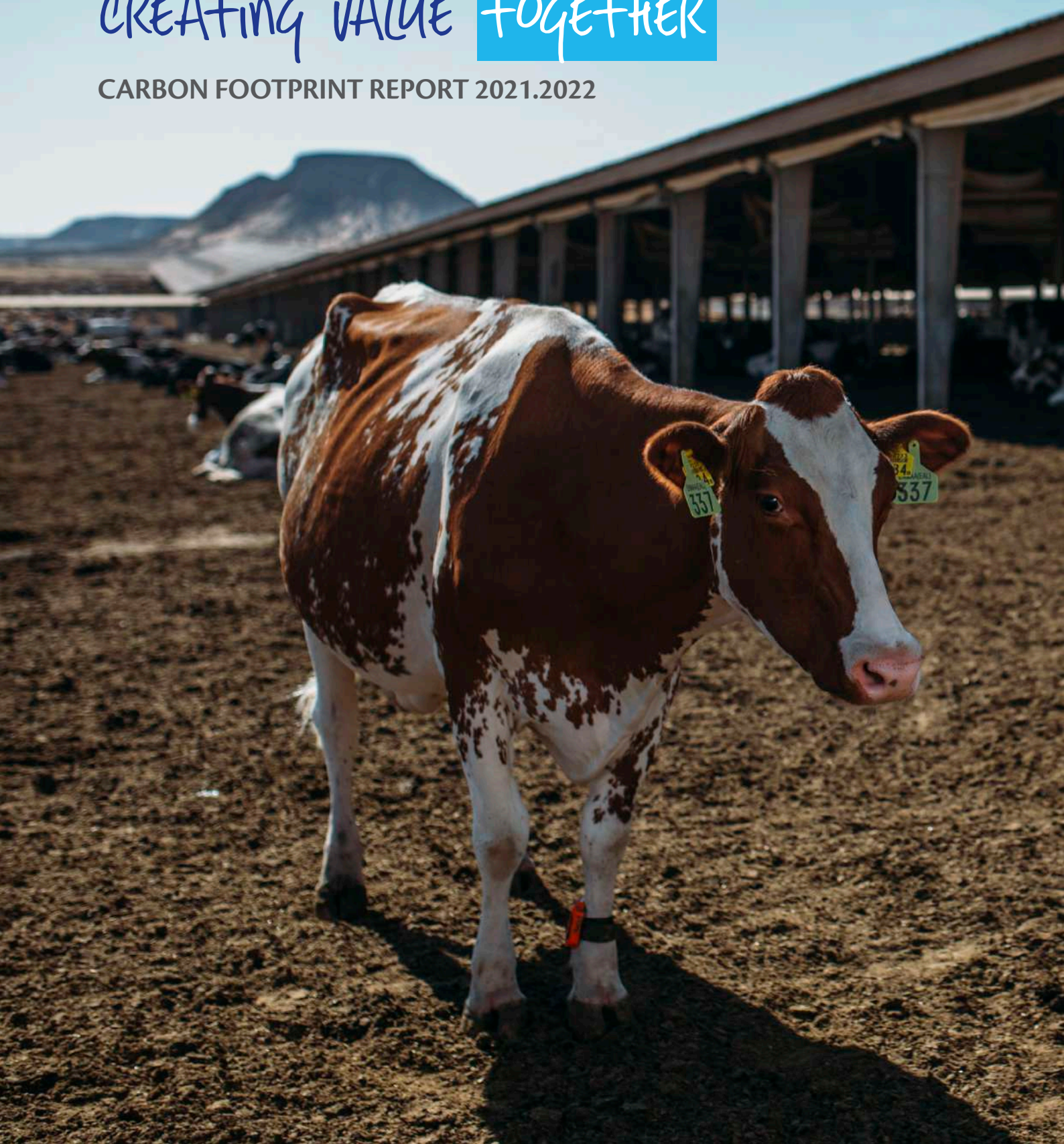




CREATING VALUE TOGETHER

CARBON FOOTPRINT REPORT 2021.2022



CONTENTS



Emissions results of year 2022

The farming sector represents the highest contributor to GHG emissions in Juhayna, at **87%** for both years, followed by the manufacturing sector at **10%**.



Benchmarking Performance

Benchmarking, only Scope 1 and 2 emissions are considered, and the businesses are presented as carbon intensity



2021.2022

CARBON FOOTPRINT REPORT

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Carbon Footprint Results

In 2022, Juhayna recorded total emissions amounting to **1,093,407 mtCO₂e**, representing a **7%** increase compared to the previous year's emissions of **1,025,287 mtCO₂e**.

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WE CAN TOGETHER

ABBREVIATIONS & ACRONYMS

AFOLU	Agriculture, Forestry, and Other Land Use
BY	Base Year
CDP	(Disclosure Insight Action (formerly the Carbon Disclosure Project
CFP	Carbon Footprint
CH4	Methane
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
DEFRA	Department for Environment, Food & Rural Affairs
EBIT	Earnings Before Interests and Taxes
EF	Emission Factor
FMCG	Fast-Moving Consumer Goods
GHG	Greenhouse Gas
GWP	Global Warming Potential
HQ	Headquarters
HVAC	Heating, Ventilation, and Air-Conditioning
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standard Organization
kWh	Kilowatt hour
LUC	Land Use Change
m²	Square meter
m³	Cubic meter
mtCO2e	Metric tons Carbon Dioxide equivalent
MWh	Megawatt hour
p.km	Passenger kilometre
t	ton
tN	ton Nitrogen
WTT	Well to Tank



EXECUTIVE SUMMARY



Juhayna Food Industries, a prominent player in the Egyptian dairy and juice production sector, approaches its leadership role with a strong focus on sustainability. For the fourth consecutive year, we are taking stock of our greenhouse gas (GHG) emissions. This report presents our carbon footprint assessment for the period from the **1st of January 2021** to the **31st of December 2021**, and from the **1st of January 2022** to the **31st of December 2022**. Our assessment spans the entirety of our operations, from our farms and manufacturing processes to distribution and headquarters. We've employed calculation methodologies in line with industry standards, including the Greenhouse Gas Protocol, the IPCC Guidelines for Greenhouse Gas Inventories, and full compliance with ISO 14064-1:2018 standards. Our evaluation covers Scope 1 direct emissions from controlled equipment and assets, Scope 2 emissions from purchased energy, and some Scope 3 indirect emissions arising from our operations.

CHANGE IN METHODOLOGY

Juhayna has made substantial improvements in data quality related to farming activities, particularly those involving livestock, prompting a **methodology change** for emissions calculations in this area. The notable shift in methodology, applied from 2019 and 2020 onwards, includes the identification of cow species as Holsteins. Consequently, Western Europe's emission factors were adopted for a more accurate representation of Juhayna's farming practices and their emissions. This

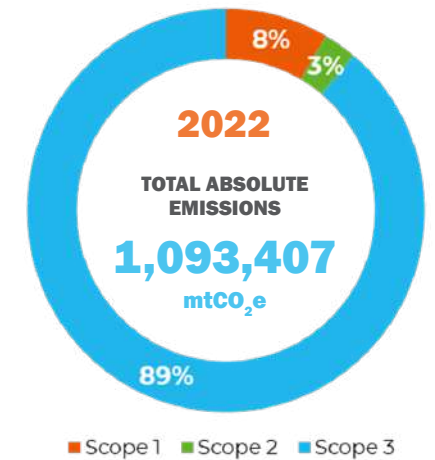
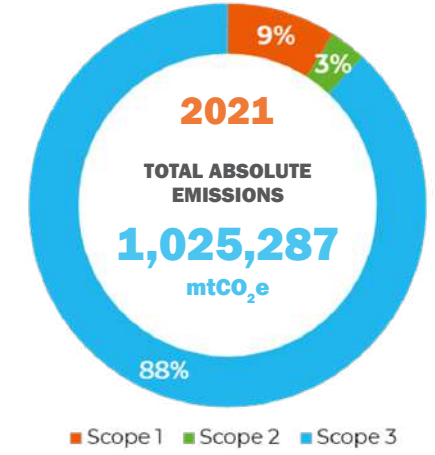
Our organizational boundary includes:

 <p>FARMING</p> <p>EL-ESSEILA FARM AL-FARAFRA FARM NON-OWNED FARMS</p>	 <p>MANUFACTURING</p> <p>AL-MASREYA AL-MARWA AL-DAWLEYA EGYFOODS</p>
 <p>DISTRIBUTION</p> <p>29 CENTERS</p>	 <p>HEAD QUARTERS</p> <p>JUHAYNA'S HQ</p>

improvement in data quality has led to adjustments in the base year and emission reduction targets. **The new base year is set as 2021**, aligning with the methodology change implementation and offering enhanced accuracy due to the improved data quality. Utilizing 2021 as the new base year enhances the transparency and precision of Juhayna's emissions reporting, reaffirming the company's commitment to effective environmental management and sustainability practices.

GHG EMISSION RESULTS

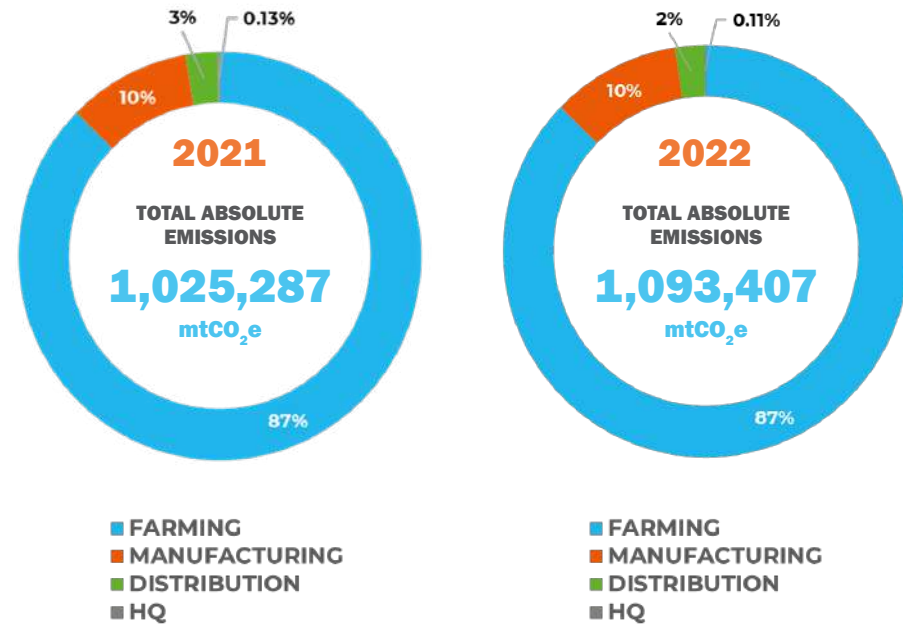
In 2022, Juhayna recorded total emissions amounting to **1,093,407 mtCO₂e**, representing a **7%** increase compared to the previous year's emissions of **1,025,287 mtCO₂e**. Scope 1 emissions experienced a slight decrease of approximately **0.8%**, and Scope 2 emissions decreased by around **2.8%**. On the other hand, Scope 3 emissions increased by approximately **7.5%**. The highest individual contributor are the local non-owned farms at **82%**.



For biogenic carbon, the carbon sequestration by the planted trees at Al-Farafra Farm amounted to **180 mtCO₂e**. The Land use Change of our farms is only calculated once and is therefore not included in this year's Biogenic Carbon. The avoided emissions are owing to our installed PV modules for electricity generation at our El-Esseila dairy farm in Al-Bahariya Oasis, preventing the release of **580 mtCO₂e**.

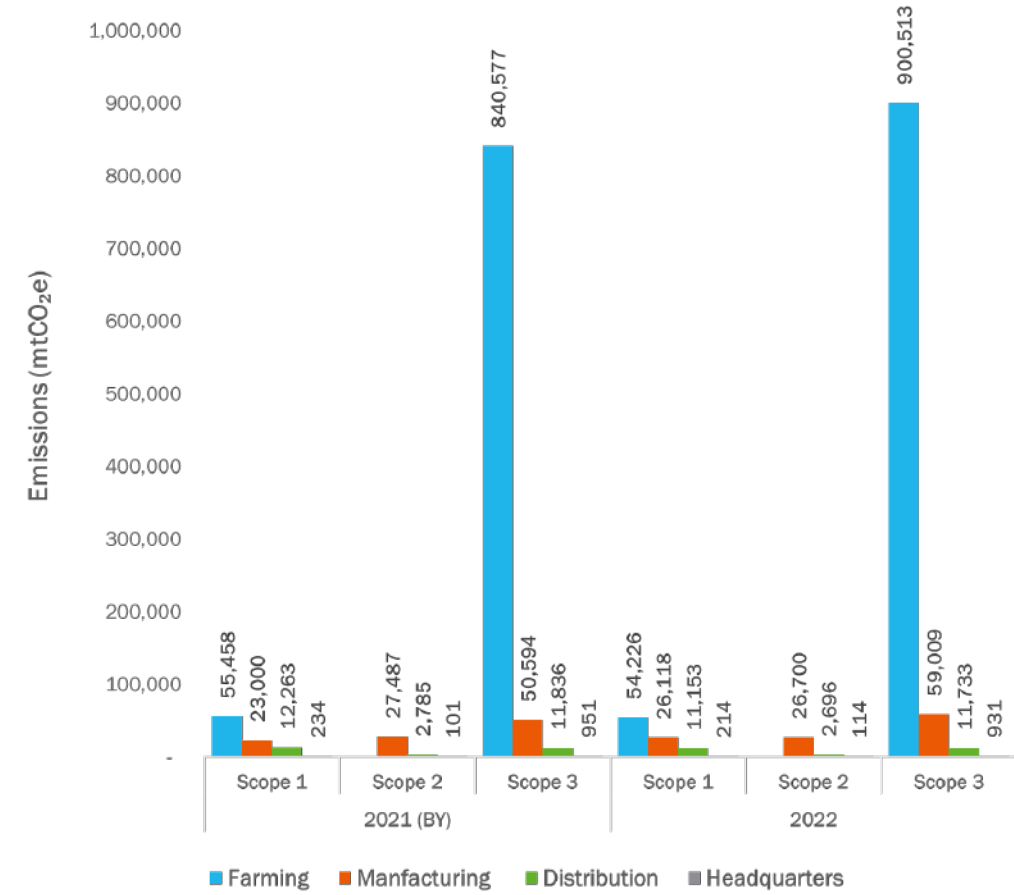
Avoided Emissions
580 mtCO₂e

Biogenic Carbon
180 mtCO₂e



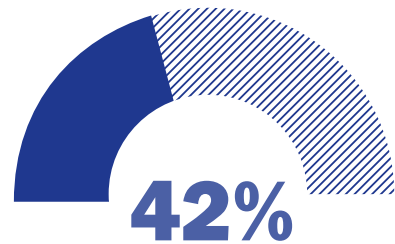
SECTOR	EMISSIONS 2021 (BY) (mtCO ₂ e)	SHARE (%)	EMISSIONS 2022 (mtCO ₂ e)	SHARE (%)
FARMING	896,035	87%	954,739	87%
MANUFACTURING	101,081	10%	111,827	10%
DISTRIBUTION	26,885	3%	25,583	2%
HQ	1,287	0.1%	1,257	0.1%
TOTAL EMISSIONS	1,025,287	100%	1,093,407	100%

Emissions per scope and sector each year (mtCO₂e)





2030
TARGET
REDUCTION



For Scope 1 and 2
emissions

REDUCTION TARGETS

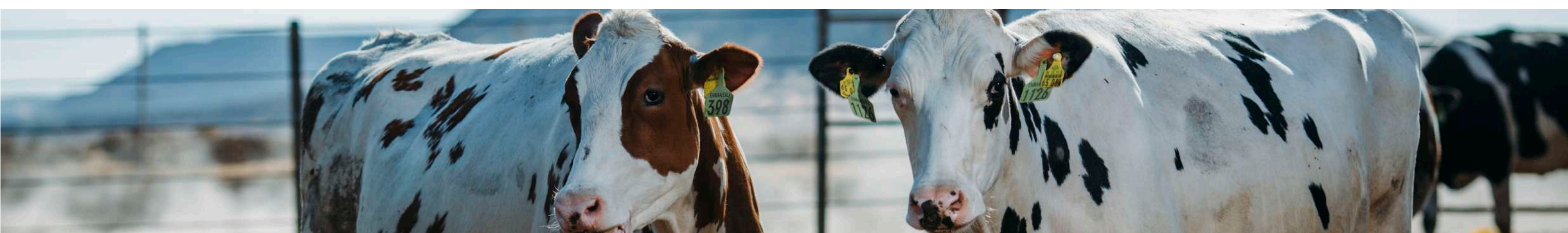
Reduction targets have been set to ensure that Juhayna's activities and related emissions contribute to a global temperature increase of no more than 1.5 degrees Celsius, in alignment with the goals of the Paris Agreement. Accordingly, Juhayna commits to reach a **42%** reduction in Scope 1 and 2 emissions by the year **2030**.

CARBON INTENSITY

The carbon intensity increased in two areas: revenue and EBIT. Emissions per unit of revenue rose by about **7.60%**, indicating that a higher proportion of emissions is associated with the company's total revenue. In the case of EBIT, emissions increased by approximately **13%**, suggesting that a significant portion of emissions is tied to the company's profitability before accounting for interest and taxes. This implies that a notable share of the environmental impact is associated with the core operational aspects of the business's financial performance. However, there was a decrease in carbon emissions intensity per unit of production, with both Scope 1 and 2 emissions decreasing by **7.7%**.

