Domty

CARBON FOOTPRINT REPORT

2021

About this Report

This report details the carbon footprint generated by Domty's operations in 2021 and covers Scope 1, 2 and selected activities from Scope 3. This is the first assessment of greenhouse gas emissions, and as it's the first time to report the emissions, the year 2021 is considered the base year which all upcoming years will be referenced. All the data collected and analyzed within this report follow the Greenhouse Gas Protocol outlined by the World Resources Institute (WRI) and adhere to its principles of relevance, completeness, consistency, transparency, and accuracy.

Abbreviations & Acronyms

CFP	Carbon Footprint
CH_4	Methane
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
DEFRA	Department for Environment, Food & Rural Affairs
EF	Emission Factor
ERA	Egypt Electricity Regulatory Authority
FTE	Full-time Equivalent
GHG	Greenhouse Gas
GWP	Global Warming Potential
HCWW	Holding Company for Water and Wastewater
HVAC	Heating, Ventilating, and Air Conditioning
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standard Organization
kWh	Kilowatt Hour
L	Liter
m^2	Square Meter
m^3	Cubic Meter
$mtCO_2e$	Metric tons Carbon Dioxide Equivalent
Scp	Scope
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute
WTT	Well-to-Tank

Contents

Report Highlights

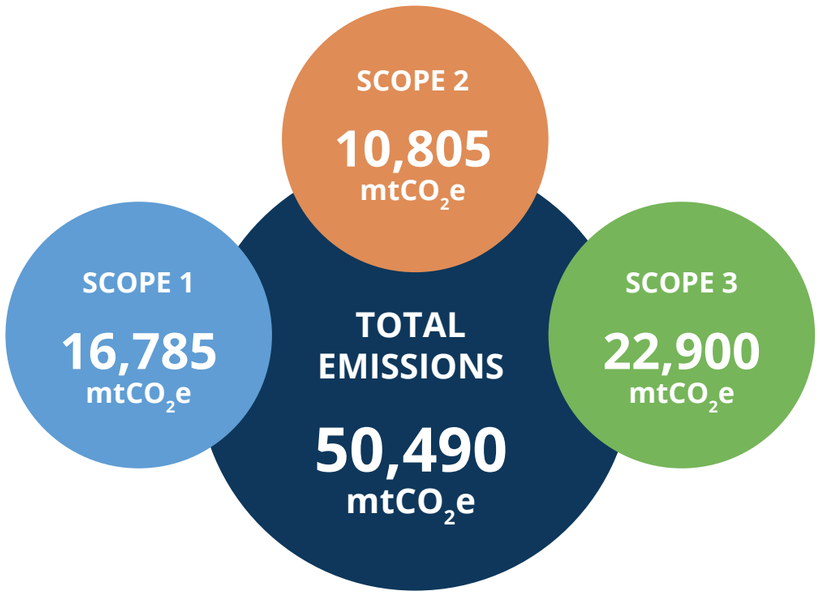
Being one of Egypt's largest producers of cheese, as well as juice and bakery products, the present and future effects of climate change is something that we at Domty are aware of. The Paris Agreement has established a significant global agenda for tackling climate change, that we recognize as a tremendous opportunity for our company to further advance society and protect a habitable planet.

This Carbon Footprint Report establishes the foundation for effective climate action by identifying key areas of our impact on the climate and highlighting critical points for intervention to significantly reduce GHG emissions in the coming decades. The report offers a thorough analysis of Domty's GHG emissions, taking into account our manufacturing plants, administration buildings, distribution warehouses and other Domty's facilities.

The reporting period is from the 1st of January to the 31st of December 2021, covering GHG emissions of our main activities, embracing direct emissions from controlled equipment and assets, emissions from purchased electricity, and selected indirect Scope 3 emissions resulting from our operations.

Based in Egypt, we export worldwide, and thus related emissions were also taken into account based on the data availability. The analysis and calculations were based on the Greenhouse Gas Protocol, the Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories, and the ISO 14064-1:2019 standards.

The total GHG emissions of our business as of 2021 were **50,490 $mtCO_2e$**. Scope 3 had the largest share of emissions with **22,900 $mtCO_2e$** accounting for a **45%**, followed by Scope 1 with emissions of **16,785 $mtCO_2e$** corresponding to **33%** and lastly Scope 2 with **10,805 $mtCO_2e$** emissions corresponding to **22%**. Scope 1+2 intensity per ton of product was **0.155 $mtCO_2e$/ton** of product, while per million EGP revenue it was **8.21 $mtCO_2e$/million EGP**.



Scope 1 and 2 Intensities:

Carbon Intensity
(per ton of products)
=
0.155
$mtCO_2e$/ton of products

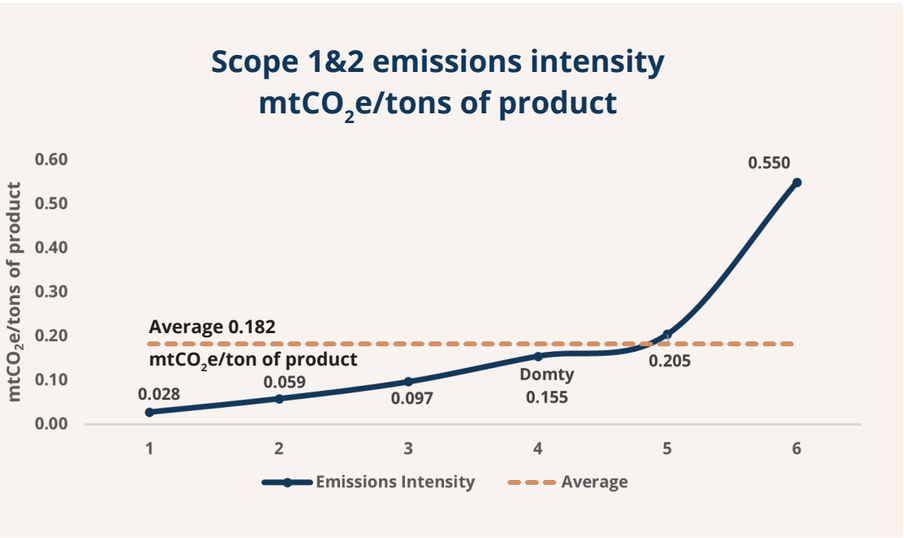
Carbon Intensity
(per million EGP revenue)
=
8.21
$mtCO_2e$/million EGP

External Benchmarking

We have decided to conduct an external benchmarking analysis to determine where we stand as a business. The external benchmarking is a guideline measurement that compares emissions (Scope 1+2) to production output from various international dairy companies. Six different dairy companies have been assessed including Domty. The lowest value for emissions intensity per ton of product was 0.028 $mtCO_2e$/ton of product, while the average value was 0.182 $mtCO_2e$/ton of product.

Domty has an emissions intensity of 0.155 $mtCO_2e$/ton of product which is below the average.

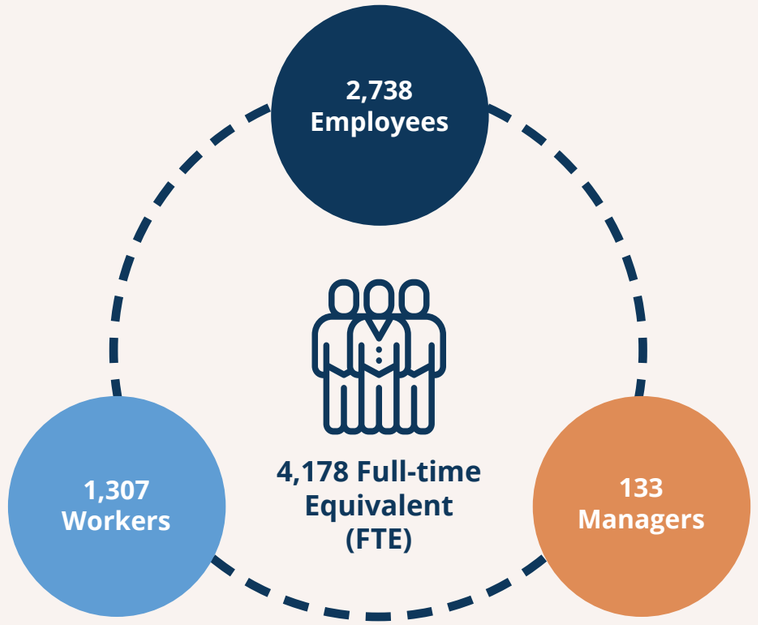
Since each business operates in a different region of the world, there may be differences in system boundaries, business activities, and very slight variations in methodologies used to calculate carbon footprints. It is important to remember that the external benchmarking is only an indicative measure.



Inventory Boundaries

Organizational Boundaries

Domty uses the control approach for the operational boundaries. Under the control approach, an organization is responsible for 100% of the emissions over which it has control. This assessment includes Domty's two manufacturing plants in 6th of October, Giza namely 'The cheese manufacturing plant' and the Juice and bakery production plant located in the 'CPC' industrial complex and named after it, as well as 27 Administrative buildings, 20 Warehouses, 10 Lounges, 3 Garages and 8 other facilities (such as apartments for workers) all around Egypt.

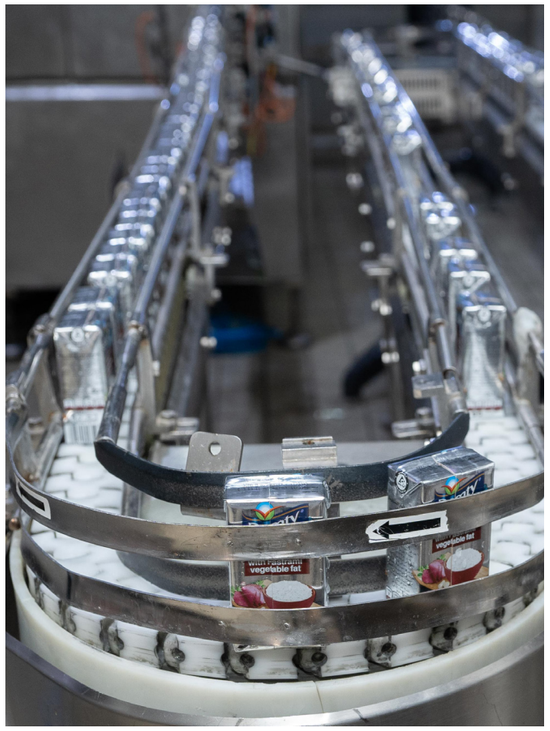


Operational Boundaries

The method for incorporating the emitting activities of the reporting company's business, as well as which activities should be included in the calculations and how they should be classified, is determined by operational boundaries (i.e. direct or indirect emissions). The emissions fall under different scopes:

Scope 1: Direct Emissions

- Stationary Combustion
  - Diesel fuel burning
  - Natural gas fuel burning
- Mobile Combustion
  - Owned vehicles fuel burning
- Fugitive Emissions
  - Refrigerant Leakage



Scope 2: Indirect Emissions

- Purchased Energy
  - Purchased Electricity

Scope 3: Indirect Emissions

- Purchased Goods and Services
  - Packaging Materials
  - Office Supplies
- Fuel and Energy-Related Activities (Not Included in Scope 1 and 2)
  - Diesel fuel burning (WTT)
  - Natural gas fuel burning (WTT)
  - Owned vehicles fuel burning (WTT)
  - Water Usage & Wastewater Treatment
- Waste Generated in Operations
  - Solid Waste Disposal
- Employee Commuting
  - Commuting (including WTT)
- Downstream Transportation & Distribution
  - Rented Vehicles (including WTT)
  - Exports (including WTT)

Emissions Summary

Scope 1: Direct Emissions – 2021		$mtCO_2e$	
Stationary Combustion	Diesel fuel burning	27	33%
	Natural gas fuel burning	7,341	
Mobile Combustion	Owned vehicles fuel burning	7,615	
Fugitive Emissions	Refrigerant Leakage	1,802	
Total Scope 1 Emissions		**16,785**	

Scope 2: Indirect Emissions – 2021		$mtCO_2e$	
Purchased Energy	Purchased Electricity	10,805	22%
Total Scope 2 Emissions		**10,805**	

Total Scope 1 & 2 Emissions – 2021	
Total Scope 1 & 2 Emissions	27,590 $mtCO_2e$
Scope 1 & 2 Carbon Intensity (per ton of products)	0.155 $mtCO_2e$/ton of products
Scope 1 & 2 Carbon Intensity (per million EGP revenue)	8.21 $mtCO_2e$/million EGP

Scope 3: Indirect Emissions – 2021		$mtCO_2e$	
Purchased Goods and Services	Packaging Materials	1,845	45%
	Office Supplies	16	
Fuel and Energy-Related Activities (Not Included in Scope 1 and 2)	Diesel fuel burning (WTT)	6	
	Natural gas fuel burning (WTT)	1,256	
	Owned vehicles fuel burning (WTT)	1,783	
	Water Usage & Wastewater Treatment	138	
Waste Generated in Operations	Office Solid Waste Disposal	111	
Employee Commuting	Commuting (including WTT)	4,970	
Downstream Transportation & Distribution	Rented Vehicles (including WTT)	11,229	
	Exports (including WTT)	1,546	
Total Scope 3 Emissions		**22,900**	

Total Scope 1, 2 & 3 Emissions – 2021	**50,490 $mtCO_2e$**

SCOPE 1

Owned vehicles reported the largest share of GHG emissions in Scope 1, accounting to around **45%** of total Scope 1 emissions.

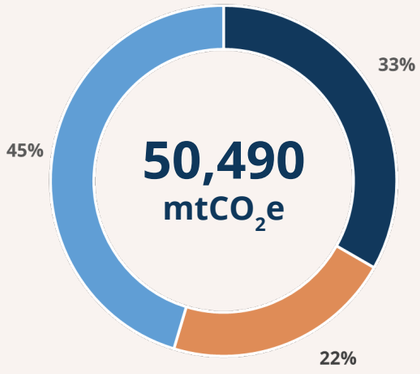
SCOPE 2

Purchased electricity is the second highest emitting activity as it accounts for **22%** of total emissions.

