes	Villa Alegre	Total
Native - Sclerophyllous Forest	1.168,1	29,9	147,5	350,3	641,0	70,5	4,1	414,0	257,0	3.082,4
Native Forest - Chilean Palm	0,8									0,8
Native Forest - Roble-Hualo	149,7									149,7
Scrub	73,3	10,4		31,5	27,7	22,9	19,4	34,4	47,0	266,6
Arborescent Scrub	215,8	13,5	24,3	57,7	116,0	15,1	45,4	74,8	3,6	566,2
Succulent Scrub				0,2						0,2
Meadows	34,01				18,37					52,38
Scrub-Prairie					51,0					51,0
Plantation		63,6		0,5				3,9	4,9	72,9
Mixed Forest					0,6					0,6
Total	1.641,7	117,4	171,8	440,3	854,6	108,5	68,9	527,1	312,5	4.242,7

7.3.2. Native Forest - Forest Type by Structure and Cover

Forestry Type	Structure	Coverage			Total area (ha)	Growth m3/year	Biomass Total tCO2eq/year
		Denso	Semidense	Open			
Sclerophyll	Adult-Renoval	1,4		2,4	3,8	5	10
	Renoval	840,9	700,8	1.537,0	3.078,7	4.310	8.384
Chilean Palm	Renoval		0,8		0,8	-	-
Oak-Hualo	Adult		0,3		0,3	2	4
	Adult-Renoval	121,9			121,9	853	1.660
	Renoval		27,5		27,5	193	374
Total		**964,1**	**729,4**	**1.539,4**	**3.232,9**	**5.363**	**10.433**

7.3.3. Plantations, Mixed Forests and Other Uses by Type and Cover

Usage	Coverage				Total area (ha)	Growth m3/year	Biomass Total tCO2eq/year
	Denso	Semidense	Open	Very Open			
Plantation	72,9				72,9	925,4	1.744
Mixed Forest		0,6			0,6	6,2	12
Scrub	29,7	112,6	85,4	39,0	266,6		810
Arborescent Scrub	29,0	204,1	157,7	175,4	566,2		1.721
Succulent Scrub		0,2			0,2		1
Scrub-Prairie			51,0		51,0		155
Meadows	52,4				52,4		159
Total	**183,9**	**317,5**	**294,1**	**214,3**	**1.009,8**	**931,7**	**4.603**