Juhayna's Carbon Emissions Intensity 2021.2022 (Scope 1 & 2 emissions)

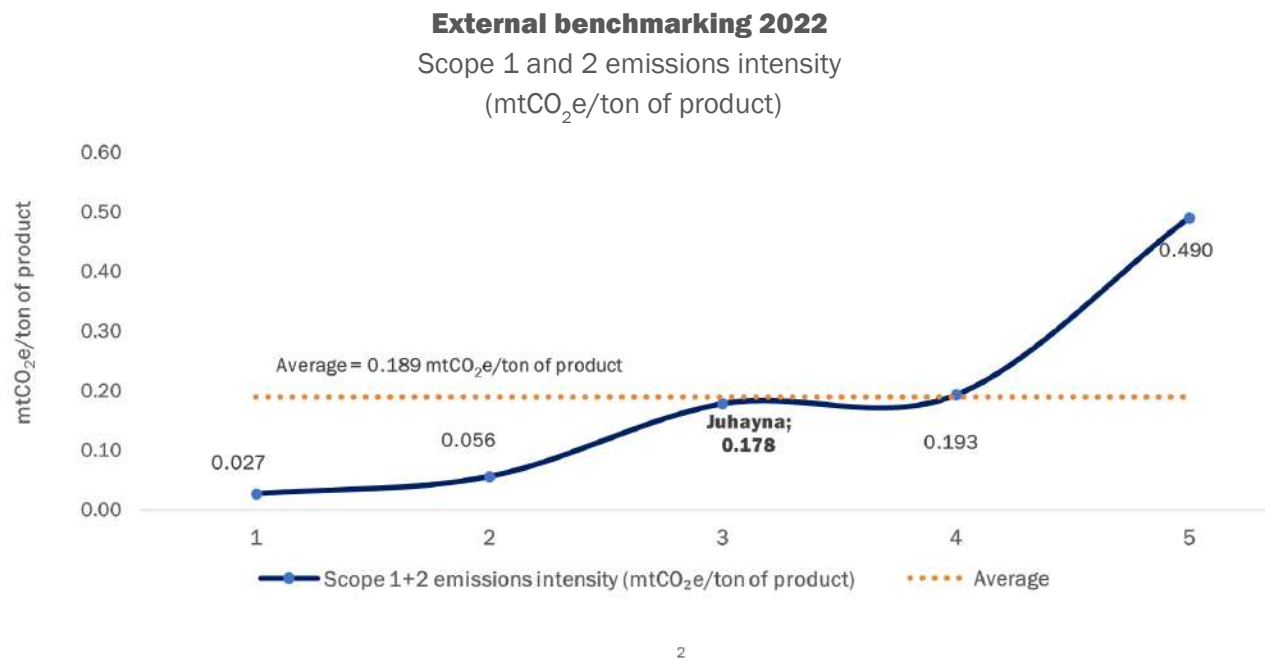
		2021 (BY)	2022	COMPARISON
EMISSIONS INTENSITY* (mtCO ₂ e/M.EGP)	REVENUE	9.91	10.67	+7.60%
	EBIT	104.69	118.27	+13.0%
ABSOLUTE EMISSIONS (mtCO ₂ e)	Scope 1	90,956	91,710	+0.83%
	Scope 2	30,373	29,510	-2.84%
	Scope 1+2	121,329	121,220	-0.09%
	Scope 3	903,958	972,187	+7.55%
	Total	1,025,287	1,093,407	+6.64%
EMISSIONS INTENSITY* (mtCO ₂ e/ton of product)	Scope 1	0.145	0.135	-6.90%
	Scope 2	0.048	0.043	-10.4%
	Scope 1+2	0.193	0.178	-7.77%



EXTERNAL BENCHMARKING

In our external benchmarking analysis, we have compared our environmental performance with other global dairy companies, focusing on Scope 1 and 2 emissions. The comparison metric used is mtCO₂e (metric tons of carbon dioxide equivalent) per ton of product. Among the dairy companies assessed, the range of emissions intensity in 2022 varied from the lowest value of **0.027 mtCO₂e/ton of product** to the highest value of **0.490 mtCO₂e/ton of product**.

Juhayna's emissions intensity stands at **0.178 mtCO₂e/ton of product**, which is below the average value of **0.189 mtCO₂e/ton of product** for the companies included in the benchmarking analysis. This indicates that Juhayna is performing favorably in terms of emissions efficiency compared to its global dairy industry peers.



JUHAYNA'S ENVIRONMENTAL PERFORMANCE AT A GLANCE

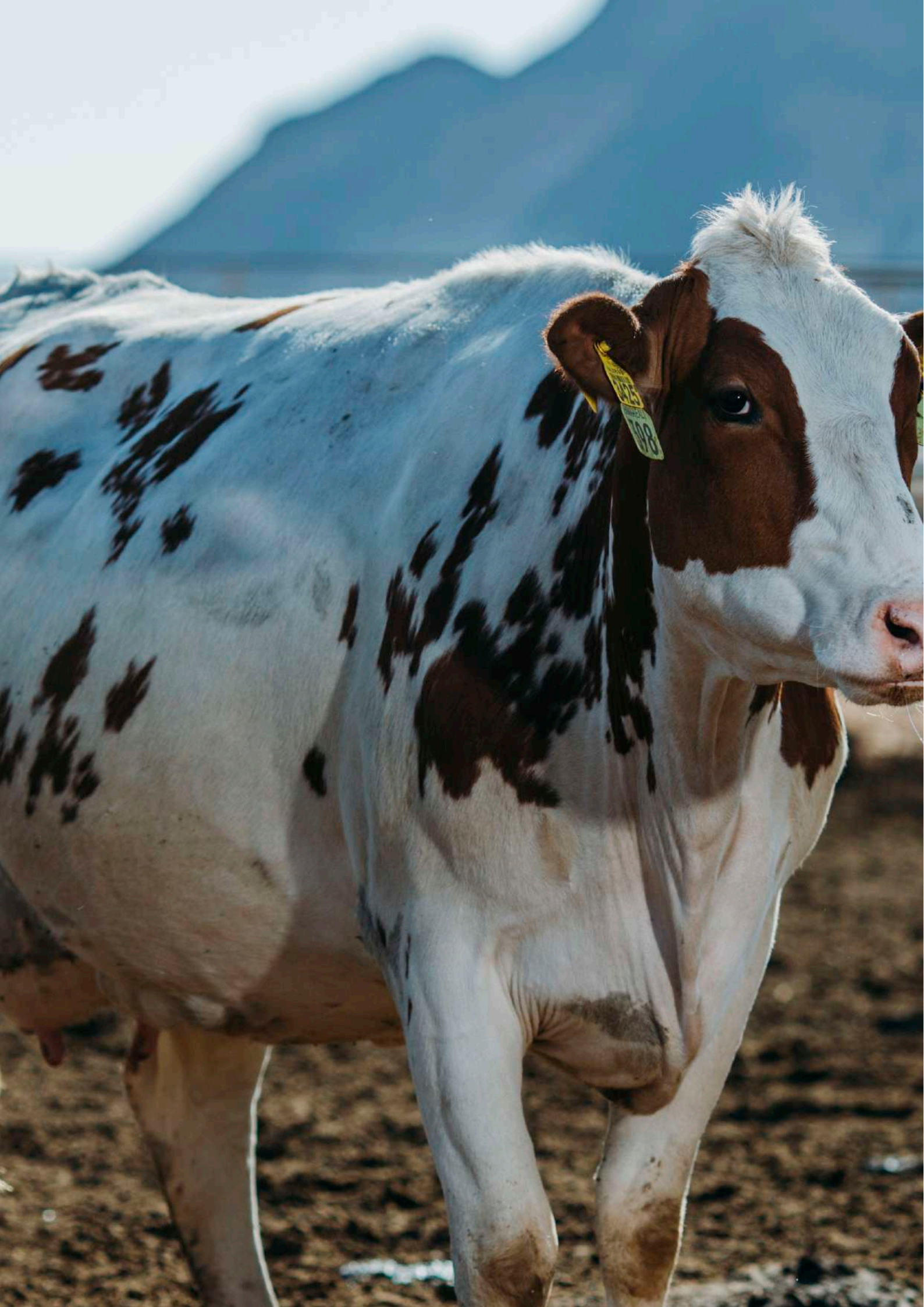
In our continuous journey towards transparency and environmental responsibility, this marks the second year of our participation in disclosing climate change data on CDP. We are proud to share that our efforts have earned us a score of C in CDP's 2022 Climate Change questionnaire, based on the data we reported for the year 2020. This accomplishment highlights our commitment to

sustainability and our dedication to measuring and reducing our environmental impact. Our CDP submission is readily accessible to investor signatories and anyone interested in delving deeper into our environmental performance. We view this transparency as an essential aspect of our sustainability efforts, allowing stakeholders to gain insights into our climate-related initiatives.



INTRODUCTION





In an era characterized by unprecedented global challenges, sustainability has arisen as an indispensable driving force in the corporate arena. As environmental concerns continue to mount, and the urgency to address climate change reaches critical levels, companies across the globe are increasingly scrutinizing their environmental footprint, guided by an unwavering commitment to carbon reduction. Amidst this transformative landscape, Juhayna Food Industries, a trailblazing leader in the food and dairy sector, assumes a pioneering role, firmly positioned at the forefront of this sustainability journey.

This Carbon Footprint Report for Juhayna encapsulates the very essence of our dedication to transparency, accountability, and conscientious environmental stewardship. It serves as a comprehensive testament to our tireless endeavors in assessing, comprehending, and mitigating our carbon footprint, all while steadfastly upholding the delivery of high-quality products and contributing to the creation of a resilient, sustainable future. Within the pages of this report, we delve deep into the critical data, strategies, and actions that underpin our environmental odyssey. Through these insights, we unequivocally demonstrate our unyielding commitment to curbing our environmental impact, thereby nurturing the emergence of a greener, more sustainable tomorrow.

For the fourth consecutive year, we take immense pride in presenting our GHG emissions report, offering a comprehensive view of Juhayna Food Industries' carbon footprint for the years 2021 and 2022. In tandem with this report, we have set new, ambitious targets aimed at reducing our emissions in alignment with global initiatives to achieve a 1.5°C scenario by 2030. Furthermore, our dedication to environmental sustainability is vividly exemplified in our achievements over the past year

In our unswerving commitment to environmental stewardship, we have taken deliberate steps to adopt eco-friendly and durable packaging for our yogurt, Rayeb, Zabado, and Mix milk, aligning our choices with our enduring pledge to preserve the environment while consistently delivering top-quality products. Concurrently, we have embarked on the expansion of our production capabilities, marked by the inauguration of a new fruit concentrates production line at the Al Marwa plant and the installation of two additional lines dedicated to Mix production at the Al Masreya plant. These endeavors collectively enhance our factory efficiency. Moreover, we have solidified a valuable partnership with Reform to address our business's waste management responsibly and sustainably.

INVENTORY **BOUNDARIES**



ORGANIZATIONAL BOUNDARIES

The organizational boundary serves as a crucial delineation, outlining the specific businesses and operations that fall under the purview of the company when it comes to accounting and reporting greenhouse gas emissions. Companies often have the flexibility to select between two primary methods for disclosure: emissions from operations they exert financial or operational control over (known as the control approach), or emissions based on their equity share in these operations (referred to as the equity share approach). In our case, we have opted for the operational control approach, encompassing our farms, factories, distribution centers, and headquarters within this framework.



FARMING



MANUFACTURING



DISTRIBUTION



HEAD QUARTERS

EL-ESSEILA FARM

AL-FARAFRA FARM

NON-OWNED
FARMS

2021
135 Farms

2022
141 Farms

AL MASREYA

AL MARWA

AL DAWLEYA

EGYFOODS

28 COUNTRIES

29 CENTERS

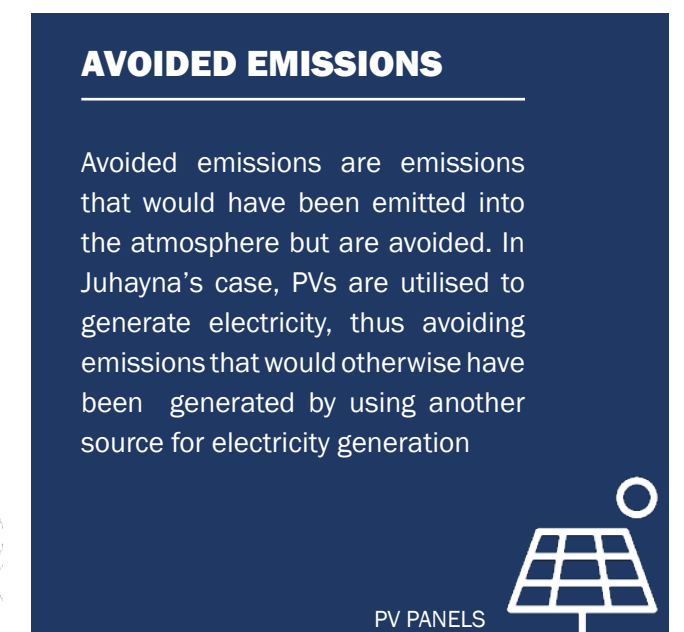
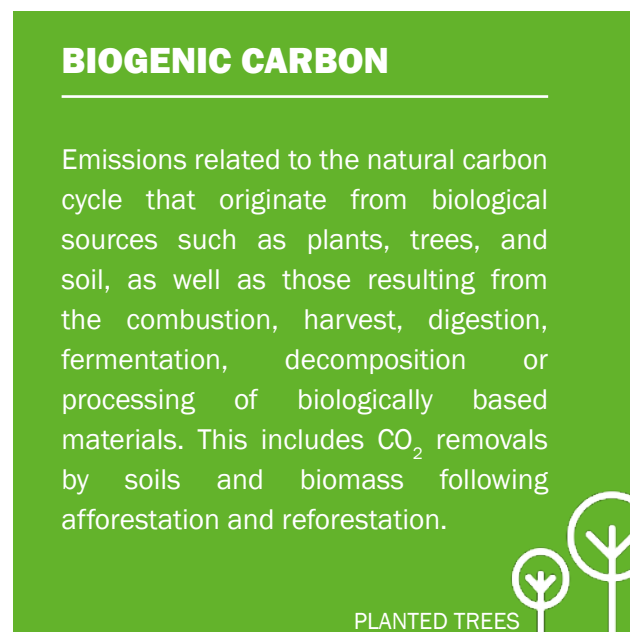
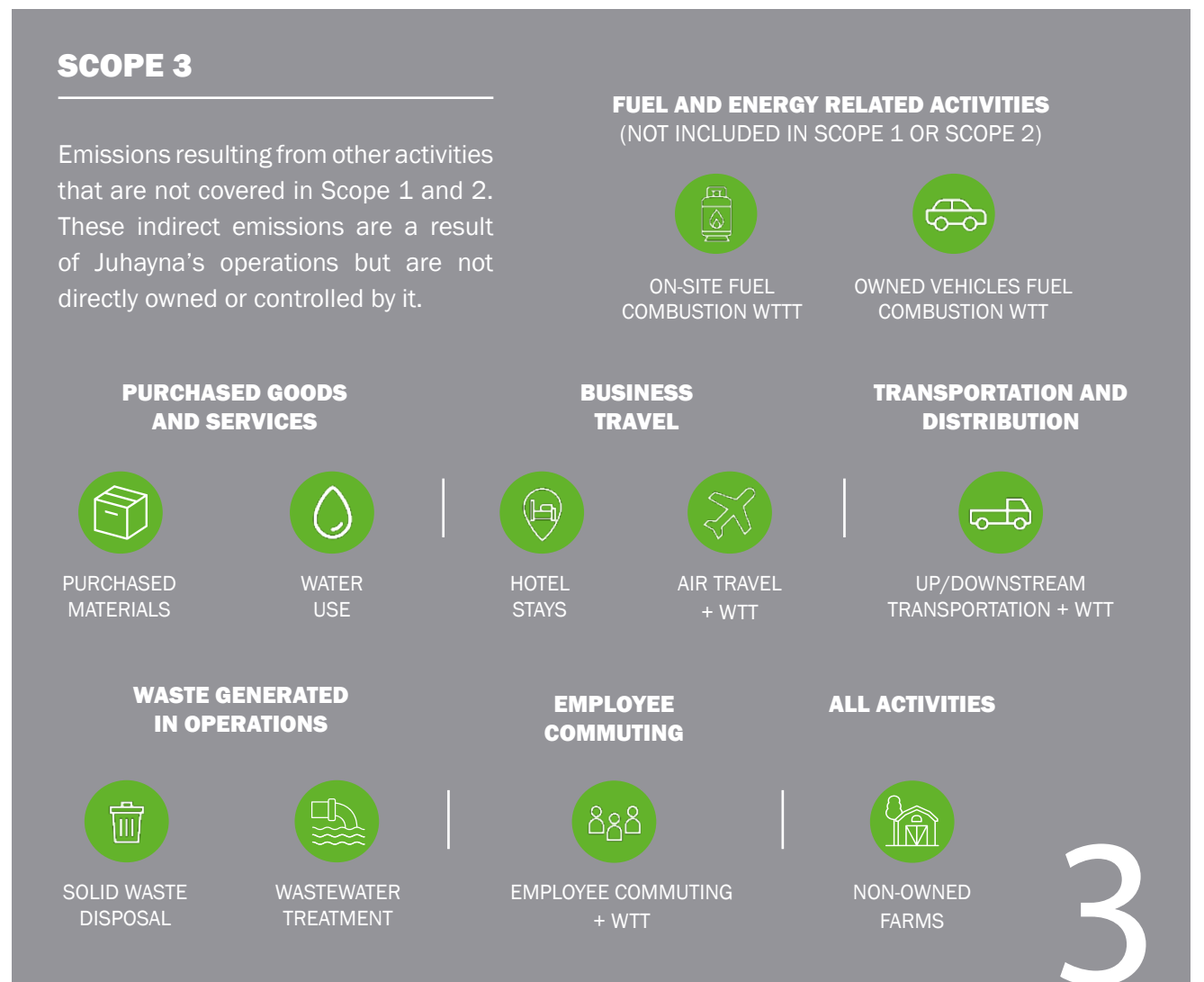
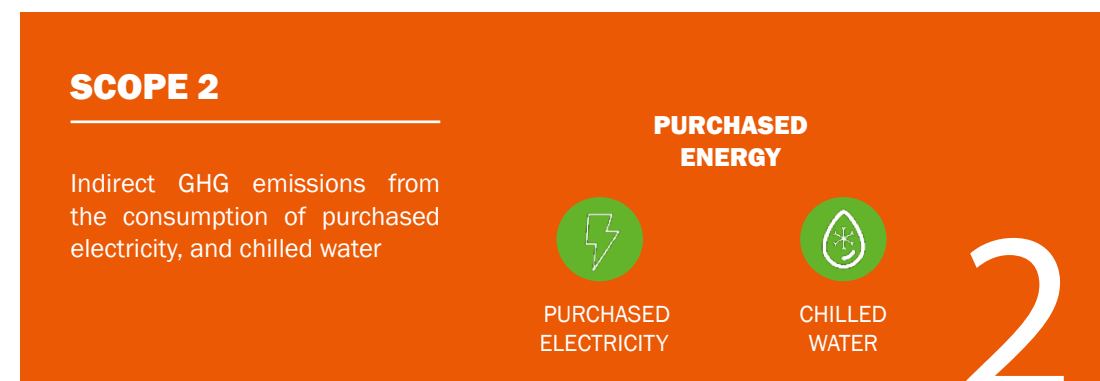
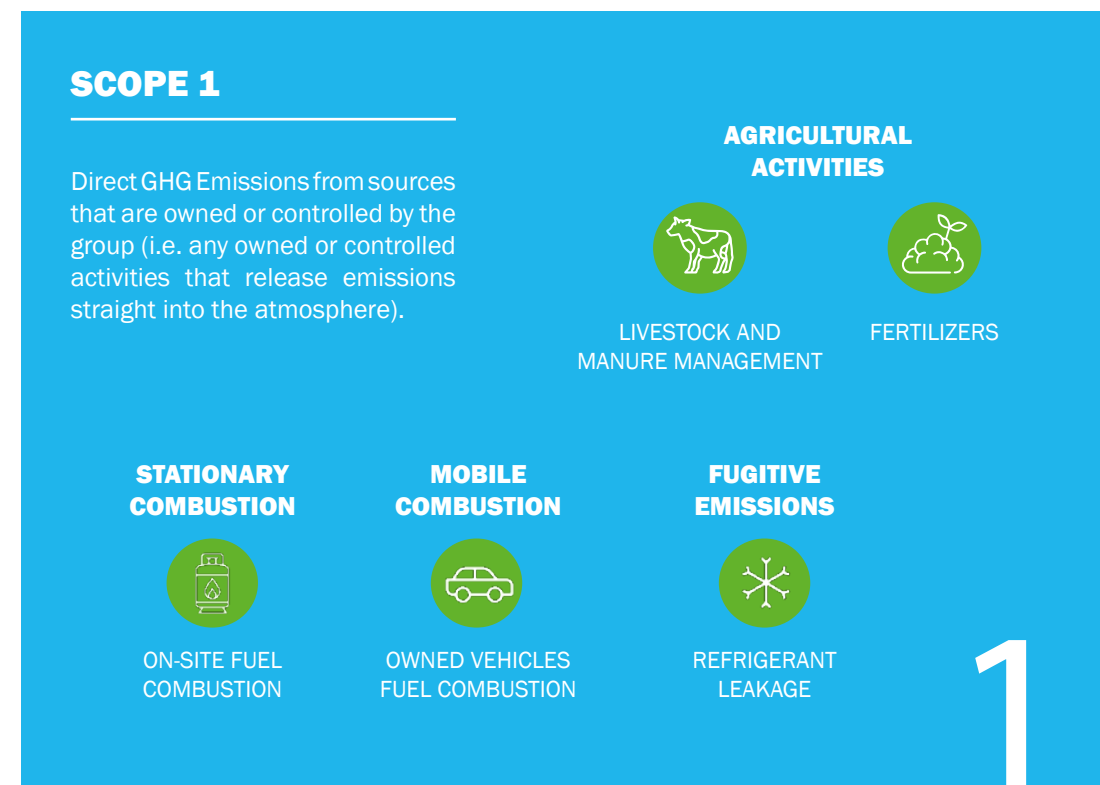
128,000
RETAIL OUTLETS