SCOPE 3

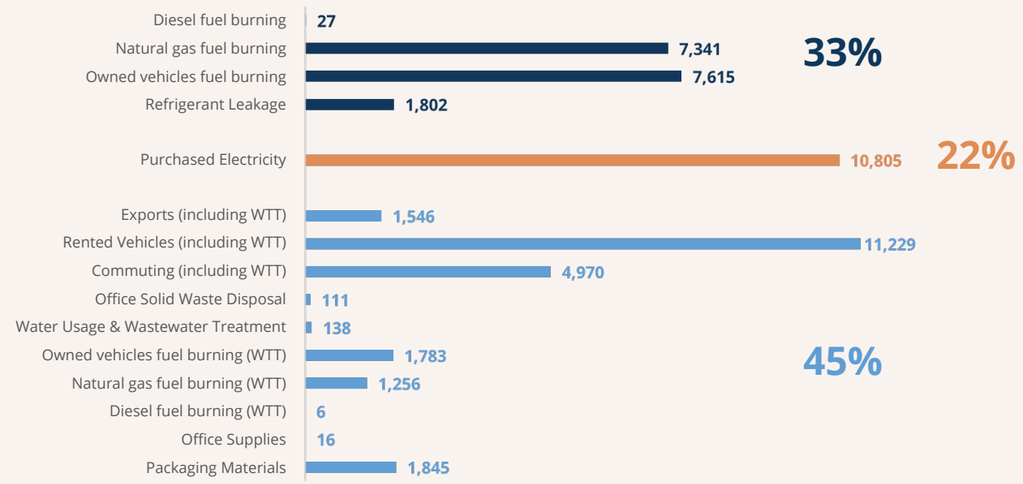
Scope 3 has the largest share of GHG emissions with a percentage of **45%** of total emissions. Within Scope 3 activities, rented vehicles corresponded to **49%** of total Scope 3 emissions making it the highest in its Scope.

Absolute Emissions by Scope



- Total Scope 1 Emissions
- Total Scope 2 Emissions
- Total Scope 3 Emissions

Absolute Emissions by Activity ($mtCO_2e$)

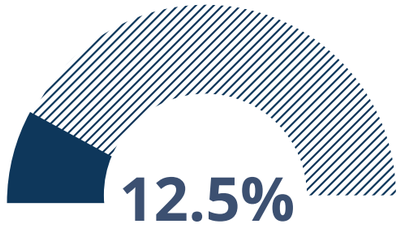


Towards Climate-Resilient Future

Reduction Targets

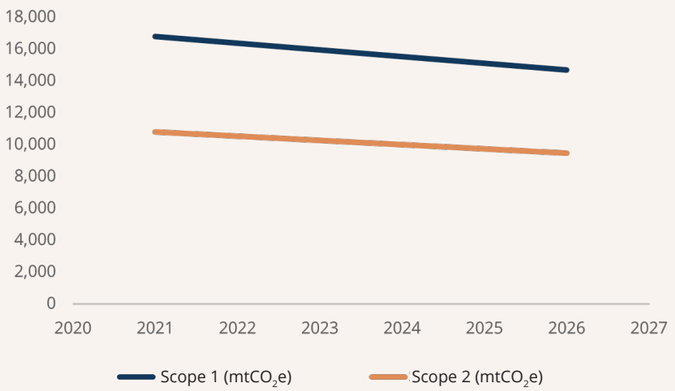
GHG reduction targets have been set to reach a low-carbon economy by accounting for carbon emissions and ensuring that Domty's activities and related emissions are reduced and resulting in a global temperature increase of no more than 2 degrees Celsius, in alignment with the goals of the Paris Agreement to limit global warming and temperature increase compared to pre-industrial levels. Domty has set a target to reduce its Scope 1 and 2 emissions by 12.5% by 2026.

Total Scope 1+2 Reduction



To be achieved by 2026

Absolute Emissions Reduction Target | WB2°C



Decarbonization Plan

Domty realizes the importance of its sustainability work and see that there is still room for improvements to be done. Therefore, we have set our way forward to achieve our reduction targets, suggesting a few major projects to be further explored and looking into opportunities to be implemented to decrease our carbon footprint and impact on the environment.

Introduction

The Arabian Food Industries Company (Domty), established in 1990, is one of the household names in Egypt with a leading position in the local cheese and milk market and a growing market share in the juice and bakery market. The company manufactures and distributes a large range of products and flavours in five key segments; white cheese, creamy cheese, dairy, juice, in addition to the newly added bakery range, with nearly 200 products in the company portfolio. The company's flagship Domty brand has even become the well-known name of the entire business, available on all supermarket shelves countrywide.

Domty does not possess any own farms for milk production, where all milk is handled through outsourced services. Instead, we have chosen to focus and specialized on the manufacturing processes and distribution. What began with only two distribution centres and two trucks, today consists of a distribution fleet of over 600 trucks operating from over 20 distribution centres across the country, ensuring a proper management distribution to all kinds of retail covering not only hypermarkets in cities, but also small shops and minimarkets in rural areas all over the country. We also have exports of our key products all around the world, covering countries in the Middle East, Europe, North America, Australia and Africa.

We aim to drive stakeholder value for both our consumers and shareholders, and we work hard to secure market trust through the company's continuous commitment to quality. At the core of the success lie the values of innovation, ingredients of highest quality with a great taste. To enable this, our manufacturing facilities are ISO-certified, equipped with high technology machineries.

Our Vision

Domty strives to be and maintain its frontrunner status in the food and dairy industry and to be viewed as a trusted entity by all of its stakeholder, including its consumers, employees and shareholders.

Priding itself on being a consumer-centric business that encourages teamwork and innovation, Domty aims to provide superior quality products that consistently exceed consumer expectations.

Since 2007, Domty went into partnership with Tetra Pak as part of safely distributing cheese to our customers for the sake of improved taste and quality, and since 2012 Domty has been the world's largest Tetra Pak packaged white cheese producer. We are actively collaborating with our suppliers to explore opportunities of enhancements with the sustainability in mind.

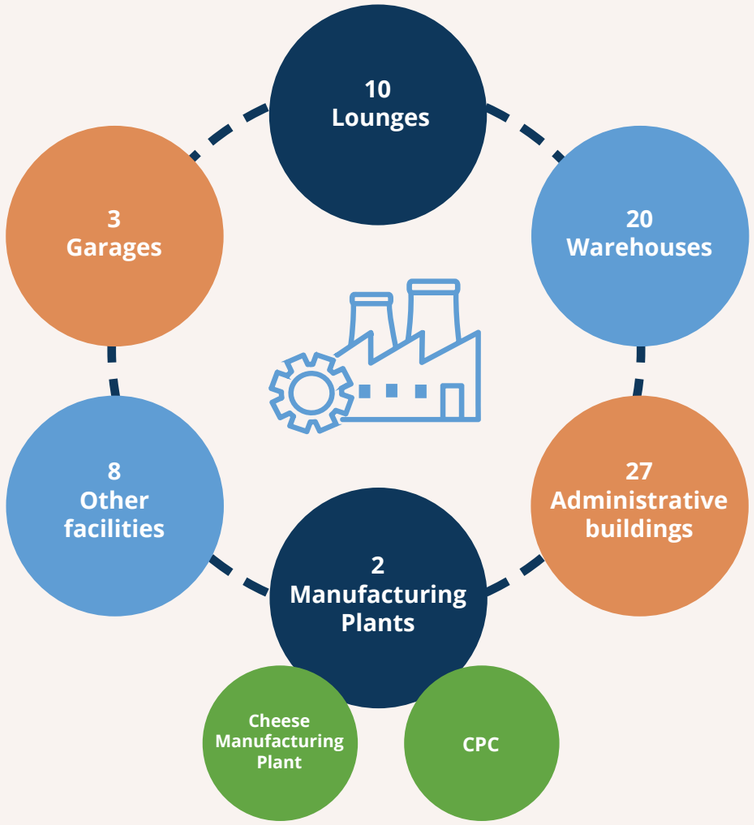
We believe that creating sustainable value is foremost driven by continuously meeting our consumers' needs. Sustainability awareness is emerging among our customers and stakeholders. As an organization, we welcome and encourage learning. As a leading company of dairy products, we are aware of the need to work in alignment with global climate to tackle climate change and to create a sustainable future for the coming generations. As a step in this, we have decided to conduct our first carbon footprint assessment, setting our baseline and accounting for our Scope 1, 2 and parts of our Scope 3 emissions. We have also set reduction targets for our emissions with a decarbonization plan to set our way forward. We believe that by working hand in hand we are able to achieve a positive change.

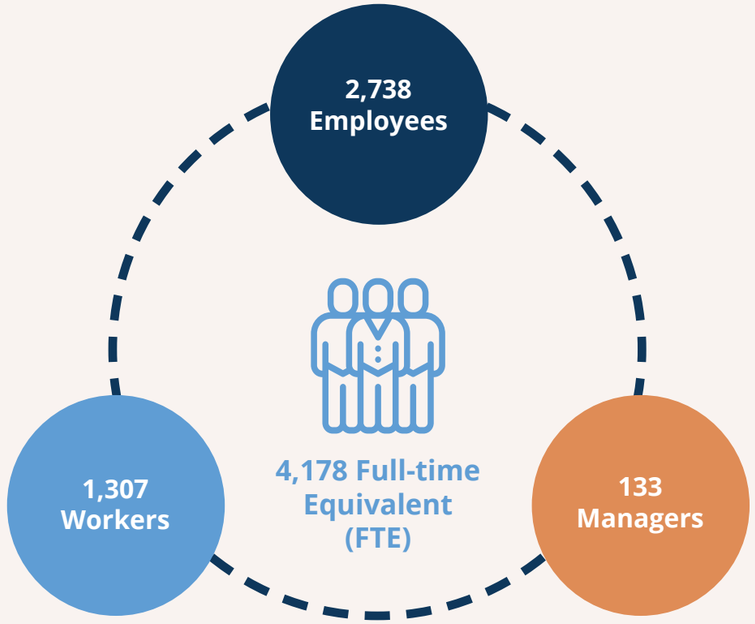
Inventory Boundaries

Organizational Boundaries

The organizational boundary defines the businesses and operations that constitute the company for the purpose of accounting and reporting GHG emissions. Companies can choose to report either the emissions from operations over which they have financial or operational control (the control approach) or from operations according to their share of equity in the operation (the equity share approach).

In line with the GHG protocol, under the control approach, an organization accounts for 100% of the GHG emissions from operations over which it has financial or operational control. In this carbon footprint assessment, the operational control approach is applied. This includes the two manufacturing plants in 6th of October, Giza namely 'The cheese manufacturing plant' and Juice and bakery production plant located in the 'CPC' industrial complex and named after it, as well as 27 Administrative buildings, 20 Warehouses, 10 Lounges, 3 Garages and 8 other facilities (such as apartments for workers) all around Egypt.





Operational Boundaries

Operational boundaries determine the approach of incorporating the emitting activities of the reporting company's business in terms of the activities that should be included in the calculations and how the activities should be classified (i.e. direct or indirect emissions).

The emissions fall under different scopes; Scope 1, resulting from owned or controlled equipment and assets, Scope 2, covering emissions from purchased electricity, heat, steam or cooling, and Scope 3 embracing significant indirect emissions not included in Scope 1 and 2.

In conformance with the GHG Protocol Corporate Standard, only Scope 1, direct emissions and Scope 2, indirect emissions are mandatory to report. Nevertheless, Domty has decided to conduct its carbon footprint assessment to include some of Scope 3 emissions within its first CFP report.

The operational boundaries for Domty's 2021 CFP report include the following:

Scope 1: Direct Emissions

Emissions from sources that are owned or controlled by Domty (i.e. any owned or controlled activities that release emissions straight into the atmosphere). Scope 1 activities include the following:

- Stationary Combustion
  - Diesel fuel burning
  - Natural gas fuel burning
- Mobile Combustion
  - Owned vehicles fuel burning
- Fugitive Emissions
  - Refrigerant Leakage

Scope 2: Indirect Emissions

Emissions associated with the consumption of purchased electricity, heat, steam or cooling from a source that is not owned or controlled by Domty. Scope 2 activities include the following:

- Purchased Energy
  - Purchased Electricity

Scope 3: Indirect Emissions

Emissions resulting from other activities that are not covered in Scope 1 and 2. These indirect emissions are a result of Domty's operations but are not directly owned or controlled by the company.

- Purchased Goods and Services
  - Packaging Materials
  - Office Supplies
- Fuel and Energy-Related Activities (Not Included in Scope 1 and 2)
  - Diesel fuel burning (WTT)
  - Natural gas fuel burning (WTT)
  - Owned vehicles fuel burning (WTT)
  - Water Usage & Wastewater Treatment
- Waste Generated in Operations
  - Solid Waste Disposal
- Employee Commuting
  - Commuting (including WTT)
- Downstream Transportation & Distribution
  - Rented Vehicles (including WTT)
  - Exports (including WTT)

Overall Methodology

Protocols & Standards

This carbon footprint assessment is conducted based on the GHG Protocol Guidelines, along with several international and widely applied standards, protocols, and guidelines specially developed for accounting and reporting GHG emissions, including but not limited to the following:

GREENHOUSE GAS PROTOCOL

The Greenhouse Gas Protocol Guidelines

which include, but not limited to:

- A Corporate Accounting and Reporting Standard
- Corporate Value Chain (Scope 3) Accounting and Reporting Standard

ISO 14064-1:2019

Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

2006 Intergovernmental Panel on Climate Change (IPCC)

Guidelines for Greenhouse Gas Inventories (with 2019 Refinements).

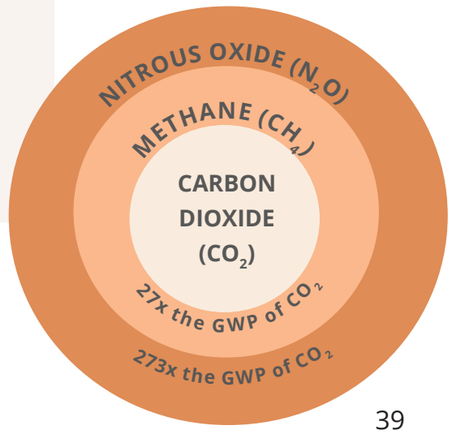
Calculation Approach

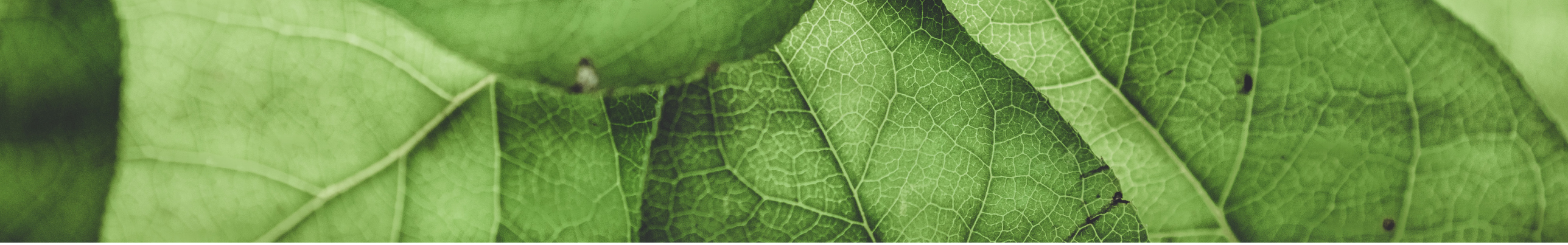
As required by best practice in organizational GHG accounting and the chosen WBCSD/WRI GHG Protocol, all seven Kyoto Protocol greenhouse gasses have been included in this assessment where applicable and material.

Global warming potentials (GWPs) are factors describing the radiative forcing impact of one unit of a specific greenhouse gas (e.g. methane) relative to one unit of carbon dioxide. They are used in GHG accounting to convert individual greenhouse gas emissions to a standardized unit for comparison; carbon dioxide equivalent (CO_2e).

Domty applied 100-year GWPs to all emissions data in this inventory in order to calculate total emissions, in metric tons carbon dioxide equivalent ($mtCO_2e$). Global warming potential values were sourced from the Intergovernmental Panel on Climate Change's (IPCC) sixth Assessment Report (AR6 2021), the most recent IPCC report available at the time of assessment. The Kyoto Protocol GHGs (or categories of GHGs) and their respective GWPs are listed in the table below.

Greenhouse Gas	100-Year GWP
Carbon Dioxide (CO_2)	1
Methane (CH_4)	27
Nitrous Oxide (N_2O)	273
Hydrofluorocarbons (HFCs)	124-14,800
Perfluorocarbons (PFCs)	7,390-12,200
Nitrogen Trifluoride (NF_3)	17,400
Sulphur Hexafluoride (SF_6)	25,200





Each activity falls under a certain scope according to the GHG Protocol Guidelines; Scope 1 (Direct emissions), Scope 2 (Indirect emissions associated with the consumption of purchased electricity) and Scope 3 (other significant indirect emissions resulting from the company's operations (not included in Scope 1 and 2)).

When calculating the CFP of Domty, the emissions of each activity under Scope 1 and 2 have been considered including some activities under Scope 3. The general calculation approach for the emissions, counted in $mtCO_2e$, is multiplying the activity with its corresponding emission factor. When doing this, a unit analysis is performed in order to make sure the results of the emissions are obtained in the desired unit $mtCO_2e$. The general formula for calculating the emissions for each activity is according to the below equation.

[E = A x EF]

GHG Emissions, **E** [$mtCO_2e$] =
Activity, **A** [unit] x Emission Factor, **EF** [$mtCO_2e$/unit]

The general formula could be applied for each activity to obtain its emissions. Activities included in the current assessment were calculated for the year 2021.Thus, the emissions accounted for, were those of the total value for each activity in a single year.

Emission Factors

Emission factors (EF) represent the quantity of GHGs released to the atmosphere caused by a certain activity. The emission factor is usually expressed as the carbon dioxide equivalent (CO_2e) emissions generated by a unit such as weight, volume and distance, e.g., CO_2e/liter fuel consumed or CO_2e/kWh of purchased electricity etc. Emission factors are retrieved from:

DEFRA

Department for Environment, Food & Rural Affairs UK 2021

2006 Intergovernmental Panel on Climate Change (IPCC)

Country Specific Emission Factors

Emission factors calculated specifically for Egypt

As regards to the country specific grid electricity emission factor, the emission factor is derived based on the Egyptian Electric Utility and Consumer Protection Regulatory Agency (Egypt ERA) published reports of monthly data of the grid electricity, where the emission factor is based on Egypt's actual fuel mix and power generation.

The emission factor for water supply and wastewater treatment is calculated using a conversion formula, provided by the Holding Company for Water and Wastewater (HCWW). Based on the amount of energy consumed in each process, the corresponding emission factor could be obtained.

Carbon Footprint Results

33%

SCOPE 1

16,785

$mtCO_2e$

22%

SCOPE 2

10,805

$mtCO_2e$

45%

SCOPE 3

22,900

$mtCO_2e$

Scope 1:
Direct Emissions

Emissions from sources that are owned or controlled by Domty (i.e., any owned or controlled activities that release emissions straight into the atmosphere). Scope 1 included stationary combustion, mobile combustion and fugitive emissions.

Stationary Combustion

27
$mtCO_2e$

Diesel fuel burning

This includes emissions resulting from diesel fuel burning on site. Furnaces at Domty's CPC plant used diesel fuel as a replacement for natural gas for the months of January, February, and March of 2021 only. During this period, Domty's CPC plant consumed **10,000 liters** of diesel, which resulted in **27 $mtCO_2e$** of direct emissions.

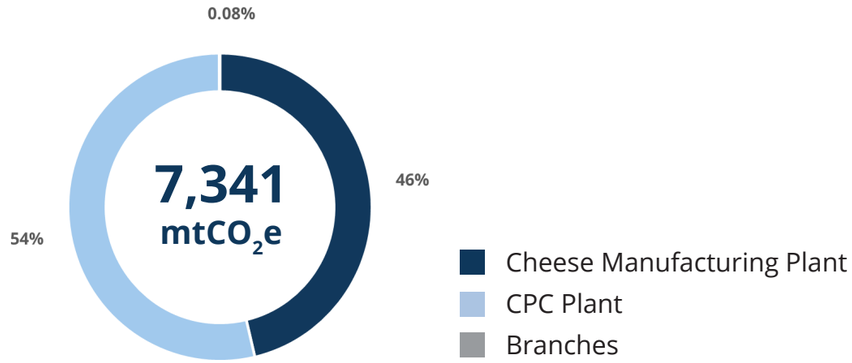
7,341
$mtCO_2e$

Natural gas fuel burning

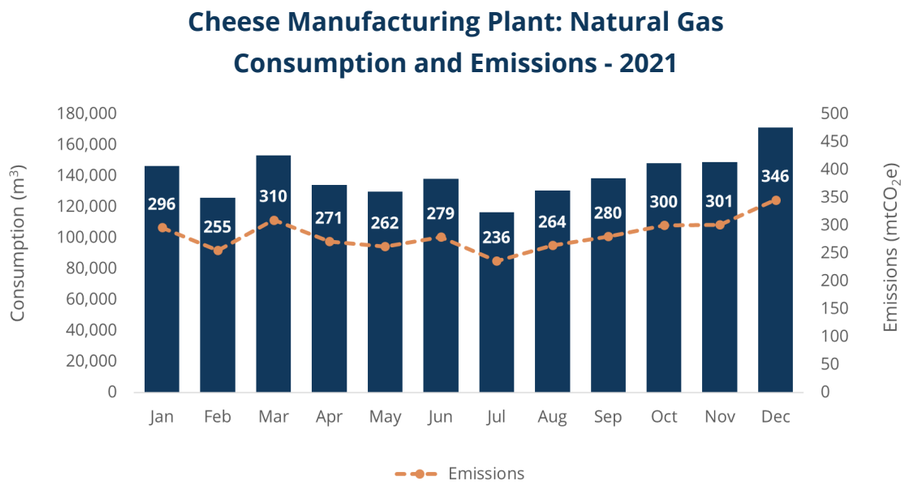
Since it is directly used by Domty, the emissions resulting from the consumption of natural gas were accounted for under Scope 1. Natural gas was used in Domty's plants and facilities. The quantities consumed in 2021 at the Cheese Manufacturing plant totaled **1,681,671 m³** and resulted in direct emissions of **3,339 $mtCO_2e$**. The quantities consumed in 2021 at the CPC plant totaled **1,947,262 m³** and resulted in direct emissions of **3,936 $mtCO_2e$.** The quantities consumed in 2021 at the branches totaled **2,800 m³** and resulted in direct emissions of **6 $mtCO_2e$**. In total, Domty consumed **3,631,733 m³**, which resulted in **7,341 $mtCO_2e$**.

54% of natural gas emissions from Domty facilities was attributed to the CPC plant.

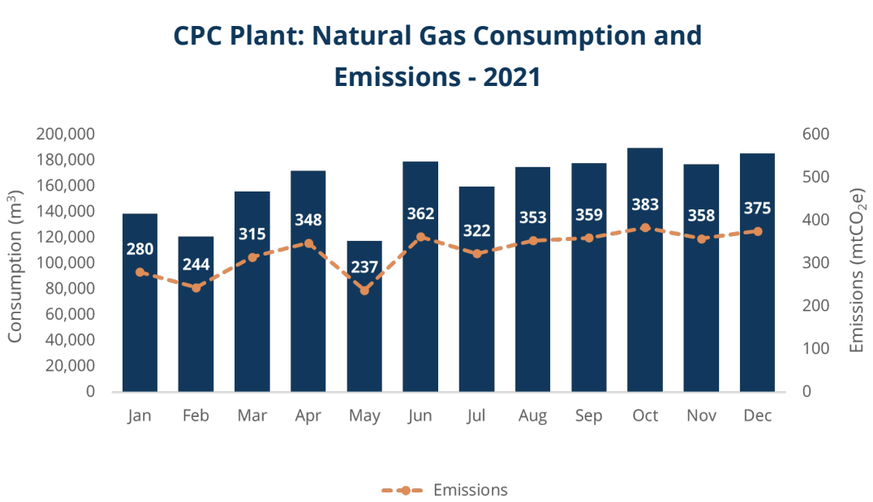
Natural Gas Emissions Distribution Over Domty Facilities - 2021



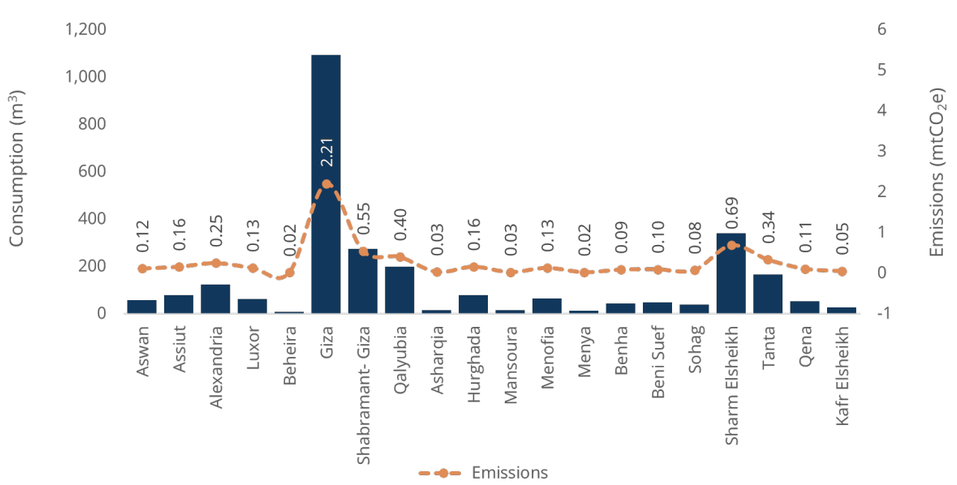
In the cheese manufacturing plant, monthly natural gas consumption varied from **116,570 m³** to **171,320 m³**. The highest consumption and emissions were witnessed in December with a value of **346 mtCO$_2$e**.



As for the CPC plant, the highest emissions happened in October with a value of **383 mtCO$_2$e** which corresponds to a consumption of **189,674 m³**.



Domty's buildings located in Giza consumes the largest amount of natural gas compared to other governorates. Giza (including Sharbramant) consumed total of **1,368 m³** which resulted in total emissions of **3 mtCO$_2$e**.



Mobile Combustion

7,615
mtCO$_2$e

Owned vehicles fuel burning

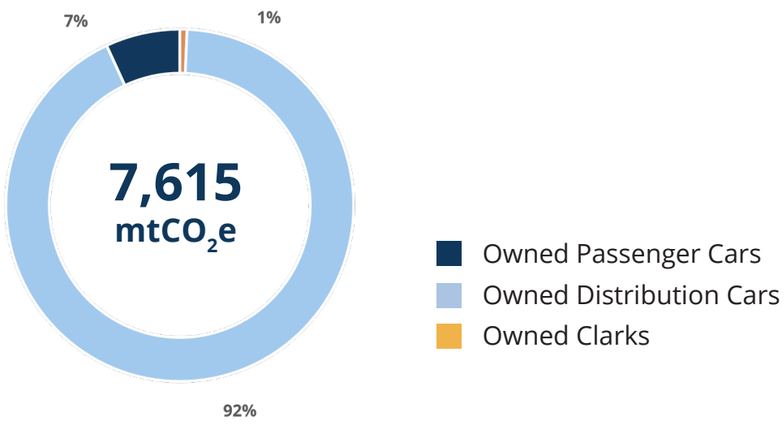
In the year 2021, Domty's owned vehicles consumed a total of **2,844,934 liters** of fuel resulting in approximately **7,615 mtCO$_2$e** of direct emissions. Domty has several types of vehicles like owned clarks, distribution cars and passenger cars.

Owned clarks at the company's Cheese Manufacturing plant consumed a total of **18,720 liters** of Diesel, which resulted in **51 mtCO$_2$e** of direct emissions.

Domty's distribution cars consumed **2,601,293 liters** of Diesel fuel, which resulted in **7,038 mtCO$_2$e**. The distribution cars with a percentage of **92%** had the largest owned vehicles emissions as shown in the below chart.