JUHANYA'S HQ

OPERATIONAL BOUNDARIES

The 2021.2022 carbon footprint report comprehensively assesses the emissions stemming from Juhayna's business activities. These emissions are categorized into different scopes: **Scope 1**, which encompasses emissions from equipment and assets owned or controlled by Juhayna; **Scope 2**, covering emissions linked to purchased energy; and

Scope 3, includes selected significant indirect emissions resulting from our operations. For Juhayna's 2021.2022 carbon footprint, we have included the most pertinent activities contributing to Scope 3 emissions in our calculations. Additionally, we have accounted for biogenic carbon and the avoided emissions.



CALCULATION APPROACH AND METHODOLOGY

This carbon footprint assessment adheres to the GHG Protocol Guidelines and incorporates various international standards, protocols, and guidelines specifically designed for the accounting and reporting of greenhouse gas (GHG) emissions. These include, but are not limited to, the following:

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
- GHG Protocol Agricultural Guidance – Interpreting the Corporate Accounting and Reporting Standard for the agricultural sector

ISO 14064-1:2018

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), including specific reference to Volume 4 – Agriculture, Forestry, and Other Land Use (AFOLU)

In alignment with the GHG protocol, the carbon footprint assessment accounted for all seven greenhouse gases covered by the Kyoto protocol: namely carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).



GREENHOUSE GAS	CHEMICAL FORMULA	100Y- Y EAR GWP
Carbon dioxide	CO ₂	1
Methane	CH ₄	27
Nitrous oxide	N ₂ O	273
Hydrofluorocarbons	HFCs	Various
Perfluorocarbons	PFCs	Various
Sulfur hexafluoride	SF ₆	25,200
Nitrogen trifluoride	NF ₃	17,400



All activities related to the business have been meticulously identified, and their corresponding emissions have been accounted for. Activity data for the years 2021 and 2022 were extracted from data records, and all data underwent thorough review and refinement.

The general formula applied for each activity allows us to calculate its emissions, with the unit of measurement being metric tons of carbon dioxide equivalent (mtCO₂e). This unit, CO₂e, signifies an amount of a greenhouse gas (GHG) whose atmospheric impact has been standardized to match the impact of one unit mass of carbon dioxide (CO₂), based on the global warming potential (GWP) of the gas.

The general approach for calculating emissions, measured in mtCO₂e, involves multiplying the activity by its corresponding emission factor. During this process, unit analysis is meticulously performed to ensure that the emission results are obtained in the desired unit, mtCO₂e. The general formula for calculating emissions for each activity adheres to the equation outlined below.

$$\text{GHG emissions, E [mtCO}_2\text{e]} = \text{Activity, A [unit]} \times \text{Emission Factor, EF [mtCO}_2\text{e/unit]}$$



REPORTING PERIOD & BASE YEAR (BY)

The reporting period is from the **1st of January 2021** to the **31st of December 2021**, and from the **1st of January 2022** to the **31st of December 2022**.

Due to significant improvements in data quality regarding our farming activities, especially those related to livestock, we have decided to implement a change in our methodology. This adjustment allows us to update the emission factor used for calculating emissions associated with our farming practices. The key departure from our previous methodology, employed in 2019 and 2020, lies in the identification of the cow species as Holsteins. Holsteins Cows, predominantly originating from the Netherlands in Western Europe, exhibit milk production quantities that closely align with those of Western Europe. Consequently, we have chosen Western Europe as the geographical region for our calculations and have employed its corresponding emission factors for our assessments. This shift represents a more accurate reflection of our farming practices and their associated emissions.

Juhayna considers the availability of enhanced and accurate data as a significant factor in determining when to update the base year and revise emission calculations. As a result, we find it necessary to modify both the base year and our emission reduction targets.

The new base year has been set as **2021**, as it aligns with the year when the change in methodology was implemented. This year is the most recent and accurate, reflecting the improved data quality and providing a reliable benchmark for future assessments. By using the year 2021 as the new base year, we aim to enhance the accuracy and transparency of our emissions reporting and reinforce our commitment to effective environmental management and sustainability practices.

CARBON FOOTPRINT RESULTS



FARMING SECTOR

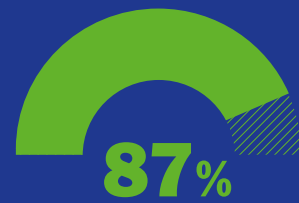
The farming sector consists of two farms owned by Juhayna and the local farms from which Juhayna sources its milk: El-Esseila, Al-Farafra, and local non-owned farms.

EL-ESSEILA
FARM

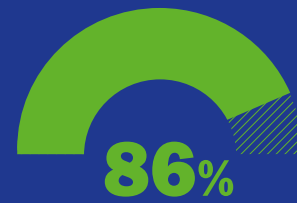
AL-FARAFRA
FARM

LOCAL
FARMS

2021



2022



This sector is the primary contributor to GHG emissions, accounting for **87%** and **86%** of the total emissions in both 2021 and 2022, respectively.

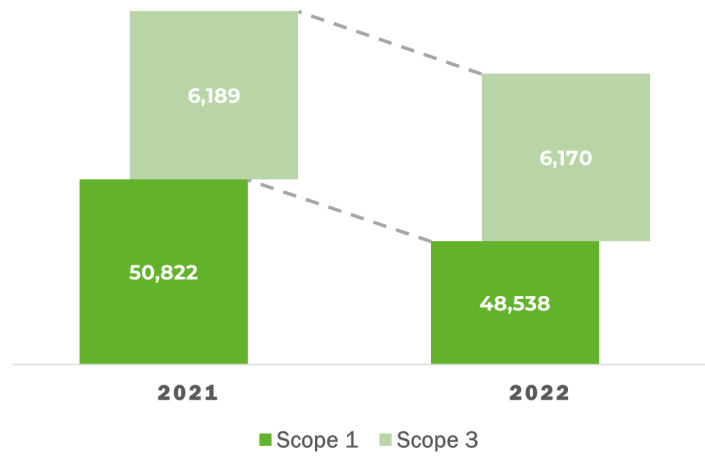


EL-ESSEILA FARM ACTIVITIES

Al-Enmaa Livestock Company specializes in dairy farm construction and owns a 550-acre property within the Bahareya Oasis, specifically located in El-Esseila. El-Esseila farm is fully owned by the company and is equipped with impressive milk production capabilities, capable of accommodating a herd of

7,000 milking cows. El-Esseila farm stands as an exclusive asset of the company, showcasing a remarkable milk production capacity of **42,509 tons** in 2021 and **46,982 tons** in 2022. This farm plays a pivotal role in fulfilling the company's significant raw milk requirements.

El-Esseila Farm Total Emissions (mtCO₂e)



2021
TOTAL ABSOLUTE EMISSIONS
57,012
mtCO₂e

2022
TOTAL ABSOLUTE EMISSIONS
54,708
mtCO₂e

2021 & 2022
AVOIDED EMISSIONS
566
mtCO₂e

The largest share of emissions comes from Livestock and Manure Management, accounting for approximately **72%** and **75%** of the total farm emissions in 2021 and 2022, respectively.

The installation of PV panels, which replaced the use of **1,703,580 kWh** of energy from diesel generators, resulted in the avoidance of emissions, totaling **566 mtCO₂e**.



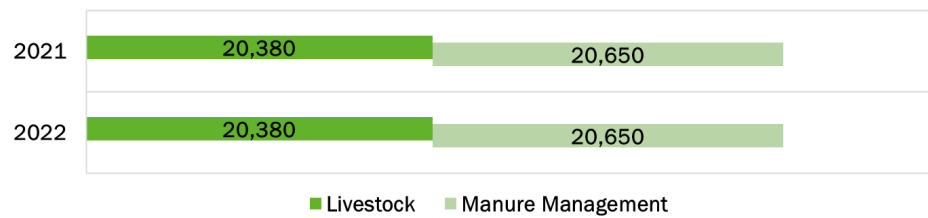
EMISSIONS PER SCOPE AND ACTIVITY (mtCO₂e)

SCOPE 1

Stationary Combustion On-site fuel combustion



Agricultural



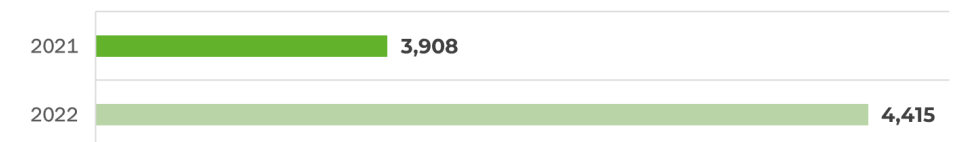
■ Livestock ■ Manure Management

Mobile Combustion Mobile Comb. Trucks

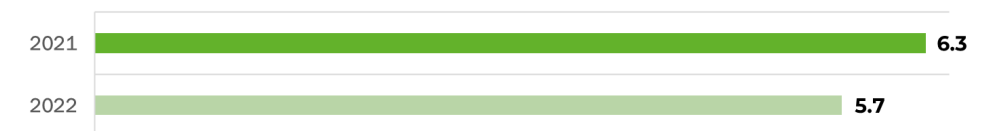


SCOPE 3

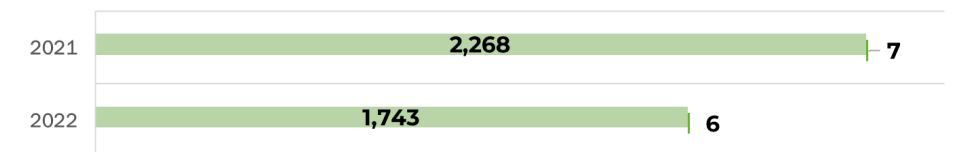
Transportation and Distribution Up/Downstream Transportation +WTT



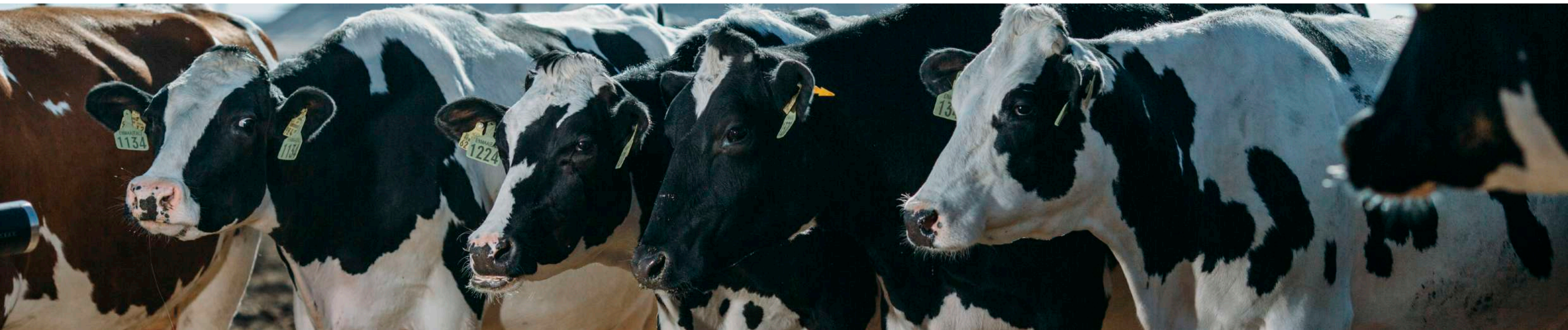
Purchased Goods and Services Purchased Materials



Fuel- and energy related activities (not included in Scope 1 or Scope 2)



■ Stationary Combustion WTT ■ Mobile Comb.Trucks WTT



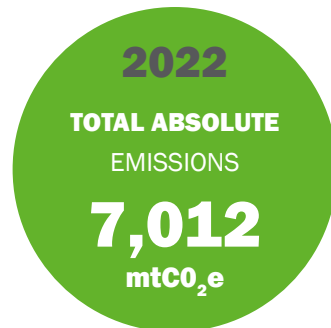
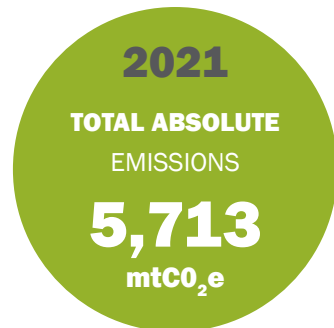
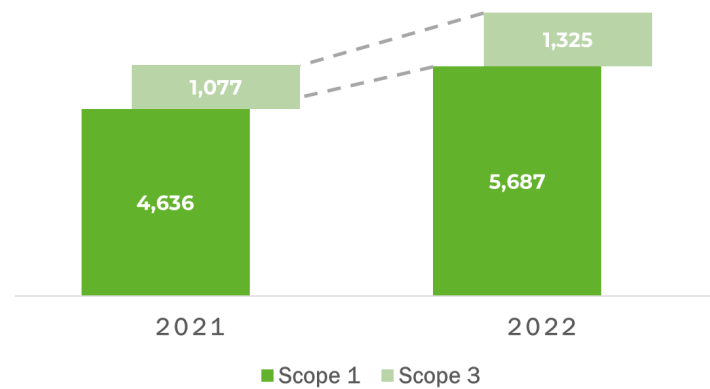
AI-FARAFRA FARM ACTIVITIES

El Enmaa Company for Agricultural Cultivation specializes in the cultivation of fruits and a variety of crops. It encompasses a total farm area of 2,686 acres, with a dedicated crop area spanning 1,515 acres.

In 2021, all crops were cleared, making way for the planting of orange and lemon trees. During this transition, emissions related to synthetic fertilizer

usage were accounted for. In 2022, onion, wheat, and corn crops were cultivated, with wheat straw serving as the crop residues. These residues were subsequently utilized as feed for cows in our livestock operations. The largest share of emissions comes from on-site diesel fuel combustion, accounting for approximately **81%** of the total farm emissions in both 2021 and 2022.

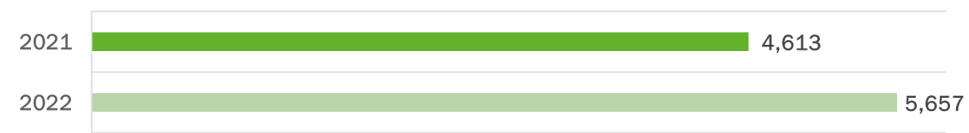
AI-Farafra Farm Total Emissions (mtCO₂e)



EMISSIONS PER SCOPE AND ACTIVITY (mtCO₂e)

SCOPE 1

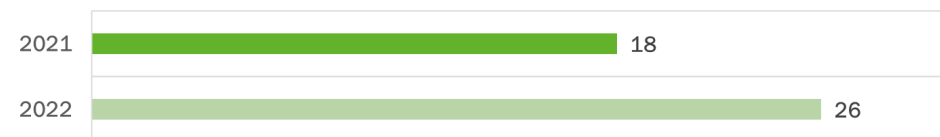
Stationary Combustion On-site fuel combustion



Agricultural Fertilizers

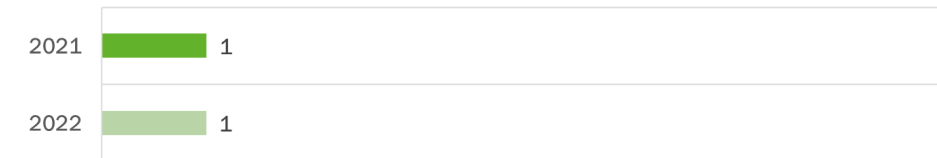


Mobile Combustion Mobile Comb. Trucks

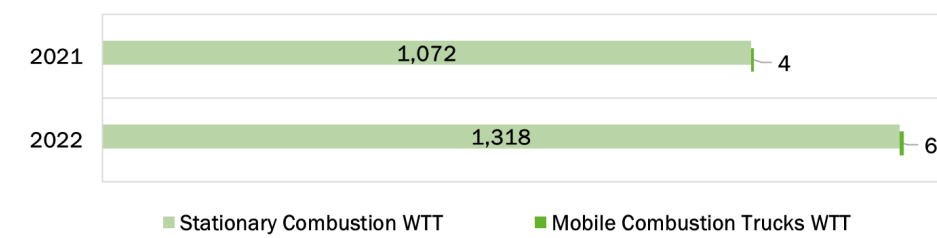


SCOPE 3

Purchased Goods and Services Purchased Materials

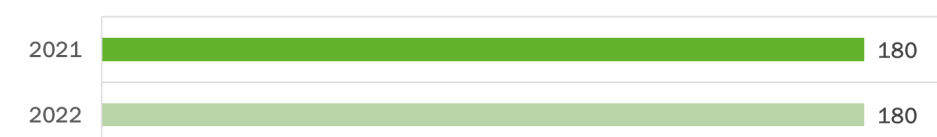


Fuel- and energy related activities (not included in Scope 1 or Scope 2)



BIOGENIC CARBON

Planted Trees



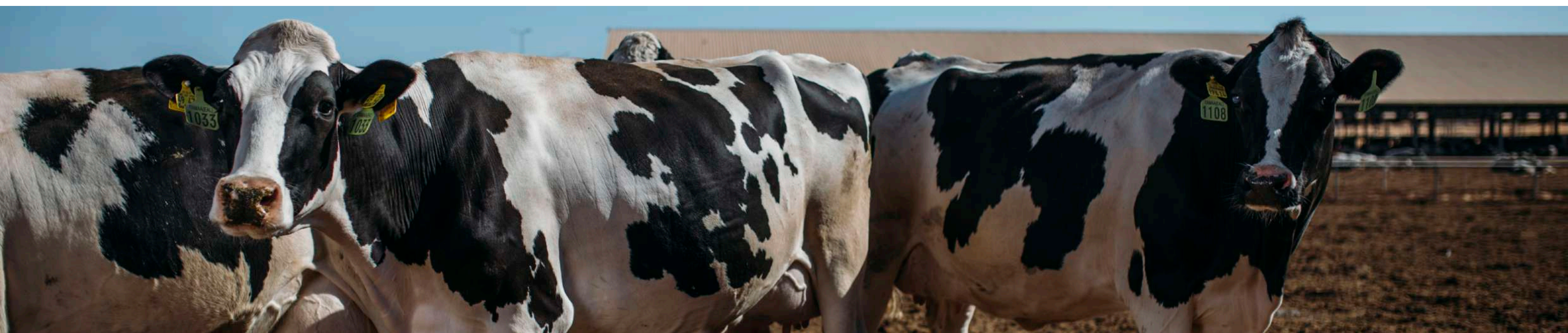
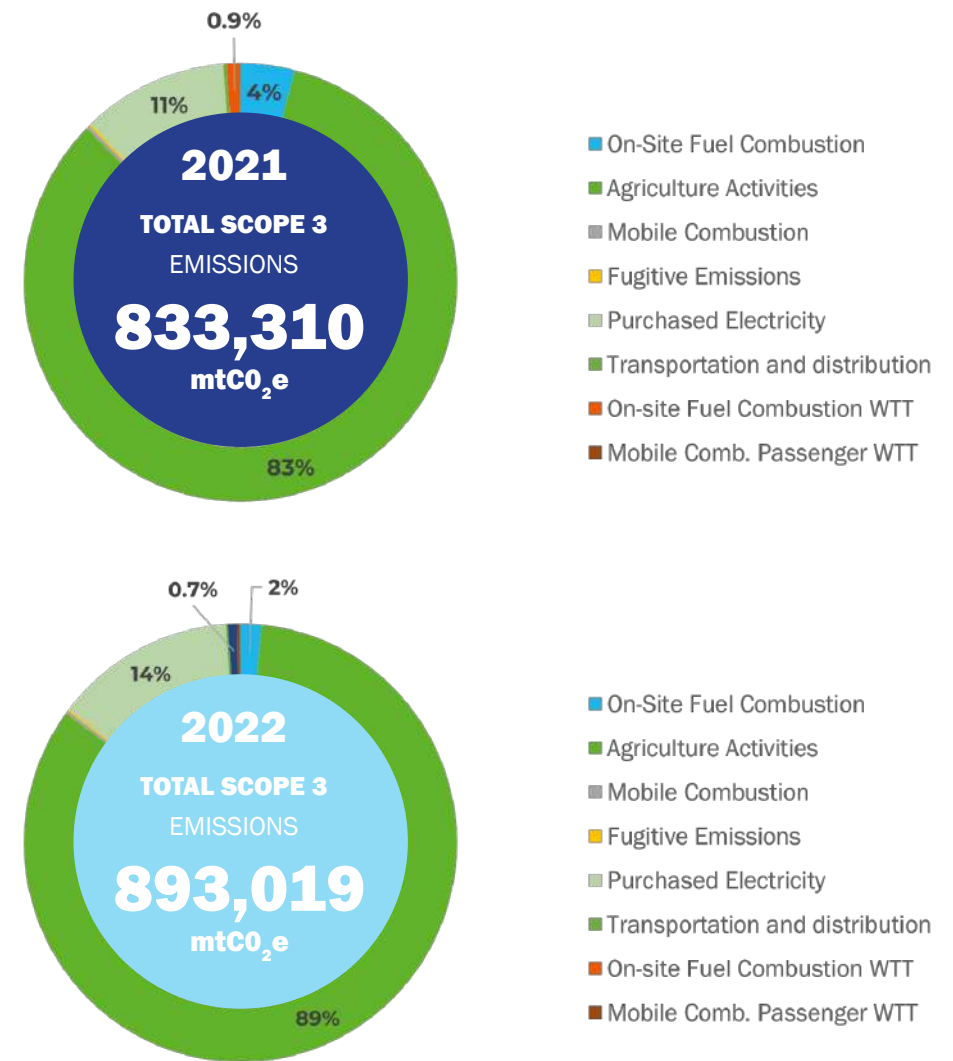


NON-OWNED FARM ACTIVITIES

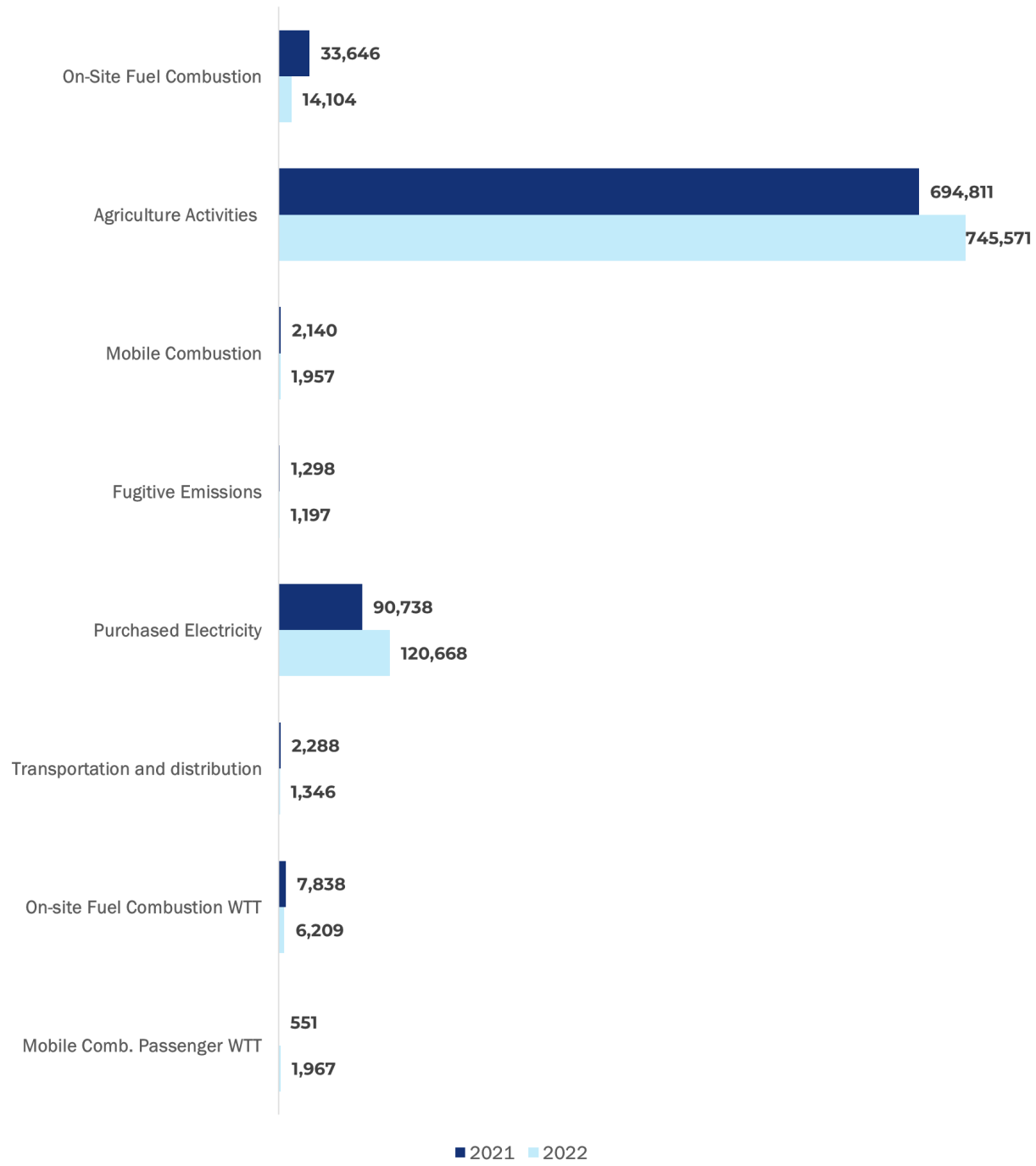
Juhayna maintains strategic collaborations with meticulously selected local farms to ensure a steadfast and consistent supply of high-quality raw milk. In the year 2021, our network encompassed a total of **135** local farms, from which data was successfully obtained from **21** of them. Data for the remaining farms were estimated based on the data collected from these farms. Milk production of the 21 farms was **32,652 tons**. This accounted for **12%** of the overall milk production from the total local farms, which totaled **275,043 tons**. In the subsequent year, 2022, our local farm partnerships expanded further, encompassing a total of **144** farms. Out of this total, data was meticulously collected from **15** farms, and estimates

were thoughtfully generated for the remaining partners in our network. These **15** farms yielded a total milk production of **23,909 tons**, representing **8%** of the total milk production from local farms, which reached **294,751 tons**.

Emissions from local farms constitute the largest portion of the total emissions, accounting for **81%** of Juhayna's total emissions in 2021 and approximately **82%** in 2022. The main activity with the highest contribution are the agriculture activities. In the most recent reporting period, which is 2022, emissions from agriculture activities, which include livestock management, manure management, and the use of fertilizers account for **83%** of the emissions from local farms.



Local Farms Activities Emissions Summary, 2021 and 2022 (mtCO₂e)





FARMING EMISSION SUMMARY

	2021	2022
Scope 1. Direct Emissions	55,458 mtCO₂e	54,226 mtCO₂e
On-site diesel fuel burning	14,374	13,141
Truck vehicles diesel fuel burning	50	50
Livestock and manure management	41,030	41,030
Synthetic fertilizers	4	5
Scope 3. Indirect Emissions	840,577 mtCO₂e	900,513 mtCO₂e
Up/Downstream Transportation +WTT	3,908	4,415
Purchased materials	7	6
Solid waste disposal	0.005	0.01
Fuel- and energy related activities (not included in Scope 1 or Scope 2)	3,352	3,073
Local farms (all activities)	833,310	893,019
Total Scope 1 & 3 Emissions	896,035 mtCO₂e	954,739 mtCO₂e
Biogenic Carbon	180 mtCO₂e	180 mtCO₂e
Planted trees	180	180
Avoided Emissions	566 mtCO₂e	566 mtCO₂e
Renewable Energy	566	566

The farming sector is the primary contributor to GHG emissions, accounting for approximately **87%** of the total emissions in 2021 and 2022. Local farms have the highest share of emissions followed by El-Esseila farm. However, the emissions from the local farms falls under Scope 3 (indirect emissions).

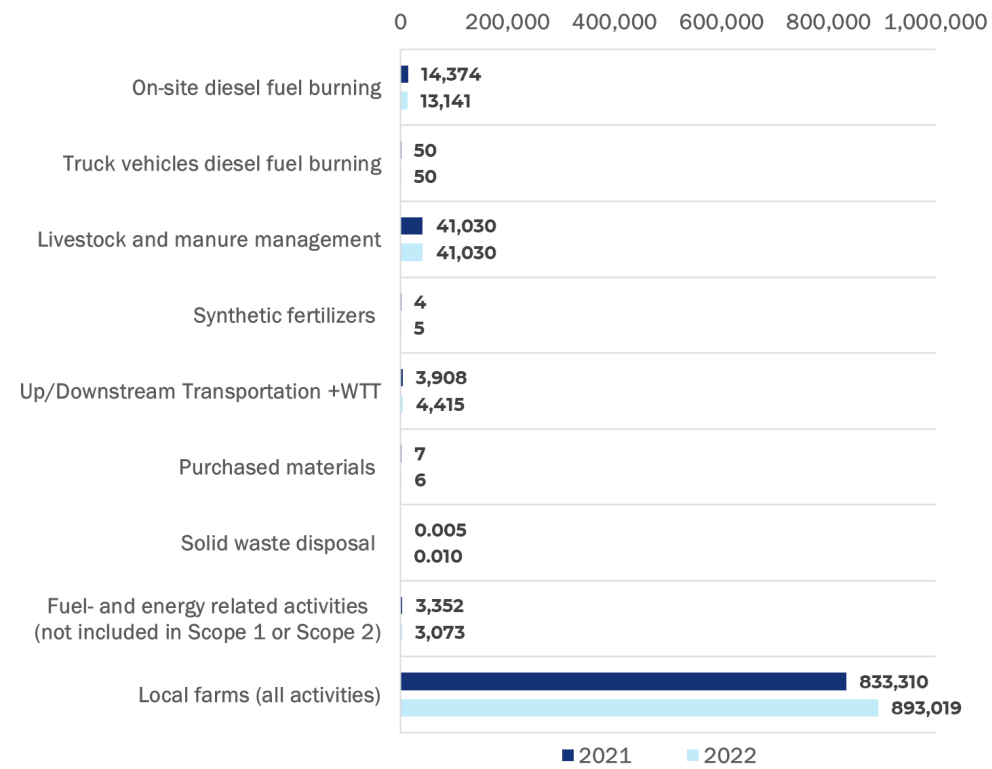
In 2021, all existing crops were removed, and orange and lemon trees were planted in their place. This change in cultivation practices resulted in no crop residues being generated, and therefore, no emissions were accounted for. In the most recent reporting year, 2022, the planted crops on the farms included 551 feddans of onions, 675 feddans of wheat, and 803 feddans

of corn. It's important to note that the only crop residues generated in 2022 were from the wheat harvest, specifically the wheat straw. However, these were not reported, as they were utilized as feed for the livestock, within Juhayna's integrated farming operations. Therefore, no emissions were attributed to these crop residues in our emissions calculations.

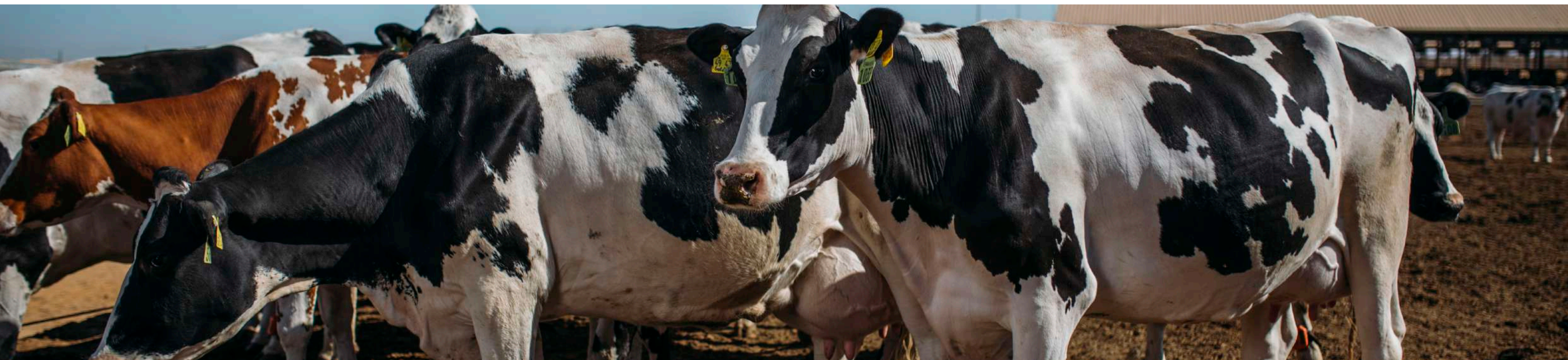
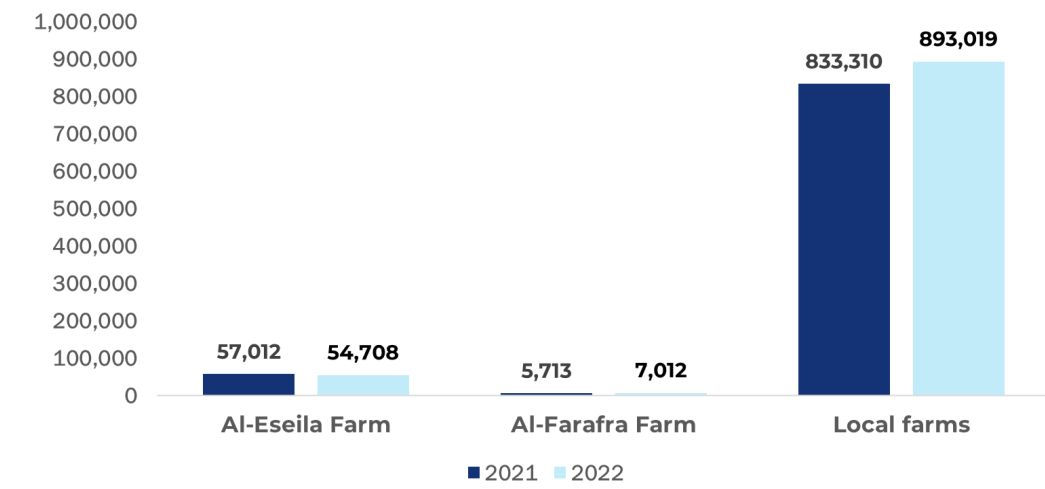
As for the Biogenic Carbon, **566 mtCO₂e** are sequestered from planting trees. The Land use Change of our farms is only calculated once and is therefore not included in this year's Biogenic Carbon. Moreover, having a 1 MW Solar PV system installed in Al Bahareya Oasis generated clean energy avoiding **566 mtCO₂e** in El-Esseila Farm for both years.