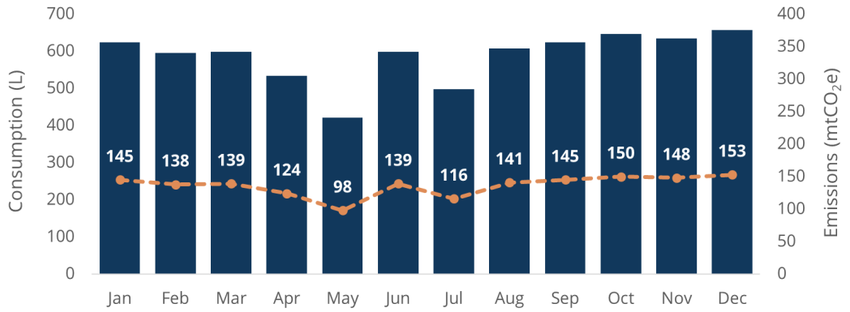
Owned passenger cars were used at Domty's plants and branches. Cars at Domty's Manufacturing plants consumed a total of **58,045 liters** of Petrol resulting in **136 mtCO$_2$e**, while at the branches, **166,876 liters** of Petrol was consumed in 2021 resulting in **390 mtCO$_2$e**.

Owned Vehicles Emissions by Type - 2021



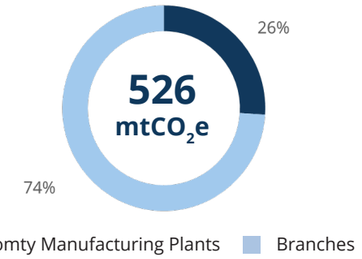
Distribution cars monthly emissions varies from **98 mtCO$_2$e** in May to **153 mtCO$_2$e** in December, which may reflect the variations in destinations.

Domty Distribution Cars Diesel Consumption and Emissions - 2021



Owned passenger cars are **7%** of total owned vehicles emissions. Out of the passenger cars, the passenger cars in the manufacturing plants contributed to **26%** while the branches contributed to **74%**.

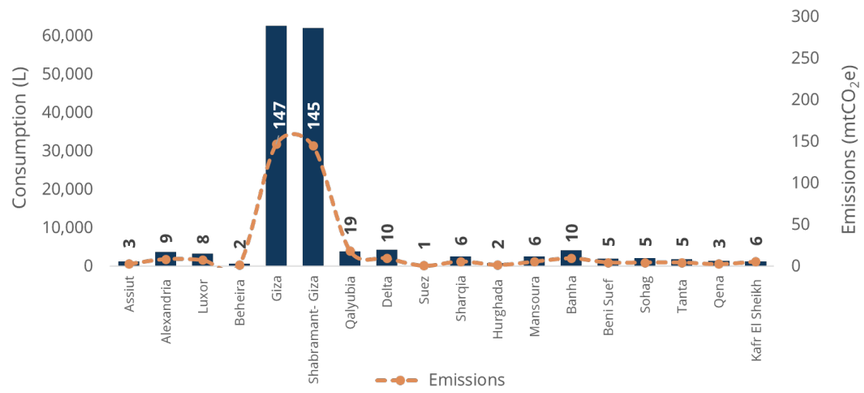
Total Owned Passenger Cars Emissions Distribution - 2021



Vehicle	Fuel	Consumption (Liters)	Emissions (mtCO$_2$e)
Clarks in the Cheese Manufacturing plant	Diesel	18,720	51
Distribution Cars	Diesel	2,601,293	7,038
Passenger Cars in Manufacturing plants	Petrol	58,045	136
Passenger Cars in Branches	Petrol	166,876	390
Total		**2,844,934**	**7,615**

The governorate that has the highest fuel consumption in terms of petrol in owned passenger cars is Giza (including Sharbramant) with a total consumption of **124,859 liters** and emissions of **292 mtCO$_2$e.**

Branches: Owned Passenger Cars Petrol Consumption and Emissions - 2021



Fugitive Emissions

1,802
mtCO$_2$e

Refrigerant Leakage

Refrigerants are fluids used in refrigeration cycles to cool a space. The types of refrigerants used at the production plants were “R-134”, “R-22”, “R-404”, “R-407”, “R-410”; either 10 kg or 13 kg cylinders. In the year 2021 the total refrigerant quantities utilized to recharge the various cooling systems were **773 kg (65 cylinders)** in the plants resulting in **1,802 mtCO$_2$e**.

Scope 2: Indirect Emissions

Scope 2 emissions are indirect GHG emissions associated with the consumption of purchased electricity. Although Scope 2 emissions physically occur at the facility where they are generated, they are accounted for in an organization’s GHG inventory because they are a result of the organization’s electricity use.

Purchased Electricity

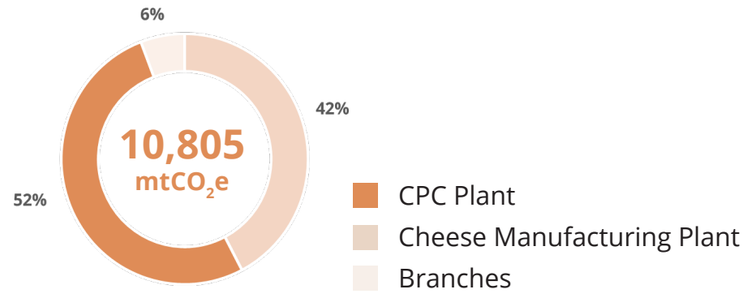
10,805
mtCO$_2$e

Purchased Electricity

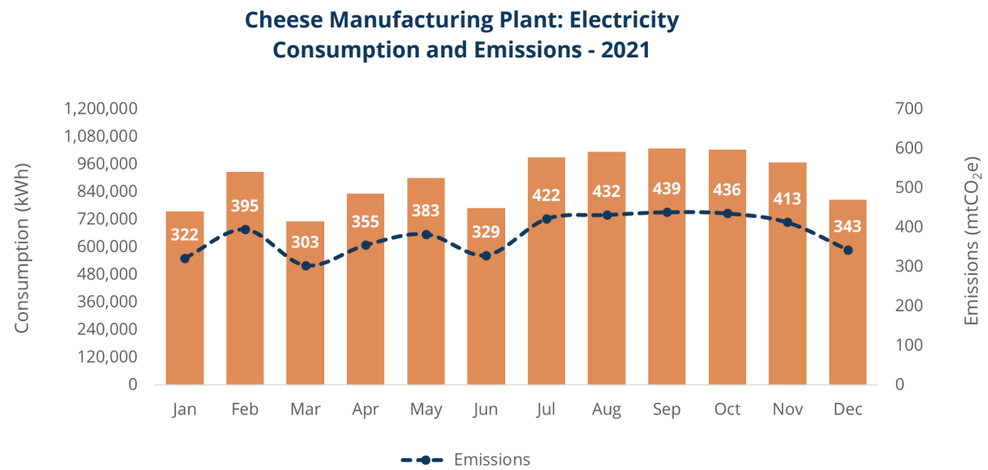
For the reporting period of 2021, Domty’s electricity consumption was **25,342,263 kWh**, resulting in **10,805 mtCO$_2$e**. This activity accounts for the second largest contributor to Domty’s emissions, accounting for about **22%** of total emissions in 2021.

The Cheese Manufacturing Plant consumed a total of **10,724,631 kWh** resulting in **4,572 mtCO$_2$e**, while the CPC plant consumed a total of **13,153,751 kWh** resulting in **5,608 mtCO$_2$e**. Domty branches consumed a total of **1,463,881 kWh** in 2021 resulting in **624 mtCO$_2$e**. The monthly consumption and associated emissions are as illustrated in the below charts. The CPC plant is the largest electricity consuming facility over all Domty facilities with a percentage of **52%**.

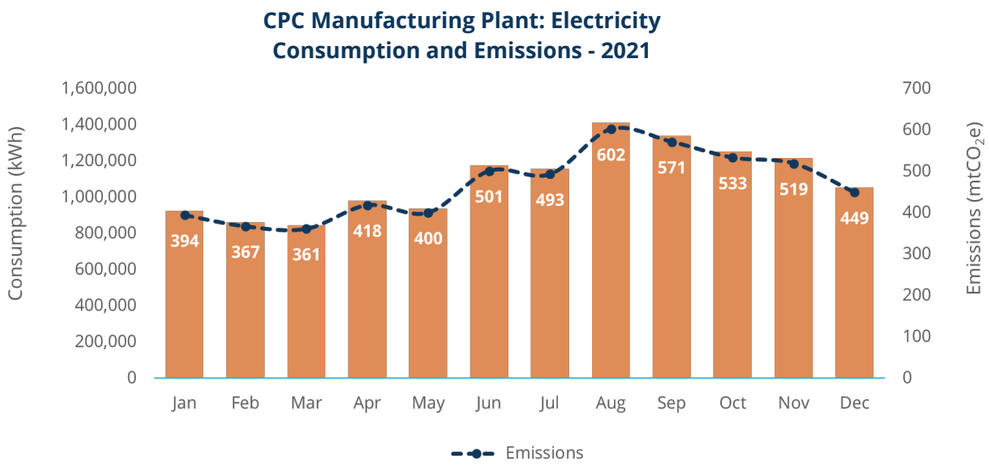
Purchased Electricity Emissions Distribution Over Domty Facilities - 2021



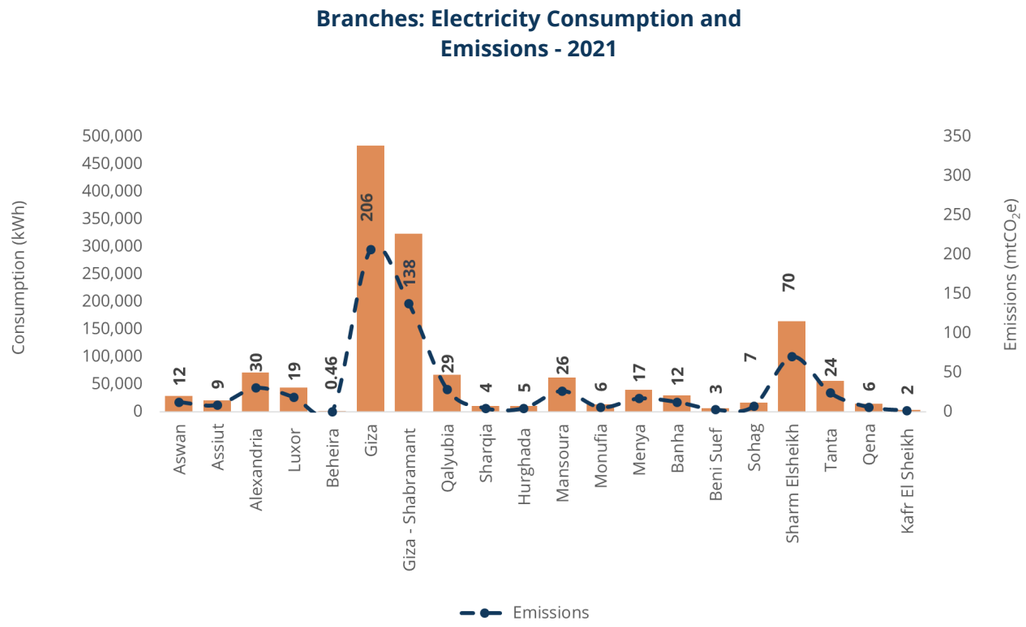
Starting from July to November the electricity consumption at the Cheese Manufacturing Plant was at its highest values. The peak was noticed in September with an associated emission of **439 $mtCO_2e$**.



At the CPC plant, the largest electricity consumption was witnessed at August with a corresponding emissions of **602 $mtCO_2e$.**



Giza branches (including Shabramant) had the highest electricity usage among the company's branches which accounted for **344 $mtCO_2e$** in emissions (equivalent to **55%** of the total emissions from the branches' electricity consumption) while the consumed electricity in all branches was **1,463,881 kWh** and resulted in **624 $mtCO_2e$**.



Scope 3:
Indirect Emissions

Scope 3 emissions are the result of activities from assets not owned or controlled by the reporting organization, but that is part of the organization's value chain.

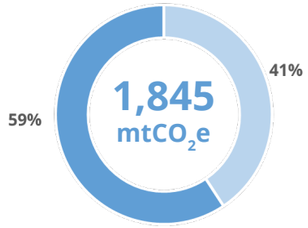
Purchased Goods and Services

1,845 $mtCO_2e$

Packaging Materials

Domty uses different packaging materials for their different products. It includes Tetra Pak Packaging and other packing materials such as plastic used in plastic bags, juice straws, etc. This resulted in a total emissions of **1,845 $mtCO_2e$**.

Total Packaging Materials Emissions - 2021



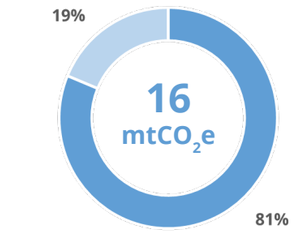
16 $mtCO_2e$

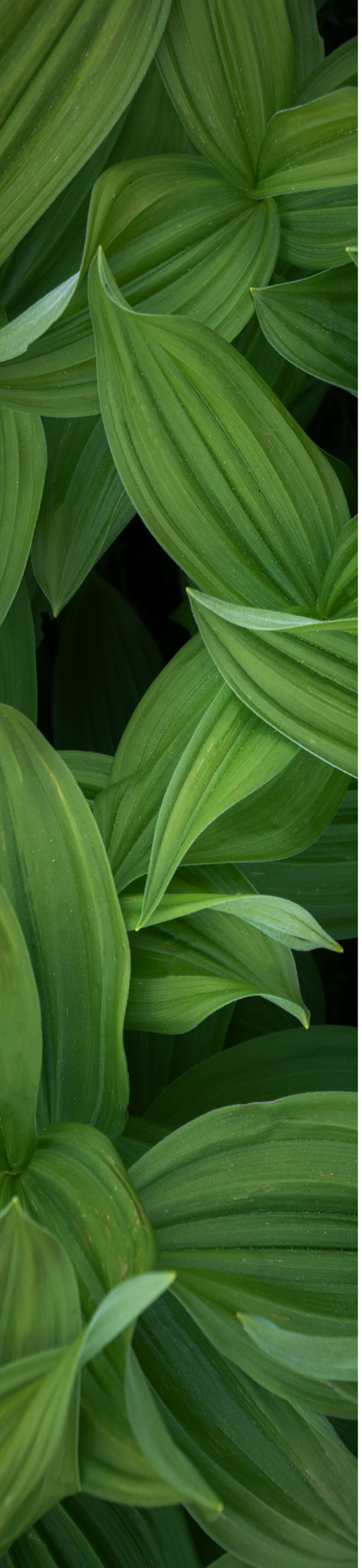
Office Supplies

Emissions resulting from the use of the different office supplies fall under Scope 3. For the current reporting period, this includes A4 paper and ink. In 2021, Domty consumed **2,992** packs of A4 with a total paper sheets of **2,753,400**. This resulted in about **13 $mtCO_2e$** emissions.