Farming Activities Emissions Summary 2021 and 2022 (mtCO₂e)



Farming Total Absolute Emissions per Farm 2021 and 2022 (mtCO₂e)





MANUFACTURING

We operate four state-of-the-art factories, all strategically located in 6th of October City, equipped with top-tier facilities to manufacture and package our diverse range of products.

Our production portfolio encompasses a wide array of offerings, including milk and dairy products. Our commitment to excellence drives us to continually enhance our manufacturing processes for optimal efficiency. In 2021, we launched the first plant-based product range. This innovative lineup offers a multitude of non-dairy alternatives to cater to consumers with dietary restrictions. These alternatives are crafted from plant extracts such as almond, hazelnuts, oats, and soya. At Juhayna, we are dedicated to pushing the boundaries of dairy and dairy alternatives, not only as a part of our portfolio strategy but also as an integral aspect of our sustainability agenda. Our aim is to develop products that are not only beneficial to our customers but also environmentally friendly.

Drinkable Flavored Greek Yogurt was selected as Juhayna's next innovative venture due to its alignment with Juhayna's mission to introduce healthy varieties to the market. The product was launched in April 2022, in collaboration with Juhayna's research and development team and is representative of the healthy and high-quality innovations that Juhayna seeks to deliver, as the range is made up of 3 different flavors at 250gm per bottle. The success of the Greek Yogurt range granted the company to start working on the launch of the Drinkable Flavored Greek Yogurt range, which constitutes of 3 different flavors – Pineapple & Peach, Mixed Berries & Oats, and Passion Fruit. The range was well received by the market and has been a great success, helping grow the Greek Yogurt market.

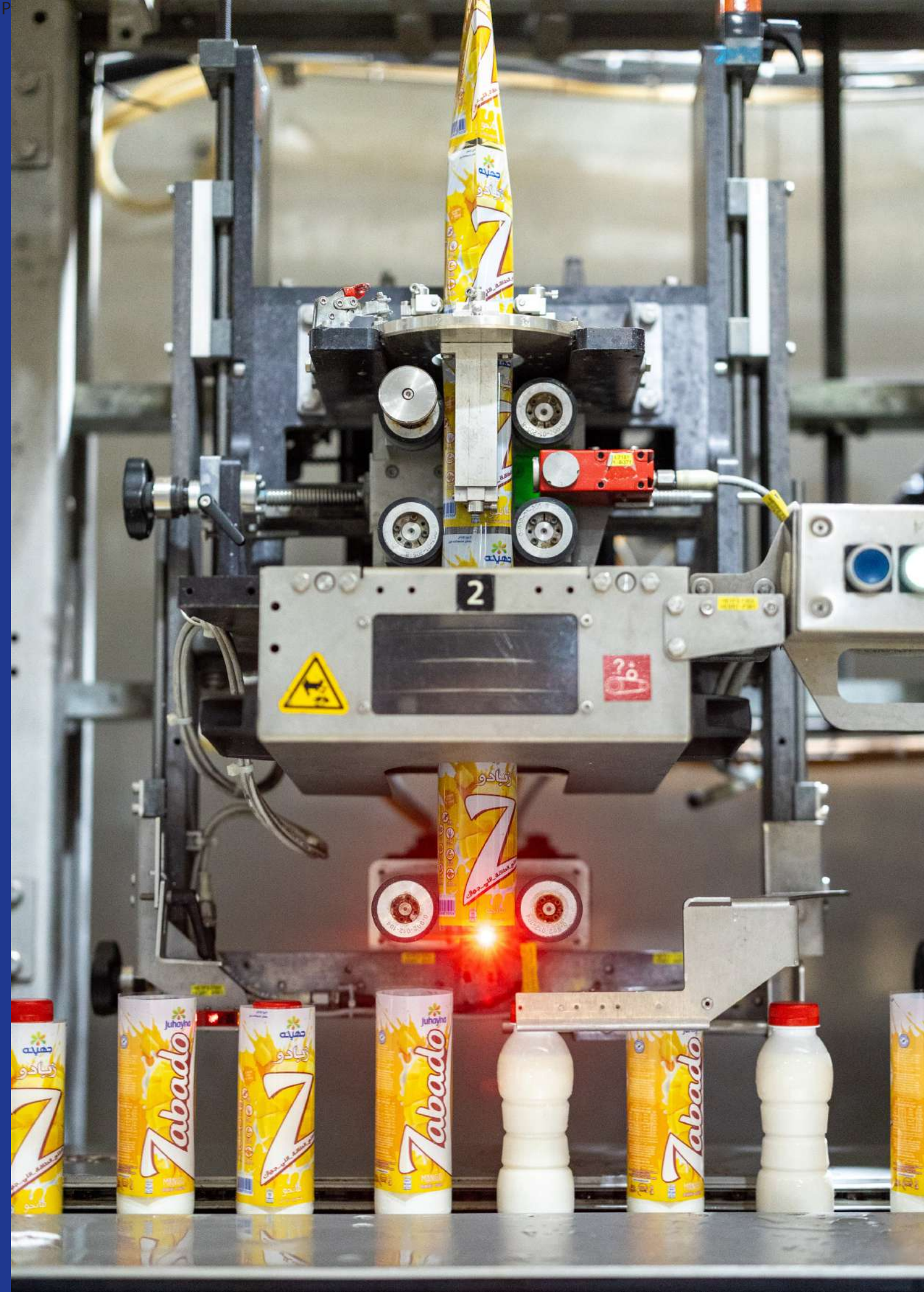


EGYFOODS

AL-DAWLEYA

AL-MARWA

AL-MASREYA





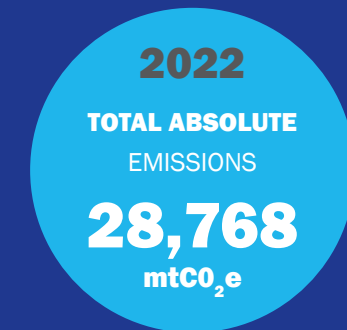
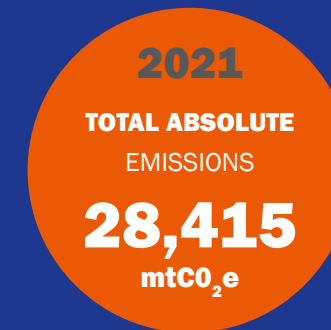
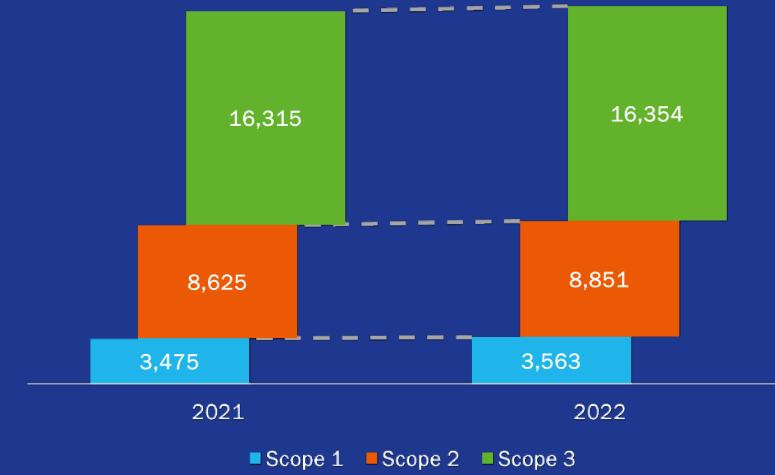
EgyFoods operates within a facility spanning 35,472 m². The factory proudly holds several certifications, including FSSC 22000 and OHSAS 18001, signifying its commitment to food safety and occupational health and safety standards. Furthermore, EgyFoods has earned the ISO 14001 certificate for effectively managing its integrated resources, ISO 22000 for ensuring food safety, ISO 45001 for occupational health and safety, and ISO 50001 for optimizing and enhancing energy consumption and efficiency within the factory.

In 2021, EgyFoods achieved an annual production volume of **113,219 tons**, and this figure has seen a slight decrease, reaching **111,363 tons** in 2022. Our production encompasses a range of UHT products packaged in Tetrapak, including full cream milk, half cream milk, skimmed milk,

whipping cream, cooking cream, lactose-free milk in both full cream and skimmed variants, as well as a variety of nuts and grains products such as oat, soy, hazelnut, coconut, and almond. Additionally, we manufacture UHT products packaged in bag-in-box format, which includes milkshake, sundae mix, soft serve, and whipping cream.

Furthermore, our production extends to fermented milk products, comprising set yogurt in both plain and flavored variations, packaged in PS packs. We also produce drinkable yogurt in plain and flavored options, packaged in PET packs, along with drinkable yogurt featuring fruit syrup, also in PET packaging. Lastly, we offer Greek yogurt, available in plain and fruit-infused varieties, and packed in preformed PP cups.

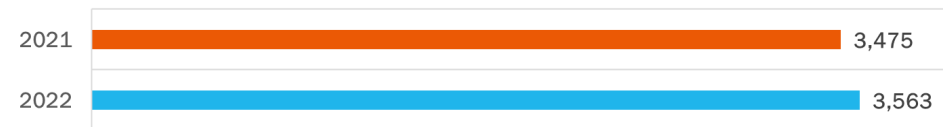
EgyFoods Factory Total Emissions (mtCO₂e)



EMISSIONS PER SCOPE AND ACTIVITY (mtCO₂e)

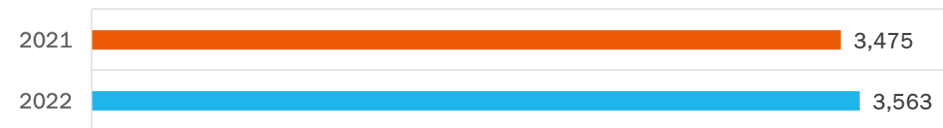
SCOPE 1

Stationary Combustion On-site fuel combustion



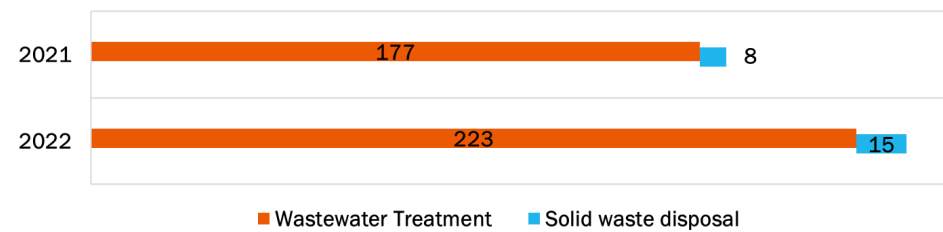
SCOPE 2

Purchased Energy Purchased Electricity



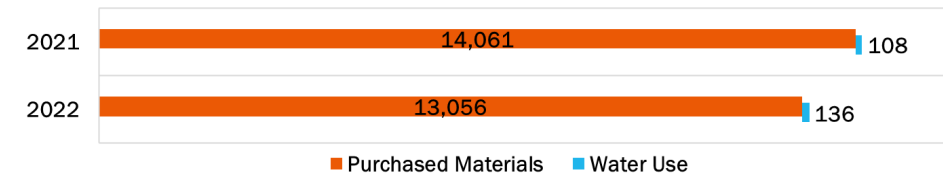
SCOPE 3

Waste generated in Operations



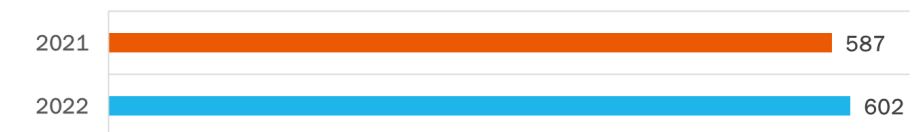
SCOPE 3

Purchased Goods and Services

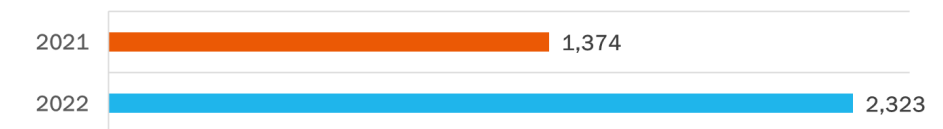


Fuel- and energy related activities (not included in Scope 1 or Scope 2)

On-site Fuel Combustion WTT



Employee Commuting Employee Commuting + WTT



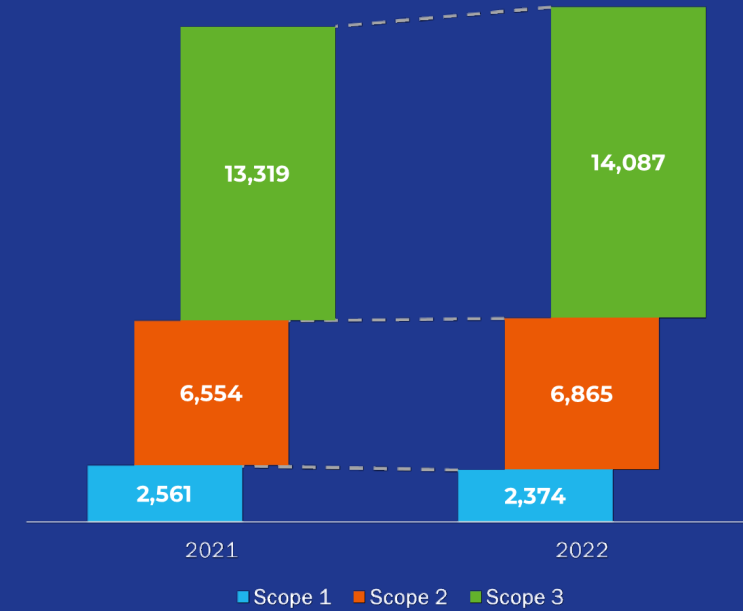
 **AL-DAWLEYA**

Al-Dawleya stands as one of the largest industrial complexes not only in Egypt but also across the MENA region. In 2021, Al-Dawleya achieved an impressive annual production volume of **192,161 tons**, and this figure has seen a slight increase, reaching **193,698 tons** in 2022.

Since its inception in 2009, this state-of-the-art manufacturing facility has been at the forefront of producing and packaging fresh juices and beverages, including renowned brands like Juhayna Juice, Pure, Bekhero, and Oriental beverages

With a dedicated workforce of 170 employees, comprising workers, engineers, and administrative personnel, El Dawleya operates ceaselessly to maximize its productivity. The facility boasts full automation and the latest technological advancements, all contributing to minimal waste generation. El Dawleya takes pride in its attainment of various global and local quality certifications which include FSSC 22000, ISO 14001, ISO 45001, ISO 22000 and ISO 50001, underscoring its commitment to excellence in various aspects of its operations.

Al-Dawleya Factory Total Emissions (mtCO₂e)



2021
TOTAL ABSOLUTE EMISSIONS
22,433
mtCO₂e

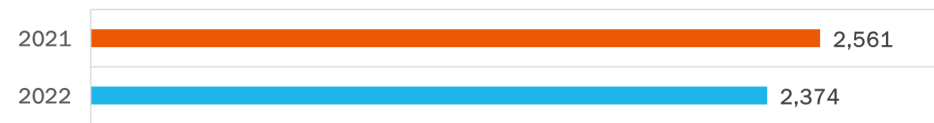
2022
TOTAL ABSOLUTE EMISSIONS
23,326
mtCO₂e



EMISSIONS PER SCOPE AND ACTIVITY (mtCO₂e)

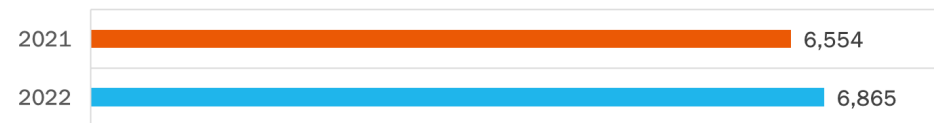
SCOPE 1

Stationary Combustion On-site fuel combustion



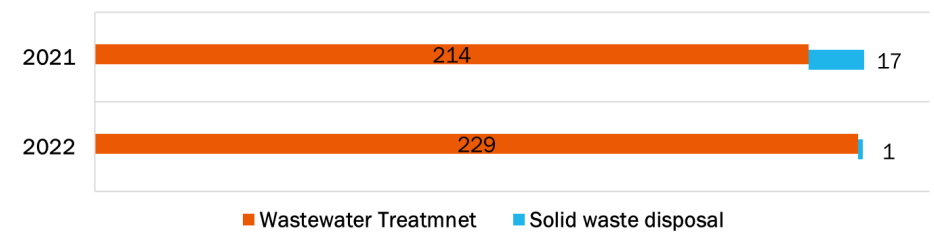
SCOPE 2

Purchased Energy Purchased Electricity



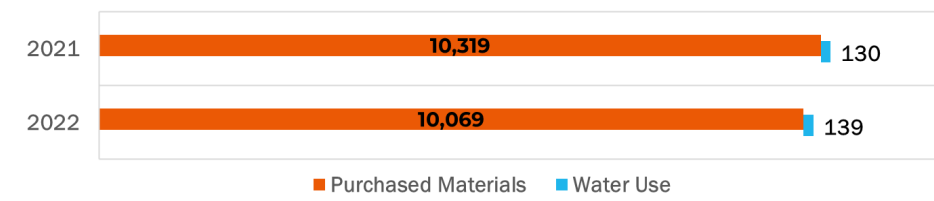
SCOPE 3

Waste generated in Operations

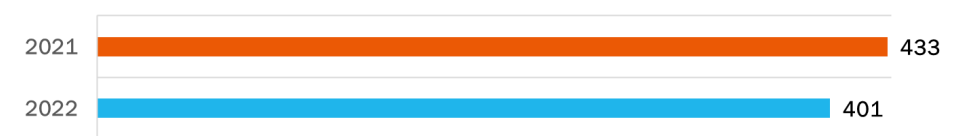


SCOPE 3

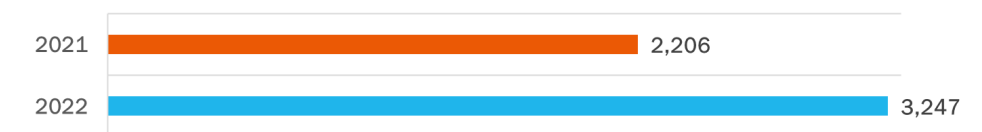
Purchased Goods and Services



Fuel- and energy related activities (not included in Scope 1 or Scope 2) On-site Fuel Combustion WTT



Employee Commuting Employee Commuting + WTT



 **AL-MARWA**

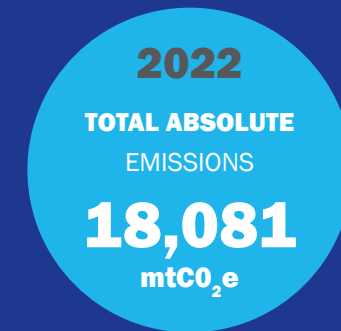
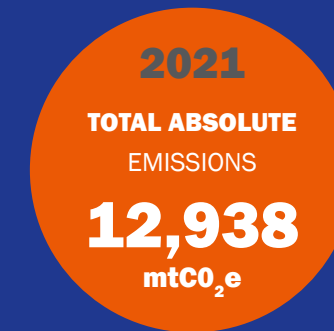
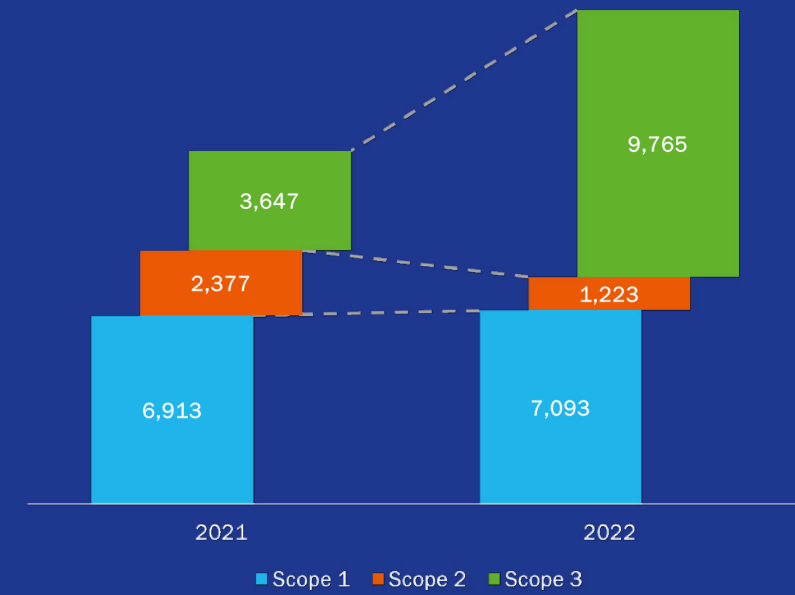
Established initially in 1998, Juhayna's Al-Marwa factory has undergone extensive upgrades and modernization, now boasting the most advanced global manufacturing technologies.

In 2021, Al-Marwa had an annual production volume of **26,654 tons**, and this figure increased reaching **36,924** in 2022. This specialized facility primarily focuses on fruit treatment, producing fruit concentrates and pulps destined for both internal use and export. A diverse range of fruits is processed at the factory, including mango, guava, strawberry, peach, apricot, apple, and concentrated carrot, all meticulously handled under stringent quality control protocols.

Operated as a semi-automated plant, Al-Marwa employs a dedicated team of 130 professionals, comprising workers, technicians, engineers, and administrative staff, working in collaboration with the Modern Concentrates Factory to ensure its seamless operations. The factory has proudly earned a range of prestigious certifications, including FSSC 22000, ISO 14001:2015, ISO 45001:2018, and Kosher, reflecting its commitment to maintaining high standards in food safety, environmental management, occupational health and safety, and adherence to kosher dietary requirements.



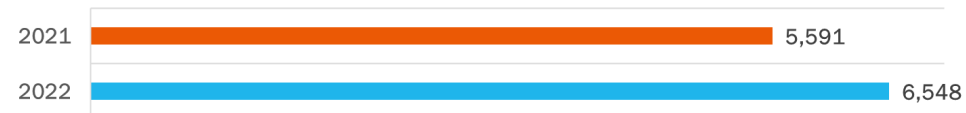
Al-Marwa Factory Total Emissions (mtCO₂e)



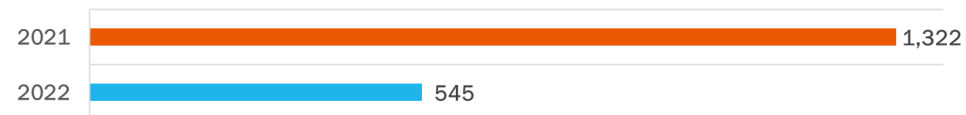
EMISSIONS PER SCOPE AND ACTIVITY (mtCO₂e)

SCOPE 1

Stationary Combustion On-site fuel combustion

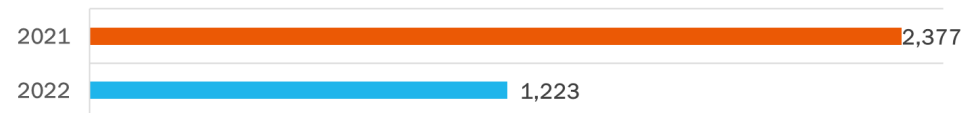


Fugitive Emissions Refrigerant leakage



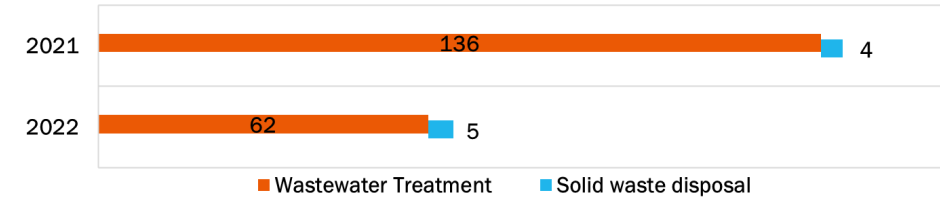
SCOPE 2

Purchased Energy Purchased Electricity

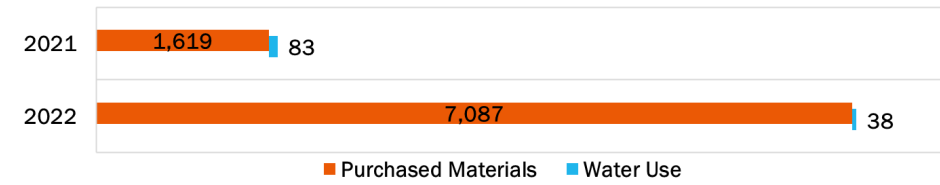


SCOPE 3

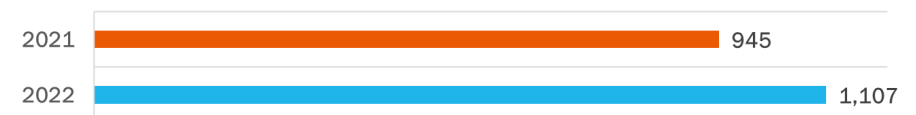
Waste generated in Operations



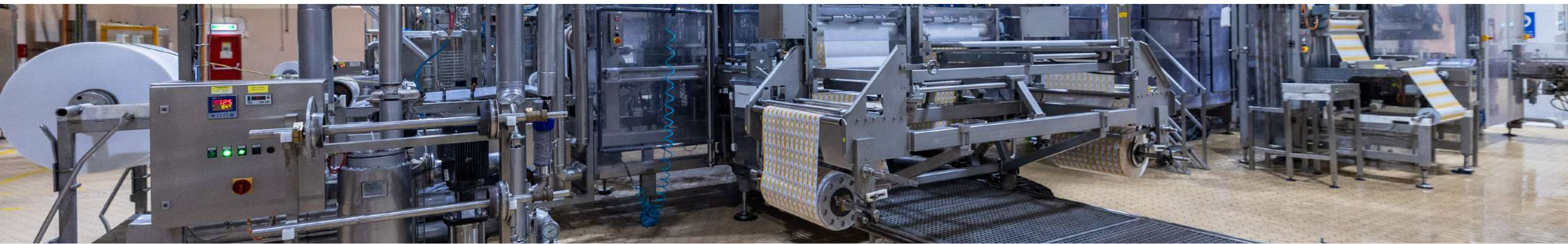
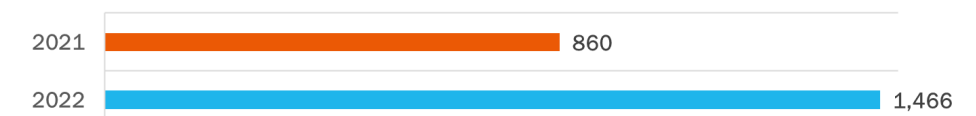
Purchased Goods and Services



Fuel- and energy related activities (not included in Scope 1 or Scope 2) On-site Fuel Combustion WTT



Employee Commuting Employee Commuting + WTT



 **AL-MASREYA**

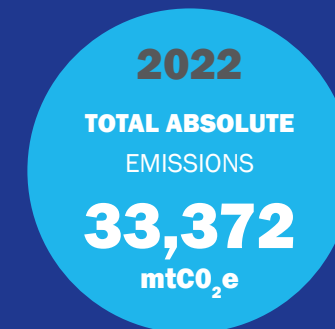
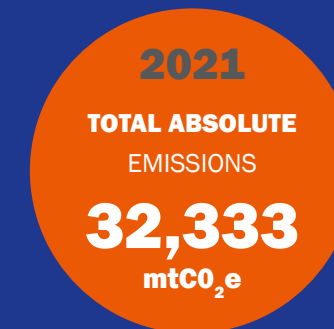
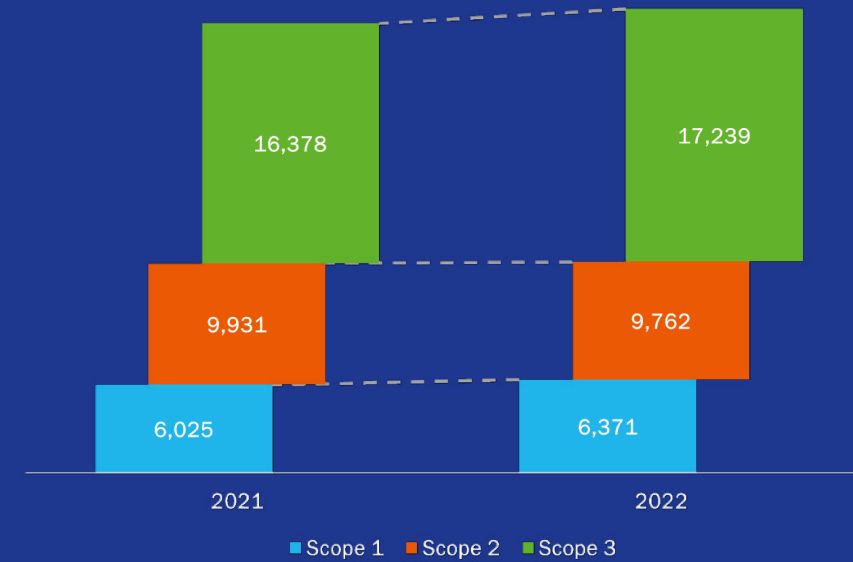
In our ongoing efforts to meet the increasing demand for Juhayna products, we acquired Al-Masreya factory in 2005. This facility, staffed by a dedicated workforce of 300 individuals, including technicians, engineers, and administrators, leverages cutting-edge technologies to produce high-quality dairy products. In 2021, Al-Masreya achieved an annual production volume of **296,132 tons**, and this figure has seen an impressive increase, reaching **338,086 tons** in 2022.

Notably, Juhayna, through its operations at El Masreya, became the third-ranked global company to adopt the innovative TBA-Edge packaging technology, ensuring the utmost quality in milk products. El Masreya Factory proudly holds several certifications, including

BRCGS, FSSC 22000, ISO 14001, ISO 45001, ISO 50001, HALAL, exemplifying its commitment to excellence and adherence to rigorous quality standards. In addition, Juhayna's full cream dairy product received the Superior Taste Award 2022 from the International Taste Institute in Belgium. This recognition came after a blind taste test conducted by a panel of 198 renowned chefs and sommeliers with a collective total of 86 Michelin stars. Juhayna is the first Egyptian company to receive this award in the dairy category, specifically for their 100% natural, preservative-free milk, earning a 1-star rating out of 3 stars. This achievement highlights their dedication to providing top-quality dairy products to customers.



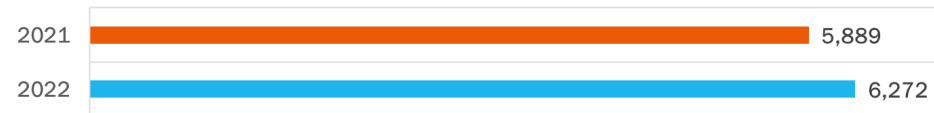
Al-Masreya Factory Total Emissions (mtCO₂e)



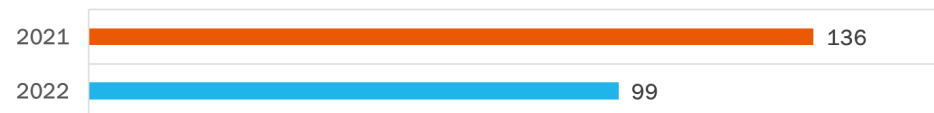
EMISSIONS PER SCOPE AND ACTIVITY (mtCO₂e)

SCOPE 1

Stationary Combustion On-site fuel combustion

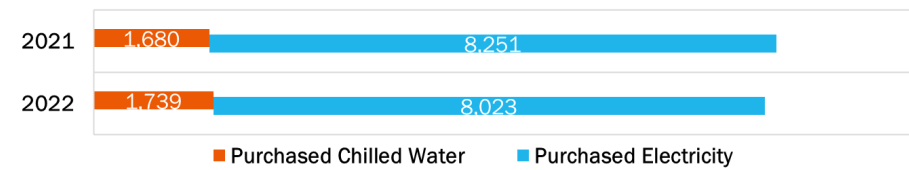


Fugitive Emissions Refrigerant leakage



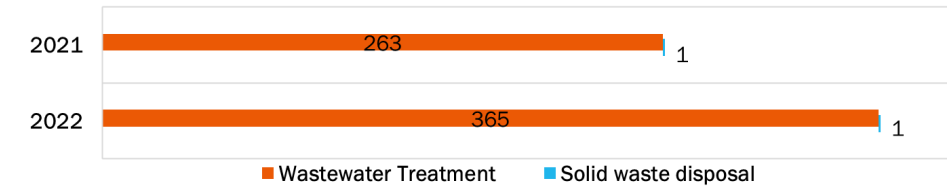
SCOPE 2

Purchased Energy

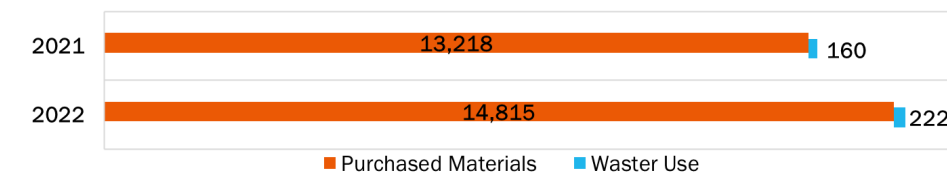


SCOPE 3

Waste generated in Operations

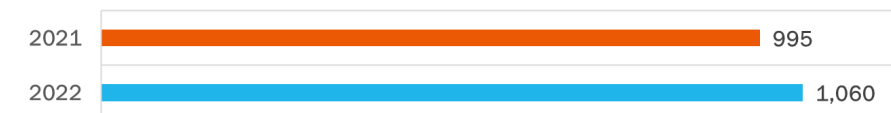


Purchased Goods and Services

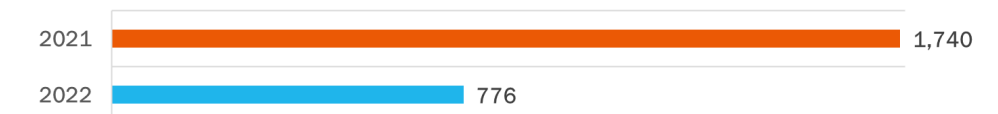


Fuel- and energy related activities (not included in Scope 1 or Scope 2)

On-site Fuel Combustion WTT



Employee Commuting Employee Commuting + WTT





MANUFACTURING EMISSIONS SUMMARY

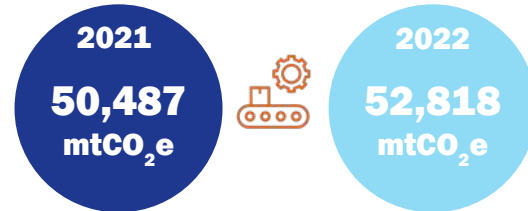
	2021	2022
Scope 1. Direct Emissions	23,000 mtCO₂e	26,118 mtCO₂e

Natural gas consumption	17,515	18,758
Downstream transportation (to Tiba) – Owned fleet	4,027	6,716
Refrigerant Leakage	1,458	644

Scope 2. Indirect Emissions	27,487 mtCO₂e	26,700 mtCO₂e
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Purchased Electricity	25,807	24,961
Purchased chilled water	1,680	1,739