Domty also consumed **632 cartridges** of ink resulting in a total emissions of **3 $mtCO_2e$**. Accordingly, the total emissions related to office supplies were almost **16 $mtCO_2e$**.

Office Supplies Emissions - 2021





Fuel and Energy-Related Activities
(Not Included in Scope 1 and 2)

The boundaries of this activity include Well-to-tank (WTT) emissions associated with the indirect fuel burning as well as water usage and wastewater treatment activities. Domty accounted for WTT emissions to capture the maximum climate impacts from fuel burning activities. The emissions for 2021 were as follows.

6 $mtCO_2e$

Diesel Fuel Burning (WTT)

WTT emissions resulting from the consumption of diesel in CPC furnaces during the reporting period were **6 $mtCO_2e$**.

1,256 $mtCO_2e$

Natural Gas Fuel Burning (WTT)

Domty's WTT resulting emissions for the year 2021 from natural gas were **1,256 $mtCO_2e$**.

1,783 $mtCO_2e$

Owned Vehicles Fuel Burning (WTT)

WTT emissions resulting from Domty owned vehicle fuel burning included Diesel and Petrol fuel. WTT emissions resulting from Diesel consumption were **1,647 $mtCO_2e$**. WTT emissions from Petrol consumption amounted to **136 $mtCO_2e$**. In total, WTT emissions from owned vehicles fuel burning were **1,783 $mtCO_2e$**.

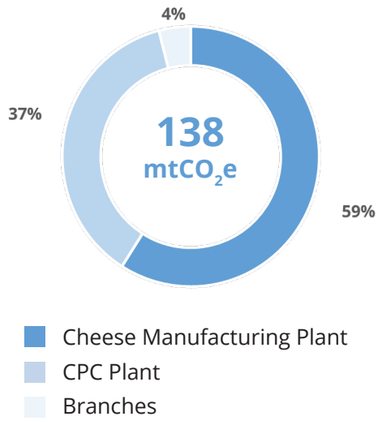
138 $mtCO_2e$

Water Usage & Wastewater Treatment

In the year 2021, Domty's consumed **775,365 m^3** of water, resulting in **116 $mtCO_2e$** attributed to water usage. An additional **22 $mtCO_2e$** were related to wastewater treatment. The total amount of emissions related to water usage and treatment were around **138 $mtCO_2e$**.

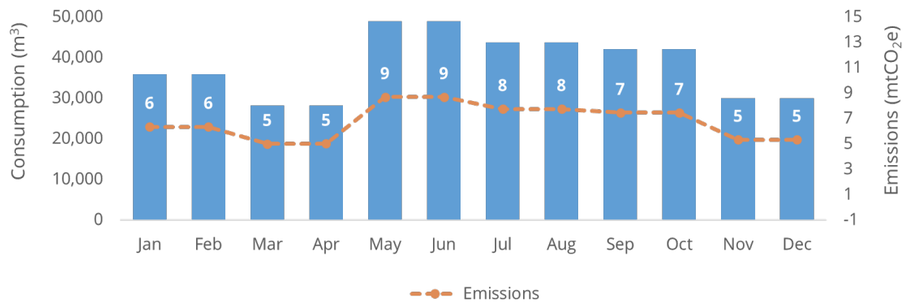
Water usage and wastewater emissions resulting from Domty's facilities amounted to **138 $mtCO_2e$** with **59%** corresponding to the cheese manufacturing plant, **37%** corresponding to the CPC Plant, and **4%** corresponding to Domty Branches distributed all over the country.

Water Usage and Wastewater Treatment Emissions Distribution Across Domty Facilities- 2021



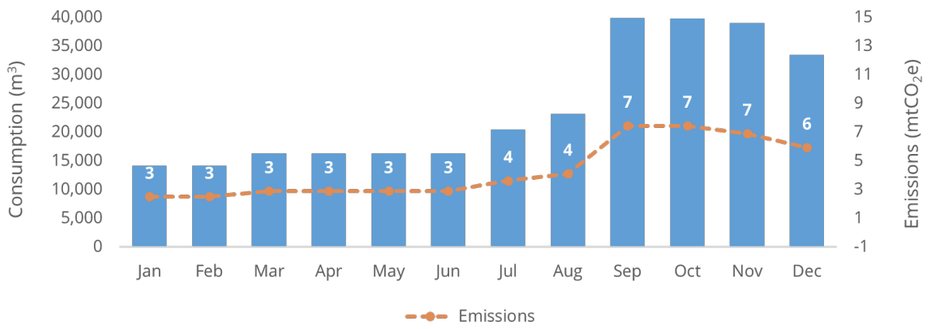
In the cheese manufacturing plant, May and June had the highest emissions with a value of **9 $mtCO_2e$**.

Cheese Manufacturing Plant: Water Consumption and Emissions - 2021



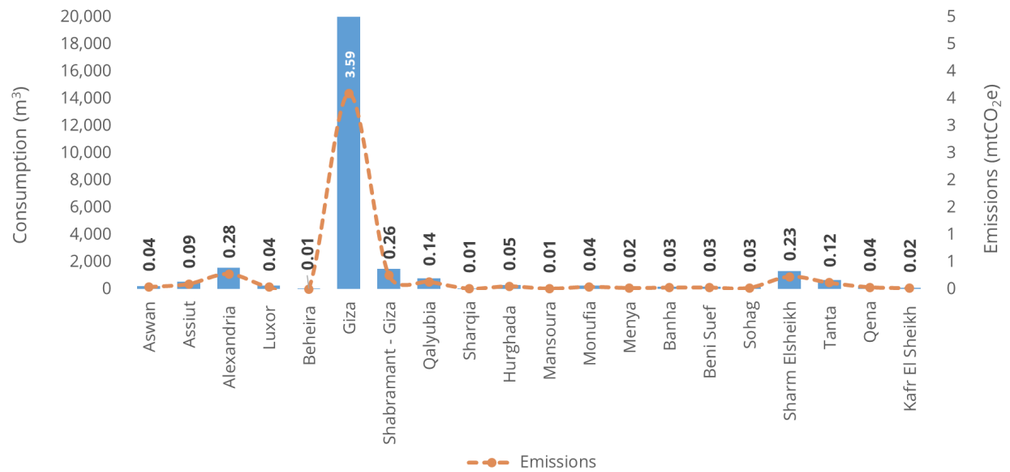
In the CPC plant, the highest emissions attributed to water usage and wastewater treatment were witnessed in the months September, October and November with a value of **7 $mtCO_2e$**.

CPC Plant: Water Consumption and Emissions - 2021



Largest water usage and wastewater emissions among the governorates was witnessed in Giza (including Shabramant) with a total value of **3.85 $mtCO_2e$**.

Branches: Water Consumption and Emissions - 2021



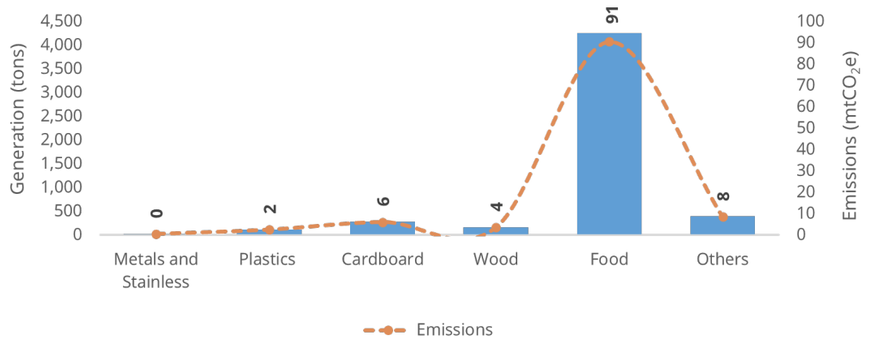
Waste Generated in Operations

111
$mtCO_2e$

Solid Waste Disposal

Domty's facilities generated about **5,233 tons** of waste in the reporting period of 2021. This quantity resulted in **111 $mtCO_2e$**. Waste data are divided by type of waste indicating that organic waste had the highest impact emitting alone **91 $mtCO_2e$**.

Solid Waste Generation and Emissions - 2021



Employee Commuting

4,970
$mtCO_2e$

Commuting (Including WTT)

Workers at Domty manfacturing plants use coasters rented by Domty to get to their work. The total daily distance travelled was **23,765 km**, which resulted in a yearly fuel consumption of **1,490,760 liters**. This fuel consumption resulted in emissions of **4,033 $mtCO_2e$**, and **937 $mtCO_2e$** WTT emissions. Total emissions for the reporting period was **4,970 $mtCO_2e$**.

Downstream Transportation & Distribution

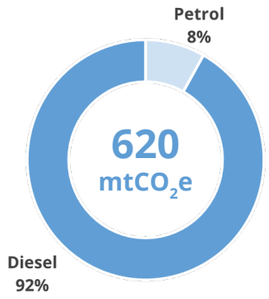
11,229 $mtCO_2e$

Rented Vehicles (Including WTT)

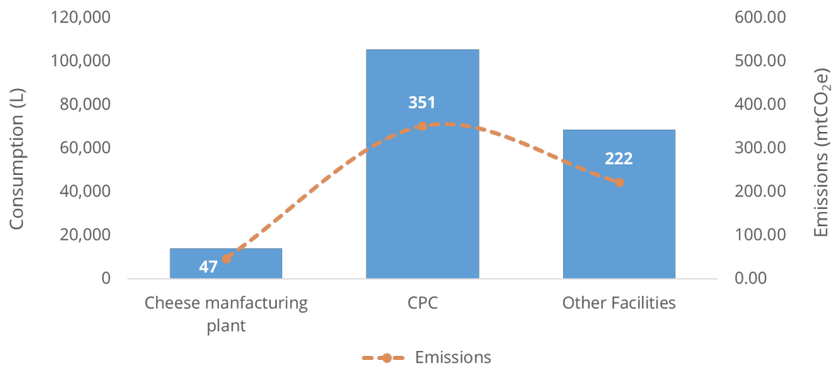
Rented Clarks

Domty uses rented clarks, some fuelled by petrol and others by diesel. The total yearly consumption of fuels in rented Clarks was **187,980 liters** causing total emissions of **620 $mtCO_2e$** (including **118 $mtCO_2e$** WTT emissions). Most of the fuel used in Clarks is Diesel with a percentage of **92%**. Rented Clarks associated emissions from the CPC plant have the largest share with a percentage of approximately **57%**.

Petrol VS Diesel Emissions in Clarks



Rented Clarks Consumption and Emissions Across Domty's Facilities - 2021

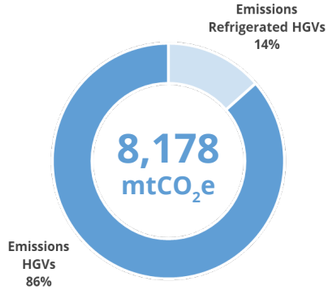


Rented Distribution Cars

There are two ways to handle the delivery of Domty products, some products should be delivered under refrigerated conditions while some do not. The overall distance travelled in the reporting period 2021 was **7,470,216 km**, resulting in **8,178 $mtCO_2e$**.

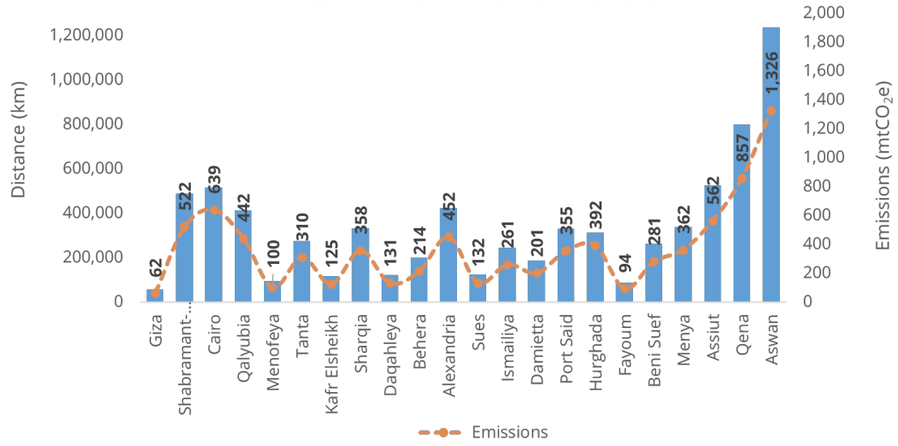
Refrigerated cars travelled a distance of **880,464 km** contributing to **1,107 $mtCO_2e$**, while non-refrigerated cars travelled a distance of **6,589,752 km** contributing to emissions of **7,071 $mtCO_2e$** (**86%** of Distribution Cars emissions) as shown in the adjacent chart.

From the total **8,178 $mtCO_2e$**, **1,592 $mtCO_2e$** are WTT emissions. The highest travelled distance through the reporting year was witnessed in Aswan branch with a value of **1,235,520 km** corresponding to approximately **1,326 $mtCO_2e$**.



Refrigerated HGVs VS Non-Refrigerated HGVs Emissions

Branches: Rented Distribution Cars Distance Travelled and Emissions - 2021

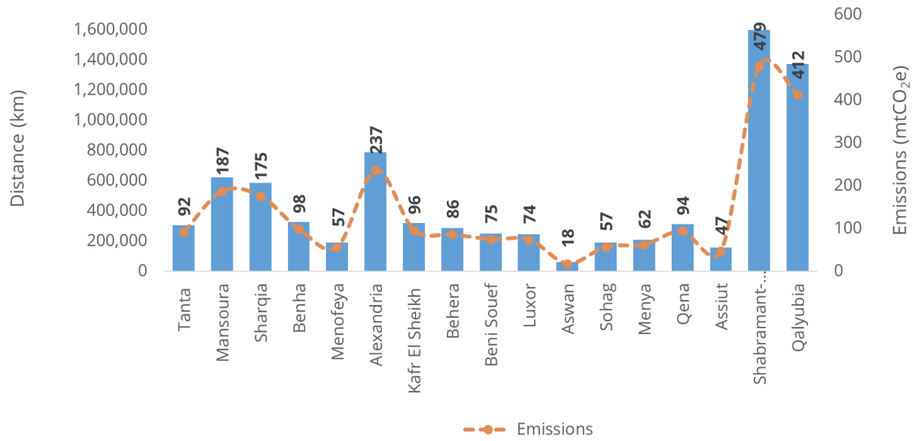


Rented Cars

Branches also use rented cars which travelled a total distance of **7,810,296 km** and causing total emissions of **2,344 $mtCO_2e$** during the reporting year, including **460 $mtCO_2e$** WTT emissions.

The manufacturing plants also used rented cars that consumed a total of **29,744 liters** of petrol emitting **88 $mtCO_2e$**, which includes **18 $mtCO_2e$** WTT emissions.

Branches: Rented Cars Distance Travelled and Emissions - 2021

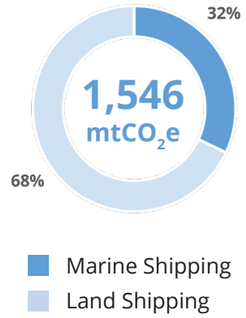


1,546 $mtCO_2e$

Exports (Including WTT)

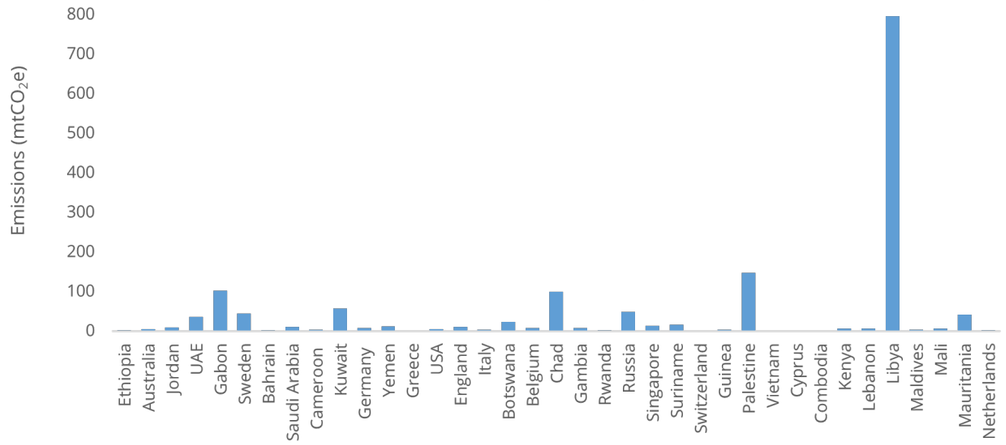
Domty exports part of its production to different countaries, in Africa, Middle East, Europe, North America and Australia. Exports are shipped either by marine or by land to neighboring countries. Port-to-port distances have been used to calculate the emissions. During the reporting period, emissions attributed to exports were **1,546 $mtCO_2e$**. Land shipping contributed to around **68%** of total exports emissions as shown in the below chart.

Marine VS Land Exports Emissions - 2021



The largest portion of Domty exports during 2021 was directed to Libya with a total weight of **2,494 tons** which corresponds to emissions of **796 $mtCO_2e$** with a percentage of **51%** from total exports emissions.

Exports Emissions by Country- 2021



Emissions Summary

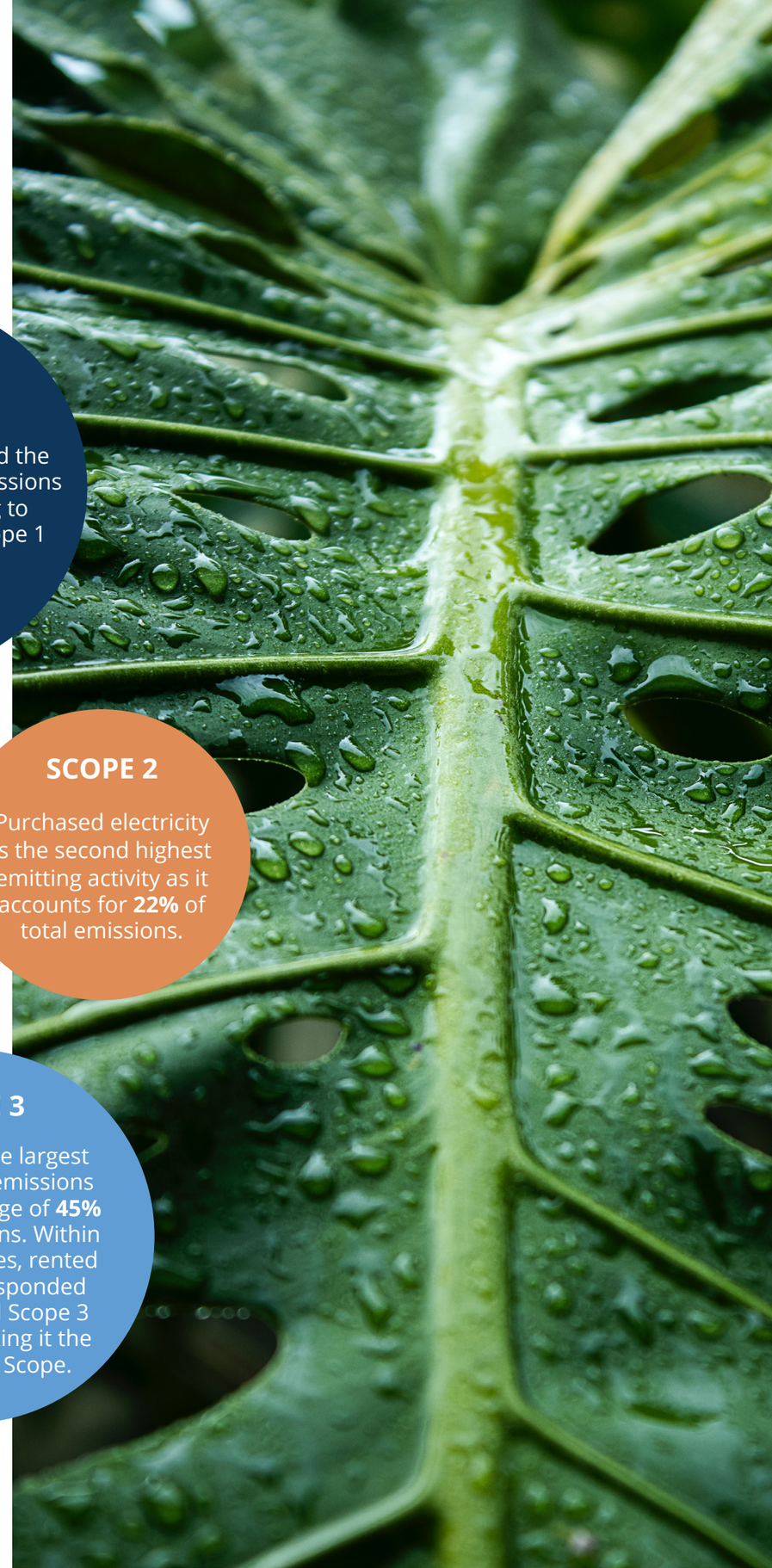
Scope 1: Direct Emissions – 2021		$mtCO_2e$	
Stationary Combustion	Diesel fuel burning	27	33%
	Natural gas fuel burning	7,341	
Mobile Combustion	Owned vehicles fuel burning	7,615	
Fugitive Emissions	Refrigerant Leakage	1,802	
Total Scope 1 Emissions		**16,785**	

Scope 2: Indirect Emissions – 2021		$mtCO_2e$	
Purchased Energy	Purchased Electricity	10,805	22%
Total Scope 2 Emissions		**10,805**	

Total Scope 1 & 2 Emissions – 2021	
Total Scope 1 & 2 Emissions	27,590 $mtCO_2e$
Scope 1 & 2 Carbon Intensity (per ton of products)	0.155 $mtCO_2e$/ton of products
Scope 1 & 2 Carbon Intensity (per million EGP revenue)	8.21 $mtCO_2e$/million EGP

Scope 3: Indirect Emissions – 2021		$mtCO_2e$	
Purchased Goods and Services	Packaging Materials	1,845	45%
	Office Supplies	16	
Fuel and Energy-Related Activities (Not Included in Scope 1 and 2)	Diesel fuel burning (WTT)	6	
	Natural gas fuel burning (WTT)	1,256	
	Owned vehicles fuel burning (WTT)	1,783	
	Water Usage & Wastewater Treatment	138	
Waste Generated in Operations	Office Solid Waste Disposal	111	
Employee Commuting	Commuting (including WTT)	4,970	
Downstream Transportation & Distribution	Rented Vehicles (including WTT)	11,229	
	Exports (including WTT)	1,546	
Total Scope 3 Emissions		**22,900**	

Total Scope 1, 2 & 3 Emissions – 2021	50,490 $mtCO_2e$



SCOPE 1

Owned vehicles reported the largest share of GHG emissions in Scope 1, accounting to around **45%** of total Scope 1 emissions.

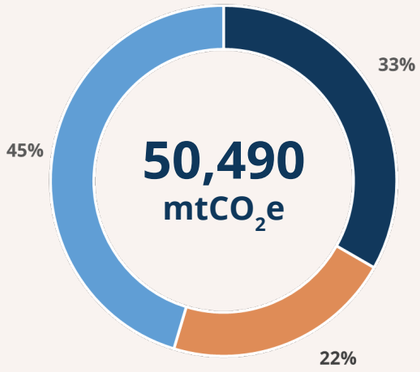
SCOPE 2

Purchased electricity is the second highest emitting activity as it accounts for **22%** of total emissions.

SCOPE 3

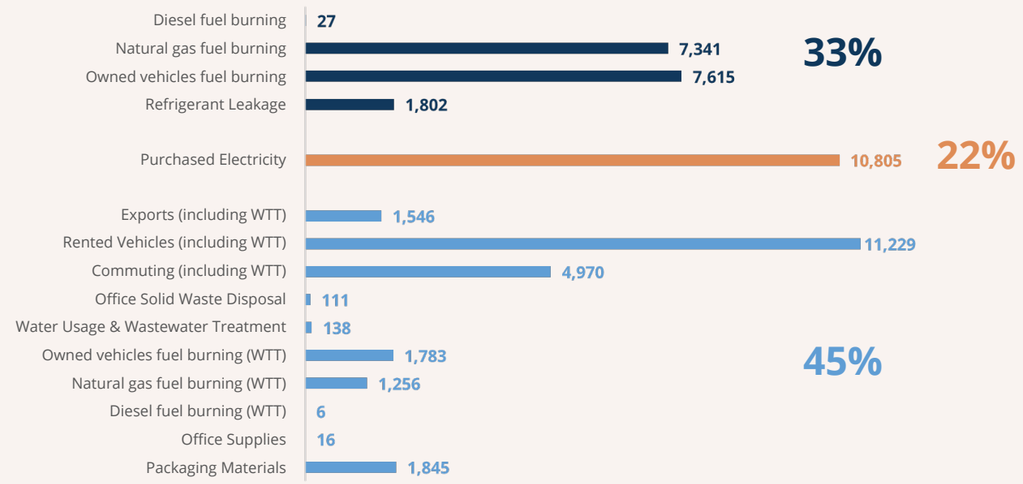
Scope 3 has the largest share of GHG emissions with a percentage of **45%** of total emissions. Within Scope 3 activities, rented vehicles corresponded to **49%** of total Scope 3 emissions making it the highest in its Scope.

Absolute Emissions by Scope



- Total Scope 1 Emissions
- Total Scope 2 Emissions
- Total Scope 3 Emissions

Absolute Emissions by Activity ($mtCO_2e$)

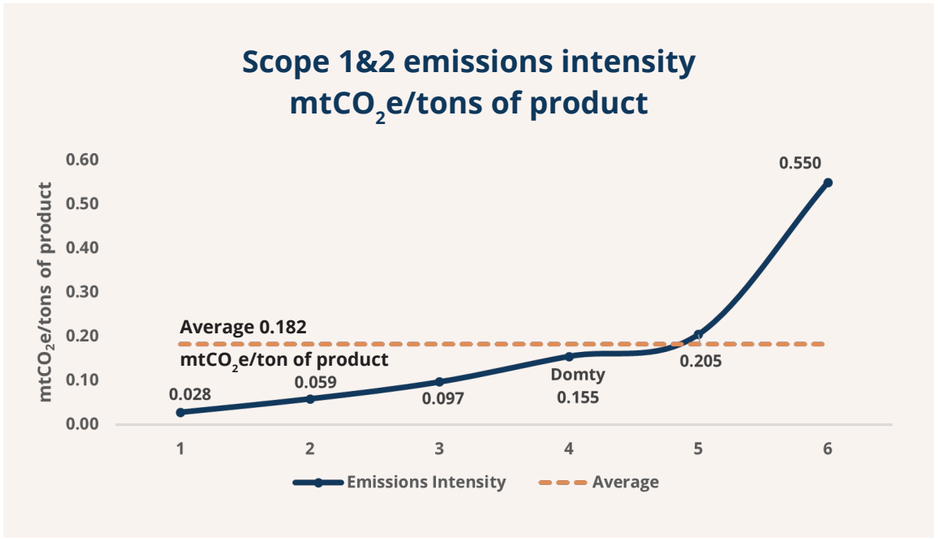


External Benchmarking

Performance of organizations is assessed and compared against other industrial peers by benchmarking. This allows the organization to determine industry best practices and to identify further improvement opportunities.

External benchmarking of Domty has been conducted based on Scope 1 and 2 emissions intensity per ton of products. Different global dairy companies have been assessed against Domty. It is worth mentioning that external benchmarking is only an indicative measure as each company operates in a different part of the world. This might imply differences in system boundaries and business activities. In addition to that, each company may have a different products portfolio in addition to dairy products. Minor differences in carbon footprint calculations methodology might also affect this assessment.

Six different dairy companies have been assessed including Domty. The lowest value was 0.028 $mtCO_2e$/ton of product, while the average value is 0.182 $mtCO_2e$/ton of product. Domty has an emissions intensity of 0.155 $mtCO_2e$/ton of product which is below the average.



Towards a Climate-Resilient Future

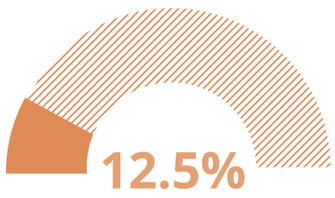
Reduction Targets

GHG reduction targets have been set to reach a low-carbon economy by accounting for carbon emissions and ensuring that Domty's activities and related emissions are reduced and resulting in a global temperature increase of no more than 2 degrees Celsius, in alignment with the goals of the Paris Agreement to limit global warming and temperature increase compared to pre-industrial levels.