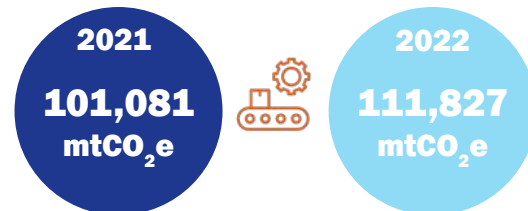
Total Scope 1 & 2 Emissions



Scope 3. Indirect Emissions	50,594 mtCO₂e	59,009 mtCO₂e
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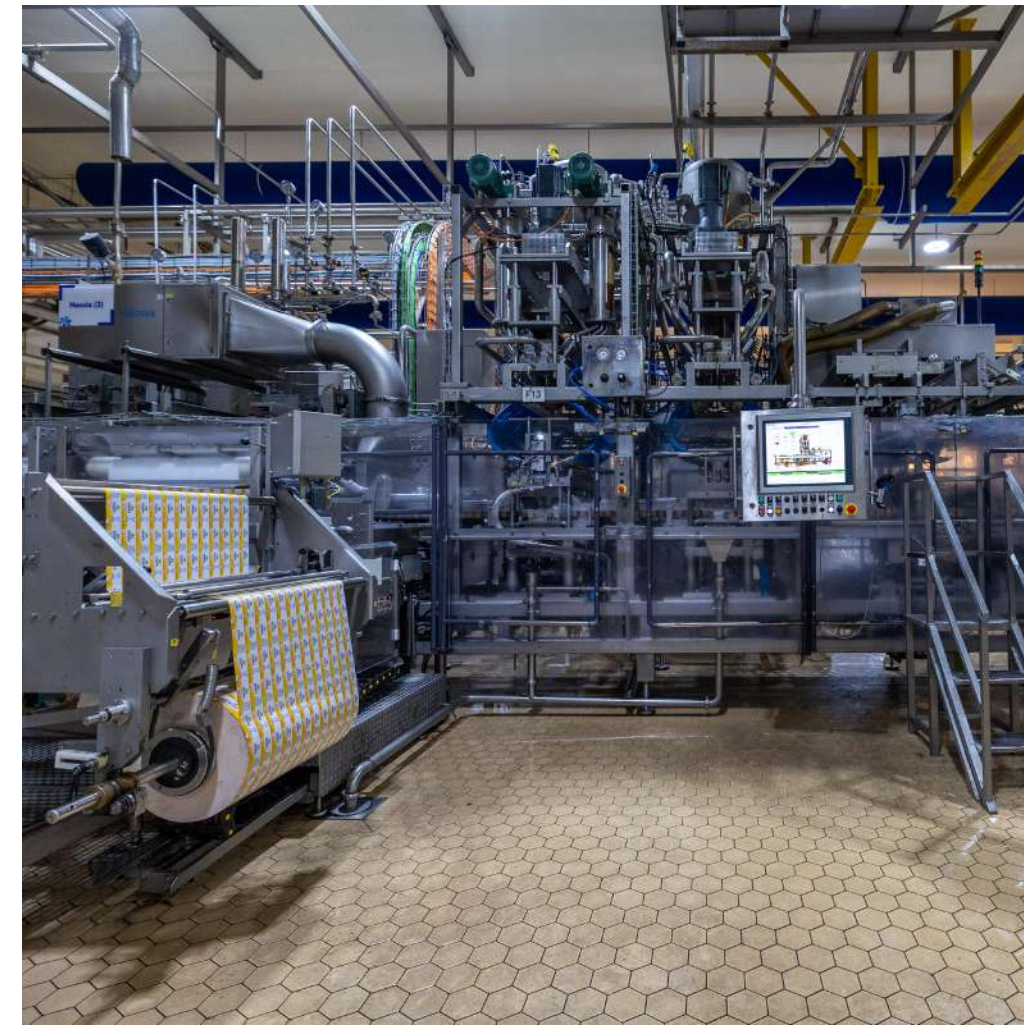
Employee Commuting	6,181	7,812
Fuel and Energy-related activities (not included in Scope 1 and 2)	3,896	4,735
Water use	481	535
Wastewater treatment	790	878
Purchased materials	17,813	21,925
Tetra pack packaging	21,403	23,102
Solid waste disposal	30	22

Total Scope 1, 2 & 3 Emissions

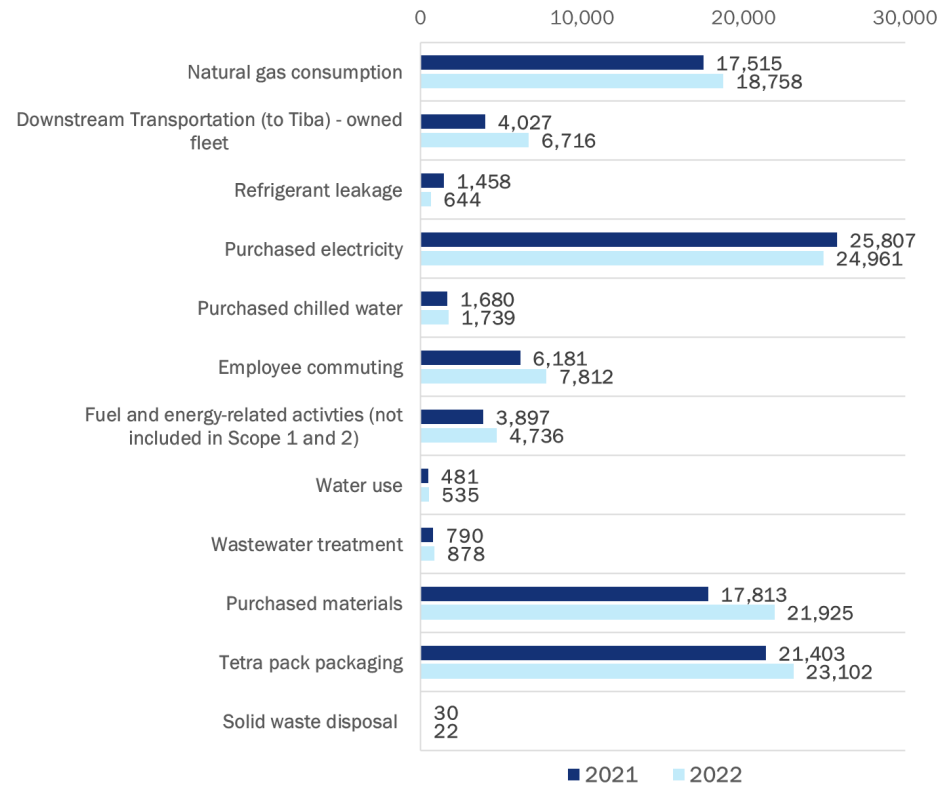


Emissions from downstream transportation from the factories to Tiba (Juhayna's distribution arm) were calculated for all the factories together. The products are delivered from the different factories to the warehouse using the same fleet. Therefore, data for each factory's separate transportation wasn't available. For the manufacturing sector, the activity with the highest contribution in both years is the products tetra pack packaging, as indicated in the adjacent chart.

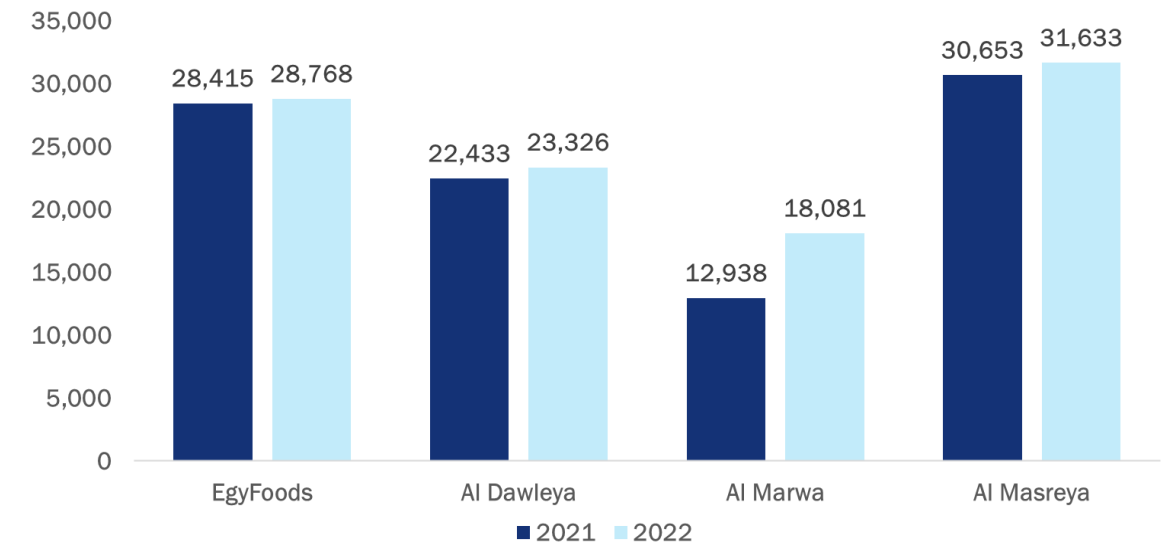
Purchased materials include wood and metals, paper and board, plastics, and consumables such as ink cartridges, gloves, uniforms etc. In 2022, packaging emissions constituted approximately **21%** of our total manufacturing emissions, and a significant **40%** of our Scope 3 emissions. Meanwhile, our Scope 1 emissions accounted for around **23%** of the total, and Scope 2 emissions made up roughly **24%**. Scope 3 emissions represented the largest share of our total manufacturing emissions, comprising about **53%**.



Manufacturing Activities Emissions Summary 2021 and 2022 (mtCO₂e)



Manufacturing Total Emissions per Factory 2021 and 2022 (mtCO₂e)



DISTRIBUTION CENTERS

Juhayna's commercial arm, known as TIBA, serves as the backbone of our distribution network and plays a pivotal role in our vertical integration strategy. TIBA boasts one of the largest distribution fleets in the Egyptian food and beverage industry, comprising approximately 1000 vehicles equipped to transport both refrigerated and non-refrigerated products to locations nationwide. Our distribution network encompasses **29** strategically located distribution centers, allowing us to reach a staggering **128,000 retail outlets**.



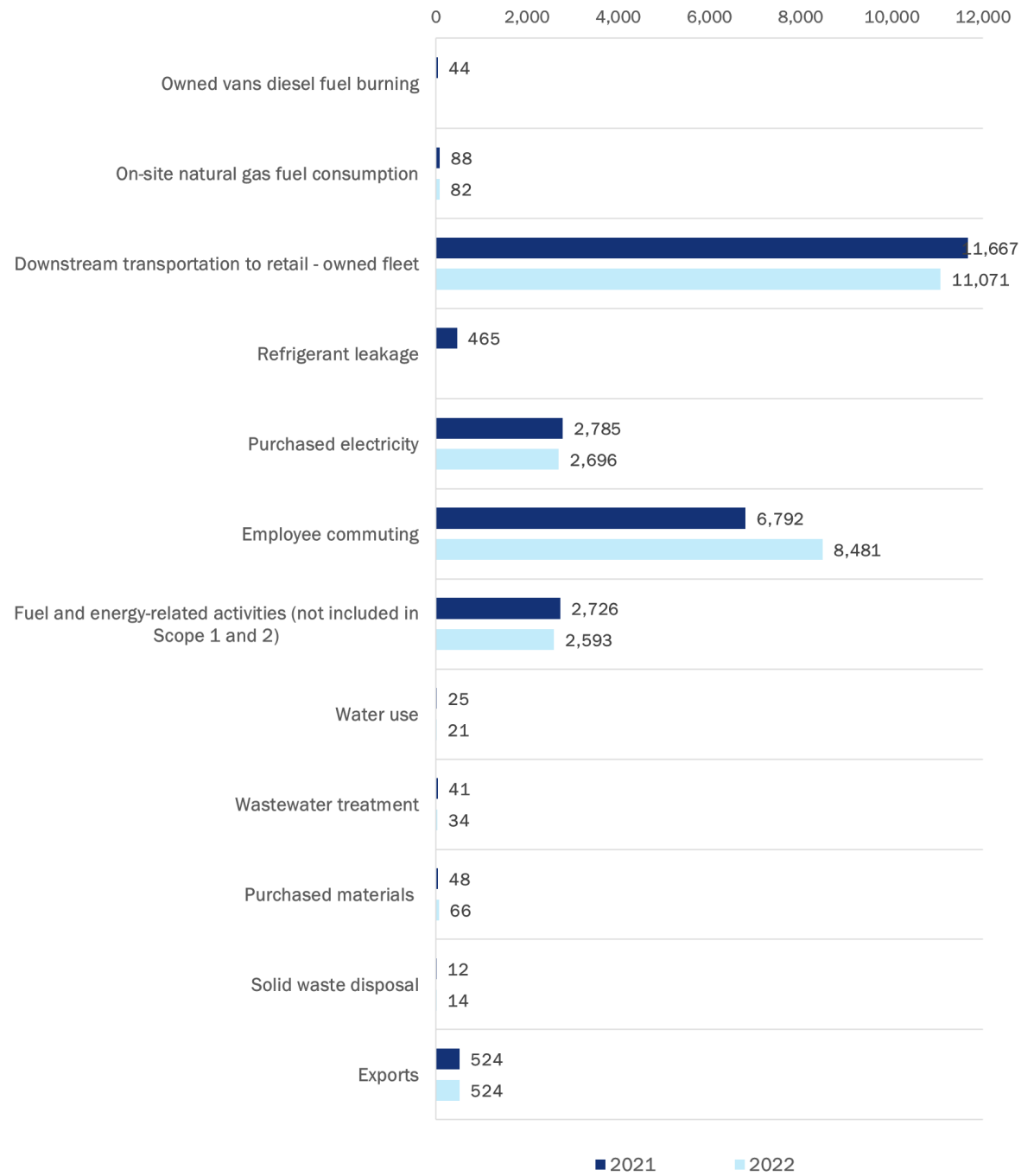
DISTRIBUTION EMISSIONS

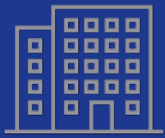
	2021	2022
Scope 1. Direct Emissions	12,263 mtCO₂e	11,153 mtCO₂e
Owned vans diesel fuel burning	44	-
On-site natural gas fuel consumption	88	82
Downstream transportation to retail - Owned fleet	11,667	11,071
Refrigerant Leakage	465	-
Scope 2. Indirect Emissions	2,785 mtCO₂e	2,696 mtCO₂e
Purchased Electricity	2,785	2,696
Total Scope 1 & 2 Emissions	15,049 mtCO₂e	13,849 mtCO₂e
Scope 3. Indirect Emissions	11,836 mtCO₂e	11,733 mtCO₂e
Employee Commuting	8,449	8,481
Fuel and Energy-related activities (not included in Scope 1 and 2)	2,737	2,593
Water use	25	21
Wastewater treatment	41	34
Purchased materials	48	66
Solid waste disposal	12	14
Exports	524	524
Total Scope 1, 2 & 3 Emissions	26,885 mtCO₂e	25,583 mtCO₂e

The distribution activities encompass both downstream transportation from Tiba to the retailers and export operations, primarily using ocean routes with some land transport involved. Additionally, emissions from 29 distribution centers across the country were accounted for. Notably, downstream transportation emerged as the primary contributor to emissions in both years, constituting **99%** of Scope 1 emissions and **43%** of total emissions in 2022. The combined emissions of Scope 1 and 2 in 2022 amounted to **13,849 mtCO₂e**, making up **54%** of the total emissions within the distribution sector.



Distribution Activities Emissions Summary, 2021 and 2022 (mtCO₂e)





HEADQUARTERS





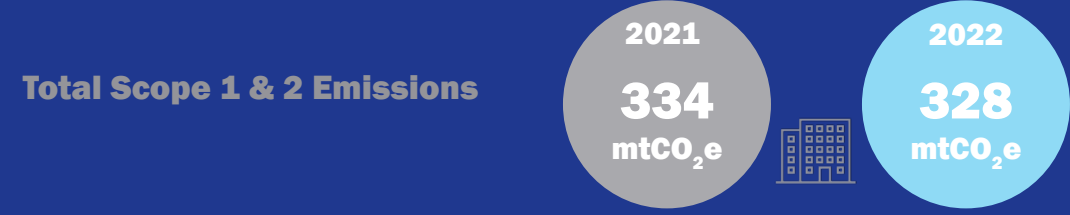
HEADQUARTERS

	2021	2022
Scope 1. Direct Emissions	234 mtCO₂e	214 mtCO₂e

Owned cars petrol fuel burning	166	148
Owned trucks diesel fuel burning	69	65

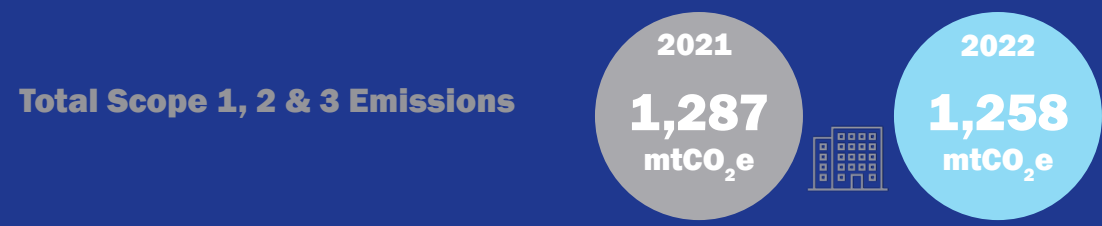
	2021	2022
Scope 2. Indirect Emissions	101 mtCO₂e	114 mtCO₂e