In order to accomplish the GHG reductions related to the 2 degree temperature goal, Domty has set absolute emissions reduction targets with 2026 as the target completion year, where we are aiming to attain a reduction of Scope 1+2 emissions of 12.5% as presented below.

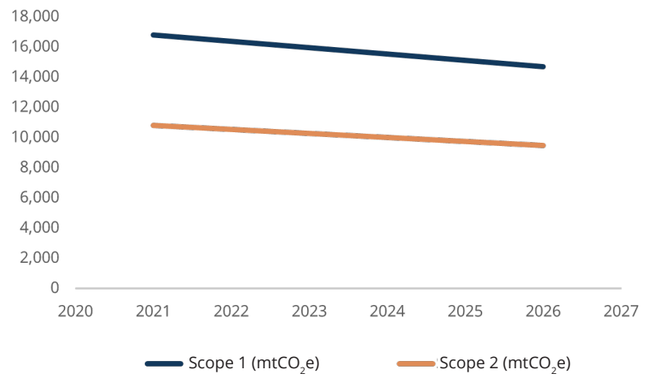
	Base Year Emissions (2021)	Target year (2026)	GHG Reduction target (%)
Scope 1 emissions ($mtCO_2e$)	16,785	14,687	12.5%
Scope 2 emissions ($mtCO_2e$)	10,805	9,454	12.5%
Scope 1+2 emissions ($mtCO_2e$)	**27,590**	**24,141**	**12.5%**

Total Scope 1+2 Reduction



To be achieved by 2026

Absolute Emissions Reduction Target | WB2°C



Decarbonization Plan

The democratization plan seeks to reduce an organization's overall carbon footprint by reducing the resource consumption of its facilities and operations.

Areas for improvement were identified based on an internal benchmarking assessment. The personalized set of decarbonization steps are presented on the next page. In the future, the feasibility of chosen projects will be assessed by a thorough feasibility study and analysis of their key components, after which the appropriate next steps will be conducted.

Climate Resilience Future for Domty

First CFP

As of this year (2021), Domty started its journey towards a more climate-resilient future. Carbon footprint assessment is a major milestone in our journey as it helps in identifying the problem in order to start solving it.

First Stage of Decarbonization Actions

Complete Carbon / Ecological Footprint Assessment

At the current state, selected activities from Scope 3 have been assessed. In order to make in-depth analysis, a complete carbon footprint including all Scope 3 emissions is recommended.

Sustainability Policies

Develop sustainability policies for all Domty facilities and activities with commitment to promoting governance, environmental and social sustainability.

Waste Management Plan

100% of Domty manufacturing plants are ISO 14001 certified. However, further efforts could be exerted in our waste management system to ensure a proper handling and processing of our waste.

Energy and Water Management System

Adopting a water and energy management system will help us conserve energy and water while improving the effectiveness of how we use our resources.

Recyclable or Reusable Packaging Materials

Work on converting 80%-100% of our packaging materials to recyclable or reusable materials.

Data Monitoring & Controlling System

Develop a digital sustainability management tool to facilitate collecting and monitoring all types of consumptions (electricity, water, fuel etc.) of all locations and allow for intervention in case of any extra/unnecessary consumption.

Refrigerants Management

Work on conducting regular maintenance to the HVAC system to avoid refrigerants leakage. This would also include recording accurate data of refrigerants used; their types, quantities and area of use.

Capacity building

Educating employees about climate change, decarbonization and climate resilience.

Second Stage of Decarbonization

Local Raw materials Sourcing

Increase the percentage of local suppliers instead of relying on imported materials.

Renewable Energy

Adopt renewable energy resources to supply Domty's electricity needs. Domty is currently studying the possibility of constructing a solar PV station to substitute for 10% of electricity consumption.

Reduce Plastic Usage

Reduce the use of virgin plastic in our packaging.

Owned Vehicle Efficiency

- Implement regular inspection and maintenance to transportation fleet to ensure it is working with the desired efficiency.
- Domty already started Studying the possibility of changing part of its fleet to Natural Gas instead of Diesel fuel.

Sustainable Building Guidelines

Adopt sustainable building guidelines such as; insulation, draught proofing, efficient lighting and lighting control, HVAC operational parameters and control, external/internal shading optimization, daylight and occupancy sensors.

Regenerative Agricultural Products

Work on sourcing raw materials and ingredients from regenerative agricultural methods.

Value Chain Decarbonization

Design/update and adopt a new supplier selection criteria, suppliers' monitoring and auditing programs with "Green Supply Chain" policies to minimize waste and improve environmental footprint values. By including environmental factors for the stages of the supply chain; the traditional supply chain could be transformed to green one, where such an initiative will ensure the sustainability of natural resources and boost eco-friendly materials.

2021 **2025** **2030**

Annex

Definitions & Terminology

Base Year	A base year is a reference year in the past with which current emissions can be compared. In order to maintain the consistency and comparability with future carbon footprints, base year emissions need to be recalculated when structural changes occur in the company that change the inventory boundary (such as acquisitions or divestments). If no changes to the boundaries of the inventory happen, the base year is not adjusted.
Carbon Footprint	The amount of greenhouse gases that an individual, group, or organization lets into the atmosphere in a certain time frame.
CO_2e	Carbon dioxide equivalent or CO_2 equivalent, abbreviated as CO_2e, is a metric used to compare the emissions from various GHGs on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.
Direct Emissions	Greenhouse gas emissions from facilities/sources owned or controlled by a reporting company, e.g. generators, blowers, vehicle fleets.
Emission Factors	Specific value used to convert activity data into greenhouse gas emission values.
Fugitive Emissions	Fugitive emissions are emissions of gases or vapors from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities. As well as the economic cost of lost commodities, fugitive emissions contribute to air pollution and climate change.
GHG Protocol	Greenhouse Gas Protocol – uniform methodology used to calculate the carbon footprint of an organization.
GWP	Global Warming Potential – an indication of the global warming effect of a greenhouse gas in comparison to the same weight of carbon dioxide.

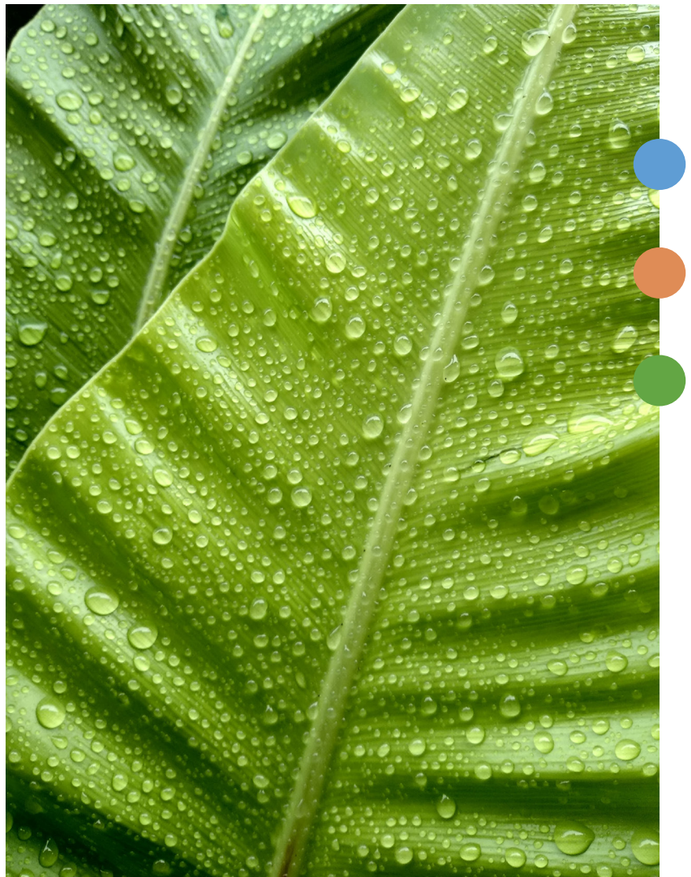
HVAC	HVAC (heating, ventilating, and air conditioning; also heating, ventilation, and air conditioning) is the technology of indoor and vehicular environmental comfort. Its goal is to provide thermal comfort and acceptable indoor air quality.
Indirect Emissions	Greenhouse gas emissions from facilities/sources that are not owned or controlled by the reporting company, but for which the activities of the reporting company are responsible, e.g. purchasing of electricity.
Kyoto Protocol	It operationalizes the United Nations Framework Convention on Climate Change by committing industrialized countries to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets.
Operational Boundary	Determination of which facilities or sources of emissions will be included in a carbon footprint calculation.
Organizational Boundary	Determination of which business units of an organization will be included in a carbon footprint calculation
Refrigerant	A refrigerant is a substance or mixture, usually a fluid, used in a heat pump and refrigeration cycle.
Renewable Energy	Energy from a source that is not depleted when used, such as wind or solar power.
Scope 1	Emissions from sources that are owned or controlled by the reporting entity (i.e. any owned or controlled activities that release emissions straight into the atmosphere).
Scope 2	Emissions associated with the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by the company.
Scope 3	Emissions resulting from other activities. This includes transport fuel used by air business travel, and employee-owned vehicles for commuting to and from work; emissions resulting from courier shipment; emissions from waste disposal, etc.

Data Sources & Quality

All the information used to compute the carbon footprint comes from Domty's database. The data quality has been evaluated and presented below. The most used types of data are:

- **Primary Data:** Data taken from documents that are directly linked to the assessment, such as electricity invoices, to calculate emissions caused due to electricity.
- **Secondary Data:** Such as databases, studies, and reports.
- **Assumptions:** Assumptions made based on internationally recognized standards and studies.

CFP Data quality for the year 2021 are presented in the below table:

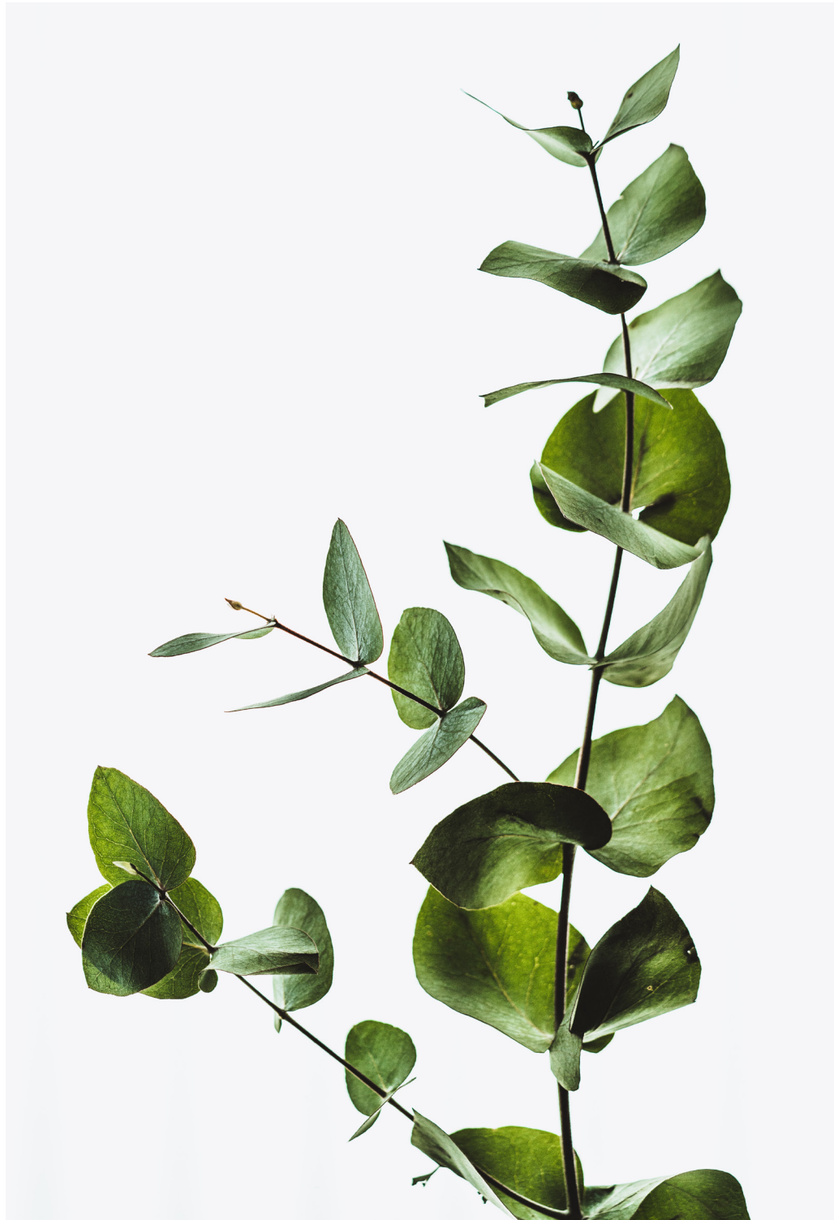


- Weak: Priority area for improvement
- Satisfactory: Could be improved
- Good: No changes recommended

	SCP	Activity	Data	Resolution
🟢	1	**DIESEL FUEL BURNING**	10,000 L	Data received as monthly diesel fuel consumption in liters. Diesel was used for only three months during the reporting period.
🟠	1	**NATURAL GAS FUEL BURNING**	3,631,733 m^3	Data received as monthly natural gas consumption in m^3. However, some warehouses had missing data due to unavailability of reading meters.
🟢	1	**OWNED VEHICLES FUEL BURNING**	2,844,934 L	Data received for fuel consumption of owned vehicles as monthly consumption in liters.
🟠	1	**REFRIGERANTS LEAKAGE**	773 kg	The total consumption of refrigerants was recorded in kg for both plants. For more accuracy, the data should be recorded for each plant separately.
🟠	2	**PURCHASED ELECTRICITY**	25,342,263 kWh	Data received as monthly electricity consumption in kWh. However, some warehouses had missing data due to unavailability of reading meters.
🟢	3	**PACKAGING MATERIALS**	1,22,070,011 pcs and 310,890 kg	Packaging materials such as Tetra Pak packages, juice straws, plastic bags and cardboard received in pieces and kg.
🟢	3	**SUPPLIES: PAPER AND INK**	2,753,400 A4 sheets and 632 ink cartridges	Paper and ink consumption in pieces.
🟠	3	**WATER USAGE & WASTEWATER TREATMENT**	775,365 m^3	Data received as monthly water consumption in m^3. However, some warehouses had missing data due to unavailability of reading meters.
🟢	3	**SOLID WASTE DISPOSAL**	5,233 tons	Solid waste disposal specified as type of waste and quantities in tons.
🟢	3	**COMMUTING**	1,490,760 L	Data received as daily fuel consumption in liters.
🟢	3	**RENTED VEHICLES**	217,724 L and 15,280,512 km	Data received for diesel fuel consumption in liters and distance travelled in km.
🟠	3	**EXPORTS**	31,762,947 ton.km	For marine and land exports, the weight for each shipment (tons) and shipping/destination country was recorded in Domty 's database. However, the ports of destination were assumed due to the unavailability of data.

Relevancy & Exclusions

The following section describes the Scope 3 GHG emission sources that were excluded from Domty's GHG inventory due to data not being available, or not technically feasible to obtain or for data whose emission quantification is beyond Domty's operation and control. The exclusion rationale per category has also been specified.



#	Activity	Description	Emissions ($mtCO_2e$)	Status
1	**Purchased goods and services**	Includes packaging materials such as Tetra Pak packages, straws, plastic bags and cardboard, as well as paper and ink consumption.	1,860	Relevant, calculated
2	**Capital goods**	Includes the emissions from embodied carbon in owned assets, facilities, etc.	N/A	Relevant, not yet calculated
3	**Fuel and energy-related activities (not included in Scope 1 and 2)**	Includes WTT from fuel burning and owned vehicles, as well as energy consumed to supply municipal water and treat it.	3,183	Relevant, calculated
4	**Upstream transportation and distribution**	This should include emissions from import-related activities. Due to a lack of data, these emissions were left out of the 2021 reporting period.	N/A	Relevant, not yet calculated
5	**Waste generated in operations**	Includes emissions from the transportation of solid waste, recycled, reused and the landfill emissions from the disposed waste.	111	Relevant, calculated
6	**Business travel**	This should include emissions from business-related air and land travel and hotel stays. However, due to a lack of data, these emissions were not included.	N/A	Relevant, not yet calculated
7	**Employee commuting**	Employee's commuting between their homes and their work place during the reporting year.	4,970	Relevant, calculated
8	**Upstream leased assets**	Domty does not have any upstream leased assets.	N/A	Not relevant, explanation provided
9	**Downstream transportation and distribution**	Includes the emissions from downstream transportation from the factories to warehouses and retail. However, part of the transportation is outsourced. The emissions cover the rented vehicles and exports. For marine exports, only port-to-port emissions have been considered.	12,775	Relevant, calculated
10	**Processing of sold products**	This category is not relevant to Domty, as the products are ready for direct consumption and do not require any further industrial processing.	N/A	Not relevant, explanation provided
11	**Use of sold products**	This category could include emissions related to retail outlets, as well as consumers' use etc. However, this category is considered to be out of our operational boundaries and scope.	N/A	Not relevant, explanation provided
12	**End of life treatment of sold products**	This category is out of our operational boundaries and scope.	N/A	Not relevant, explanation provided
13	**Downstream leased assets**	Domty does not have any downstream leased assets.	N/A	Not relevant, explanation provided
14	**Franchises**	This category is not relevant to Domty's business model; hence, it has been excluded.	N/A	Not relevant, explanation provided
15	**Investments**	Operation of investments (including equity and debt investments and project finance).	N/A	Not relevant, explanation provided

Carbon Footprint Equations

Scope 1: Direct Emissions

Stationary Combustion

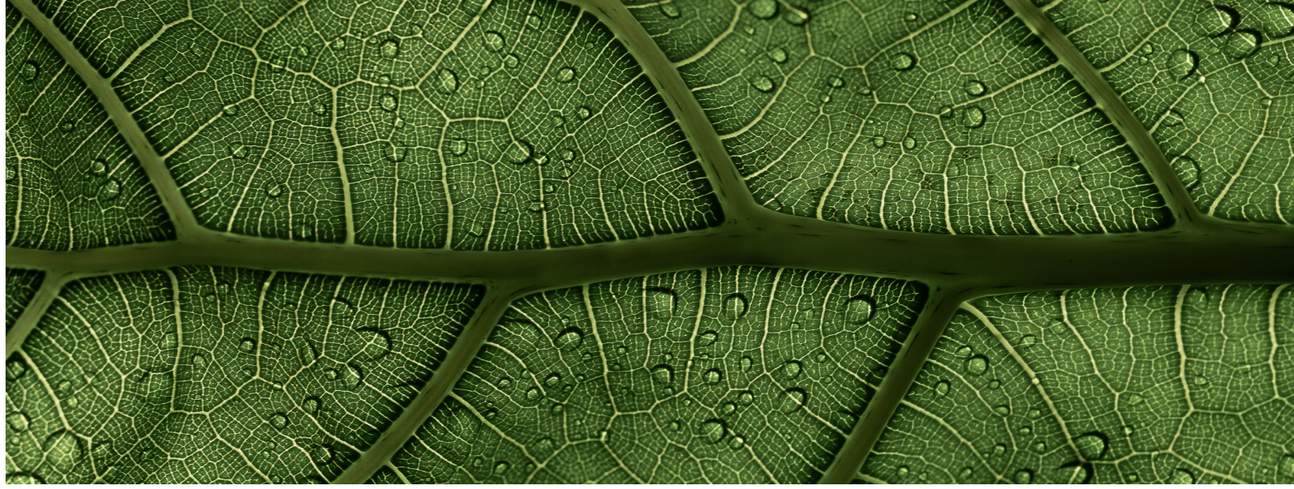
Diesel was consumed as a replacement to natural gas only in the CPC plant furnaces in the months from January to March. The total amount of diesel consumed was recorded in liters. Since it is directly used by Domty, the emissions resulting from the stationary consumption were accounted for under Scope 1.

Fuel Burning: Diesel Emissions ($mtCO_2e$) =
Fuel Consumption (L) x EF ($mtCO_2e$/L)

Mobile Combustion

Owned vehicles fuel burning falls under Scope 1 direct emissions. This includes all Domty's owned vehicles. As for the owned vehicles of Domty, fuel type and fuel consumption in liters were obtained from the database. Since the data of fuel type and fuel consumption were available, these were utilized to estimate the emissions occurring from owned vehicles.

Fuel Burning: Owned Vehicles Emissions ($mtCO_2e$) =
Fuel Consumption (L) x EF ($mtCO_2e$/L)



Fugitive Emissions

Refrigerant Leakage Refrigeration fluids are fluids which are used to cool a space in refrigeration cycles. Each year, refrigerants are used to re-charge the cooling systems to compensate for the leakage that happened during the operating year. Domty's facilities used "R-134", "R-22", "R-404", "R-407" and "R-410"refrigerants during the reporting year.

Refrigerants leakage emissions ($mtCO_2e$) =
Refrigerant leakage (kg) x EF ($mtCO_2e$/kg)

Scope 2: Indirect Emissions

Purchased Electricity

Emissions from purchased electricity are the product of the national grid emission factor and the annual electricity consumption. Purchased Electricity falls under Scope 2 (Indirect emissions). The total electricity consumption emissions of the year 2021 were calculated using the formula below:

Purchased Electricity Emissions ($mtCO_2e$) =
Electricity Consumption (kWh) x EF ($mtCO_2e$/kWh)

Scope 3: Indirect Emissions

Purchased Goods and Services

Packaging Materials

Packing materials emissions fall under Scope 3 (indirect emissions). Packing materials include plastic bags, Cheese, milk, and juice Tetra Pak packs, etc. Emissions from packing materials are the product of the weight or the number of each type of packing material by the emission factor of this material.

Packing Material Emissions ($mtCO_2e$) =
Σ Weight of Packing Material (ton) × EF of material ($mtCO_2e$/ton)

OR

Packing Material Emissions ($mtCO_2e$) =
Number of Packing Material (unit) × EF of material ($mtCO_2e$/unit)

Office Supplies

Purchased goods are the commodities used by the different sectors. For the current reporting period, this included the paper and ink consumption. The resulting emissions fall under Scope 3. The yearly amounts of purchased goods per type have been retrieved from the internal data recordings, as units of items. The emissions were obtained by multiplying the emission factor per unit by the number of items.

Paper Consumption Emissions ($mtCO_2e$) =
Weight of Consumed Paper (kg) x EF of paper ($mtCO_2e$/kg)

Ink Consumption Emissions ($mtCO_2e$) =
Number of Ink Cartridges (units) x EF of Ink ($mtCO_2e$/unit)

Fuel And Energy-Related Activities (Not Included in Scope 1 And 2)

Well-to-tank (WTT)

WTT emissions are those that result from the production of a fuel, including resource extraction, initial processing, transportation, fuel production, distribution and marketing, and delivery into a consumer vehicle's fuel tank. WTT emissions were taken into consideration in order to reflect the full range of climatic impacts from fuel-burning activities. All fuel burning activities, such as diesel & natural gas consumed by Domty's buildings and distribution fleet were included in WTT emissions. For each amount and type of fuel burned, the general formula was applied to determine the relevant emissions.

WTT Emissions ($mtCO_2e$) =
Fuel Consumption (unit) x WTT EF ($mtCO_2e$/unit)

Water Usage and Wastewater Treatment

The emission factor for water usage and wastewater treatment is calculated by using a conversion formula, provided by the Holding Company for Water and Wastewater (HCWW). The emissions are based on the amount of energy consumed in each process. The emission factors for water supply and wastewater treatment are accordingly calculated by multiplying the conversion factor by the electricity emission factor. At the same time, a unit analysis is performed to make sure the units are conforming.

Energy Consumption (kWh) =
Water Supply/ Wastewater (m^3) x Conversion Formula (kWh/m^3)

Water Supply & Treatment ($mtCO_2e$) =
Energy Consumption (kWh) x EF ($mtCO_2e$/kWh)

Waste Generated in Operations

Solid Waste Disposal

Emissions from solid waste disposal are the product of the emission factor for each waste type and the quantity of waste for each type in addition to the waste fate. (i.e., the transportation to the landfill and the landfilling procedure were included in the emission factor of the landfilled waste).

Solid Waste Emissions ($mtCO_2e$) =
Quantity of waste/type (tons) x EF/ type of waste ($mtCO_2e$/tons)

Employee Commuting

Commuting (Including WTT)

The distance travelled per employee daily was estimated and multiplied by the total working days to get the annual distance. Annual distance is then multiplied by the corresponding emission factor to calculate the associated indirect emissions. Domty only provides commuting service for workers in the two manufacturing plants.

Employees Commuting Emissions ($mtCO_2e$) =
Travelled distance (km) x EF ($mtCO_2e$/km)

Downstream Transportation & Distribution

Rented Vehicles (Including WTT)

To calculate the emissions for rented vehicles, vehicle type and distance travelled per each vehicle type were obtained from Domty's data records. Emission factors suitable for each type of vehicle have been used to calculate the associated emissions.

Rented Vehicle Emissions ($mtCO_2e$) =
Distance Travelled (km) x EF ($mtCO_2e$/km)

Exports (Including WTT)

The type, weight, and destination of each shipment were retrieved from our database. The distance travelled per shipment was then calculated using a port-to-port calculator. The distance travelled and the weight of each shipment were multiplied to produce the ton-km (ton.Km), which was then multiplied by the corresponding emission factor to produce the total emissions. WTT emissions were also accounted for under Scope 3.

Emissions from port-to-port =
Exported Goods Weight (ton) × Distance traveled (km) × EF ($mtCO_2e$/ton.km)

WTT Emissions from port-to-port =
Exported Goods Weight (ton) × Distance traveled (km) × WTT EF ($mtCO_2e$/ton.km)

Quality Assurance Statement

To the Domty's Board of Directors',

We have been appointed by Domty to conduct GHG calculations pertaining to Domty's operational activities in Egypt for the period from 1st of January 2021 to the 31st of December 2021. The scope covered Domty's factories, warehouses, branches, and headquarters.

AUDITORS' INDEPENDENCE AND QUALITY CONTROL

We adhere to integrity, objectivity, competence, due diligence, confidentiality, and professional behavior. We maintain a quality control system that includes policies and procedures regarding compliance with ethical requirements, professional standards, and applicable laws and regulations.

AUDITORS' RESPONSIBILITY

In conducting the GHG calculations, we have adopted the Greenhouse Gas Protocol Guidelines, IPCC Guidelines for Greenhouse Gas Inventories, and finally ISO 14064-1:2019 specification with guidance at the organization level for quantification and reporting of GHG emissions and removals.

It is our responsibility to express a conclusion about the quality and completeness of the primary data collected/ provided by Domty. We have performed the following quality assurance/ quality control tasks:

- Several rounds of data requests were performed whenever the received information was not clear;
- All data presented in this report were provided by the reporting entity and revised and completed by our technical teams;
- For data outliers, meetings were held to investigate the accuracy of the data and new data was provided when requested;
- Any gaps, exclusions and/or assumptions have been clearly stated in the report.

CONCLUSION

Based on the aforementioned procedures, nothing has come to our attention that would cause us to believe that Domty's raw data used in the GHG calculations have not been thoroughly collected, verified and truly represent Domty's resource consumption in the reporting period related to all categories/ aspects identified in this report. We do not assume and will not accept responsibility to anyone other than Domty for the provided assurance and conclusion.

Dr. Abdelhamid Beshara, Founder and Chief Executive Officer
MASADER, ENVIRONMENTAL & ENERGY SERVICES S.A.E CAIRO,
October 2022

ABOUT MASADER

Masader is an innovative interdisciplinary consulting, design and engineering sustainability firm based in Cairo, aiming at leveraging positive impact across the MENA region and globally. It specializes in Resource Efficiency, Sustainable Management of Natural Resources and Integrated Sustainability Solutions. Since 2015, Masader has led 100+ projects across the areas of energy, environment, climate change & carbon footprint, circular economy, green building (LEED), as well as corporate sustainability strategies, reporting and certification.

157 Baehler's Mansions Building, 2nd Floor, 26th of July Street, Zamalek, Cairo, Egypt

Tel/Fax: +202 2735 4033
Email: info@be-masader.com
Website: https://www.be-masader.com


Feta Cheese
with Pastrami
vegetable fat