Purchased Electricity	101	114
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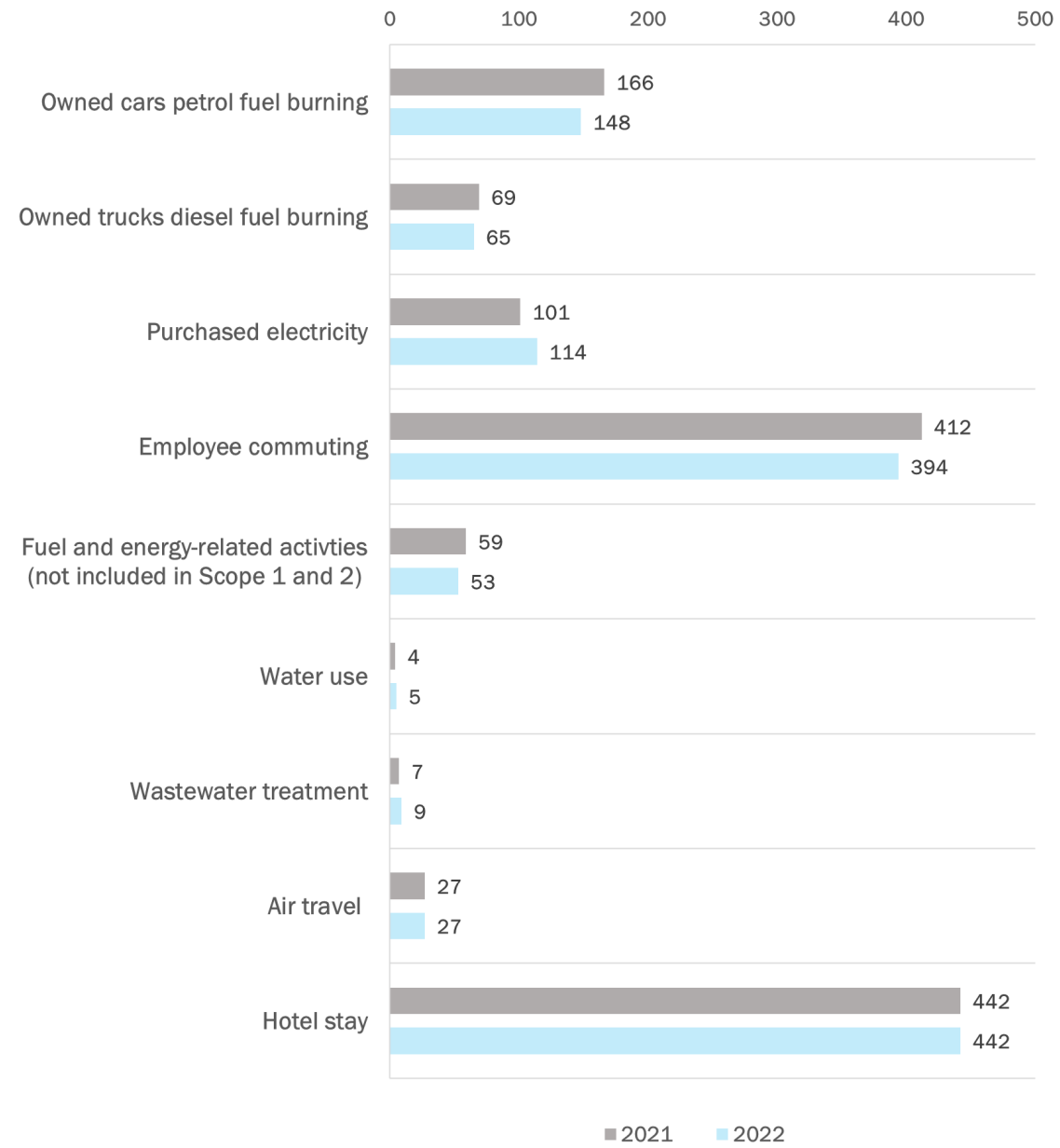


	2021	2022
Scope 3. Indirect Emissions	951 mtCO₂e	931 mtCO₂e

Employee Commuting	412	394
Fuel and Energy-related activities (not included in Scope 1 and 2)	59	53
Water use	4	5
Wastewater treatment	7	9
Air travel	27	27
Hotel stay	442	442



Headquarters Emissions Summary, 2021 and 2022
(mtCO₂e)



CFP RESULTS SUMMARY

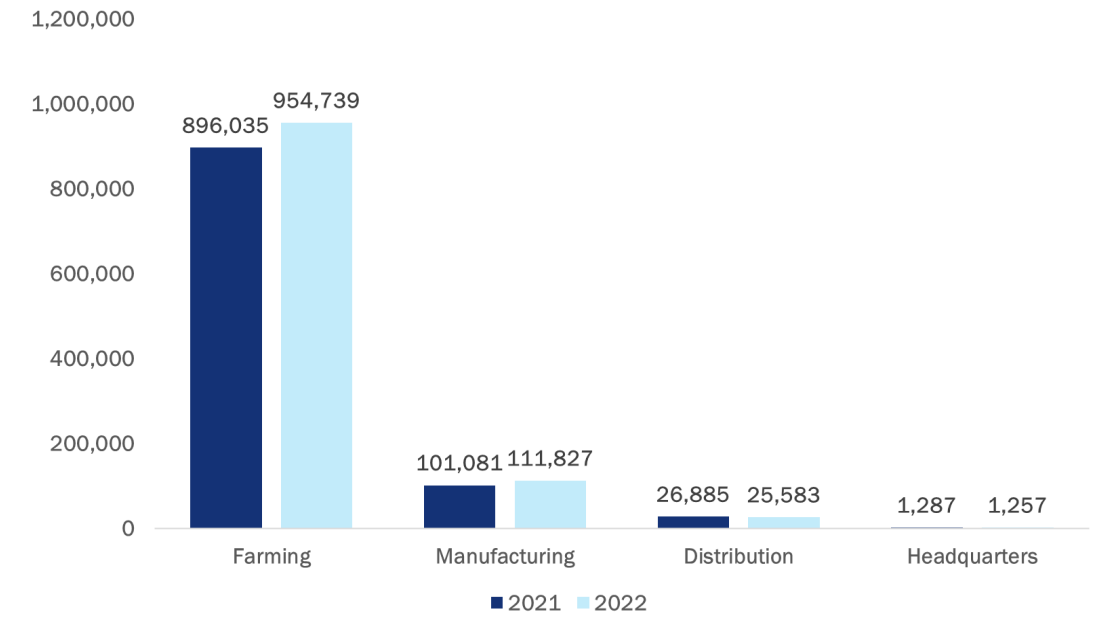


This section includes the overall 2021.2022 results for Juhayna Food industries. The table below highlights the absolute emissions per sector across both years.

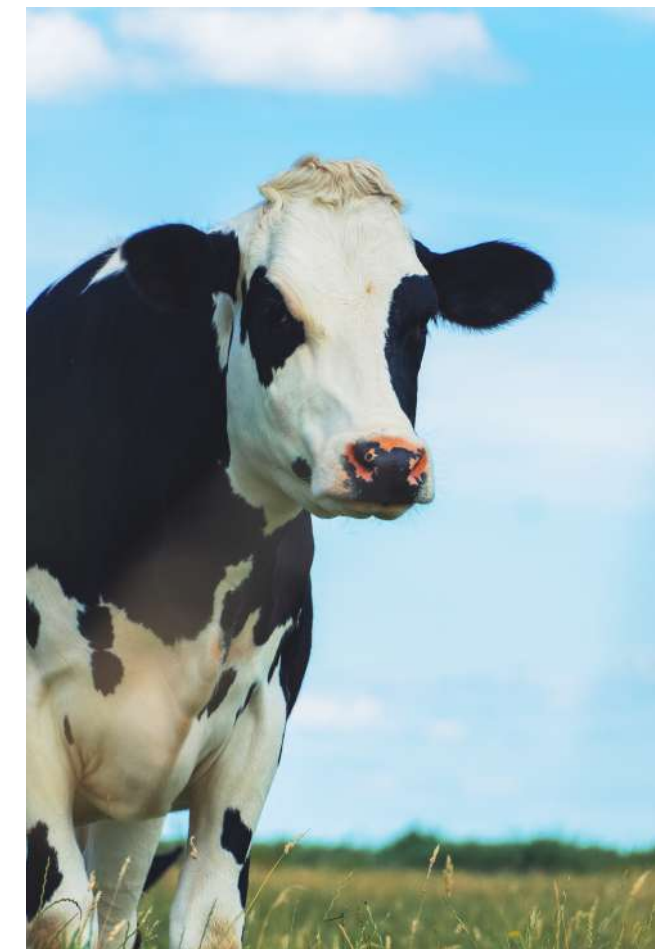
SECTOR	EMISSIONS 2021 (mtCO ₂ e)	SHARE (%)	EMISSIONS 2022 (mtCO ₂ e)	SHARE (%)
FARMING	896,035	87%	954,739	87%
MANUFACTURING	101,081	10%	111,827	10%
DISTRIBUTION	26,885	3%	25,583	2%
HQ	1,287	0.1%	1,257	0.1%
TOTAL EMISSIONS	1,025,287	100%	1,093,407	100%



Total Emissions per Sector, 2021 and 2022 (mtCO₂e)

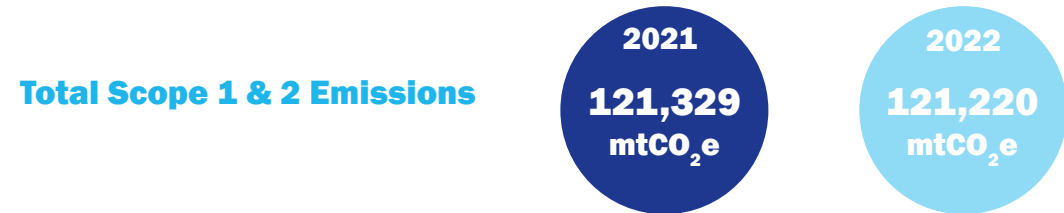


The farming sector represents the highest contributor to GHG emissions in Juhayna, at **87%** for both years, followed by the manufacturing sector at **10%** for both years too.

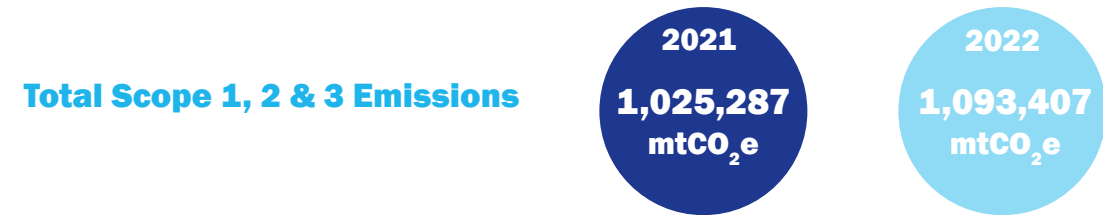


	2021	2022
Scope 1. Direct Emissions	90,956 mtCO₂e	91,710 mtCO₂e
On-site diesel fuel burning	14,375	13,144
On-site natural gas consumption	17,603	18,837
Owned vehicles fuel burning (cars + trucks)	16,021	18,051
Refrigerants leakage	1,923	644
Livestock and manure management	41,030	41,030
Synthetic fertilizers	4	5

	2021	2022
Scope 2. Indirect Emissions	30,373 mtCO₂e	29,510 mtCO₂e
Purchased electricity	28,693	27,771
Purchased chilled water	1,680	1,739



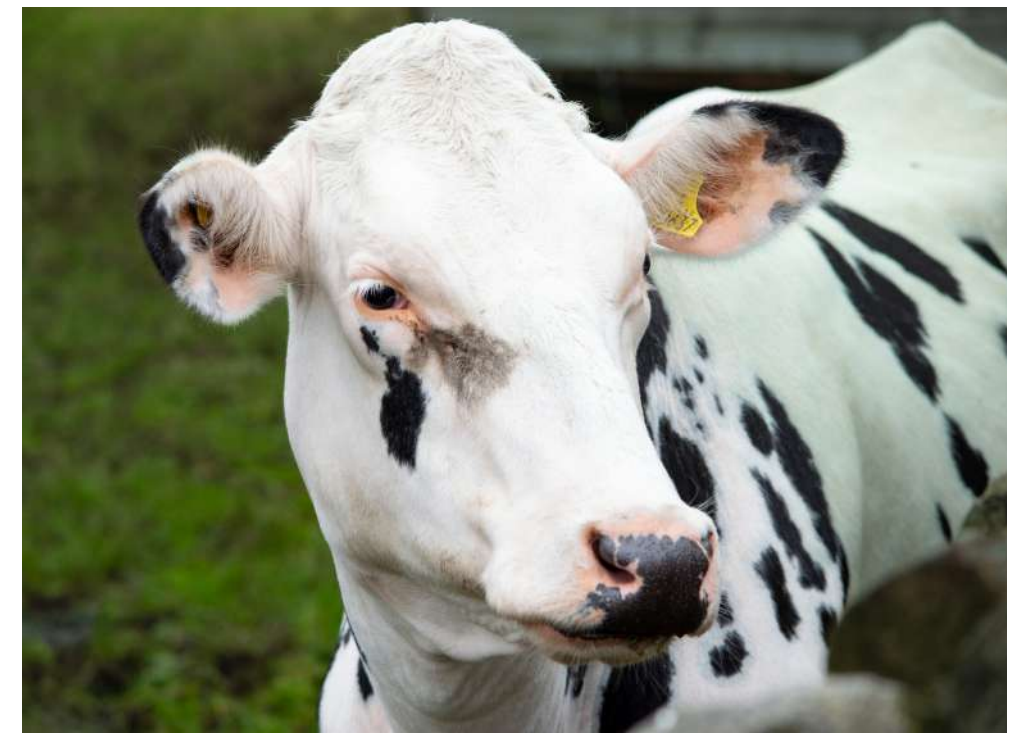
	2021	2022
Scope 3. Indirect Emissions	903,958 mtCO₂e	972,187 mtCO₂e
Purchased materials	39,272	45,100
Water use	510	560
Fuel and energy-related activities (not included in Scope 1 and 2)	10,044	10,455
Employee commuting + WTT	15,041	16,688
Air travel + WTT	27	27
Hotel stays	442	442
Upstream Transportation + WTT	3,908	4,415
Exports + WTT	524	524
Wastewater treatment	839	921
Solid Waste Disposal	42	36
Local non-owned Farms (all activities)	833,310	893,019



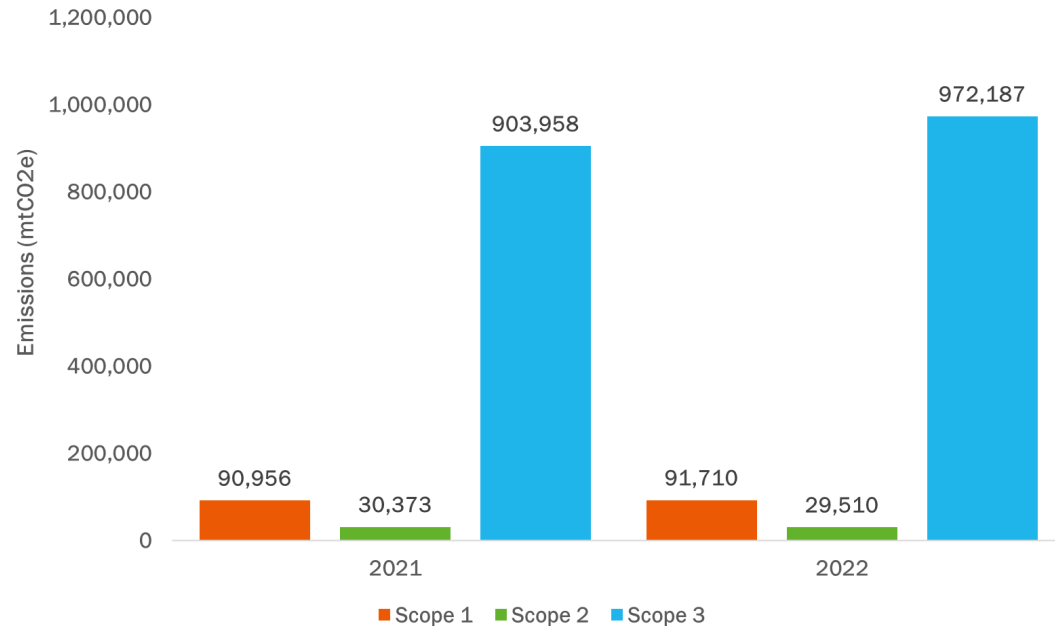
	2021	2022
Biogenic Carbon	180 mtCO₂e	180 mtCO₂e
Planted trees	180	180
Avoided Emissions	579 mtCO₂e	580 mtCO₂e
PV Electricity Generated	579	580

In 2022, Juhayna reported a total of **1,093,407 mtCO₂e** in emissions, marking a **7%** increase from the previous year. Scope 1 emissions decreased by **0.8%**, and Scope 2 emissions decreased by **2.8%**. However, Scope 3 emissions increased by **7.5%**, with local non-owned farms contributing significantly at **82%**. Scope 3 emissions accounted for **89%** of the company's total carbon footprint. For biogenic carbon, the carbon sequestration by the planted trees at Farafra Farm amounted to

180 mtCO₂e. The Land use Change of our farms is only calculated once and is therefore not included in this year's Biogenic Carbon. The avoided emissions are owing to our installed PV modules for electricity generation at our dairy farm in Al Bahariya Oasis, preventing the release of **580 mtCO₂e**. Biogenic carbon uptake and avoided emissions from the installation of PV modules do not fall under any of the 3 Scopes and are presented separately in line with the GHG Protocol guidelines.



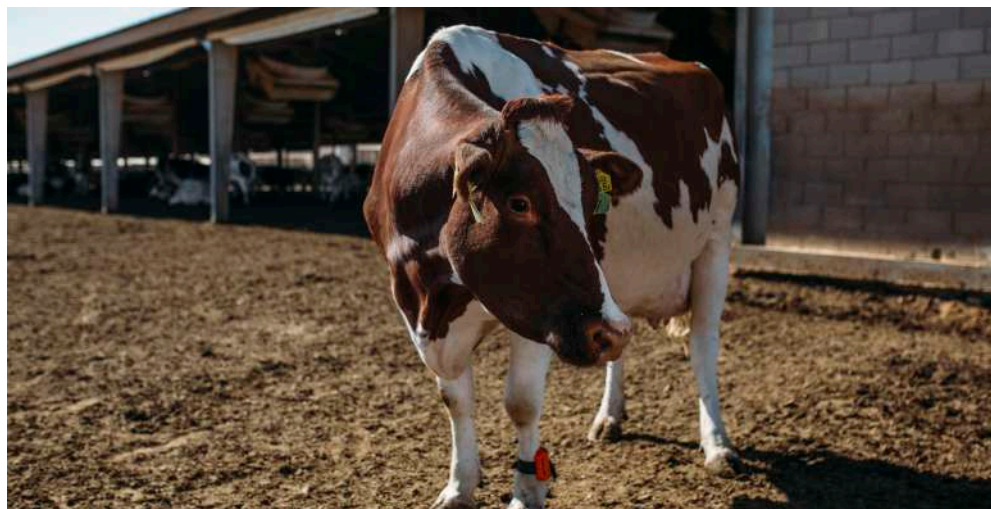
Emissions per scope, 2021 and 2022 (mtCO₂e)



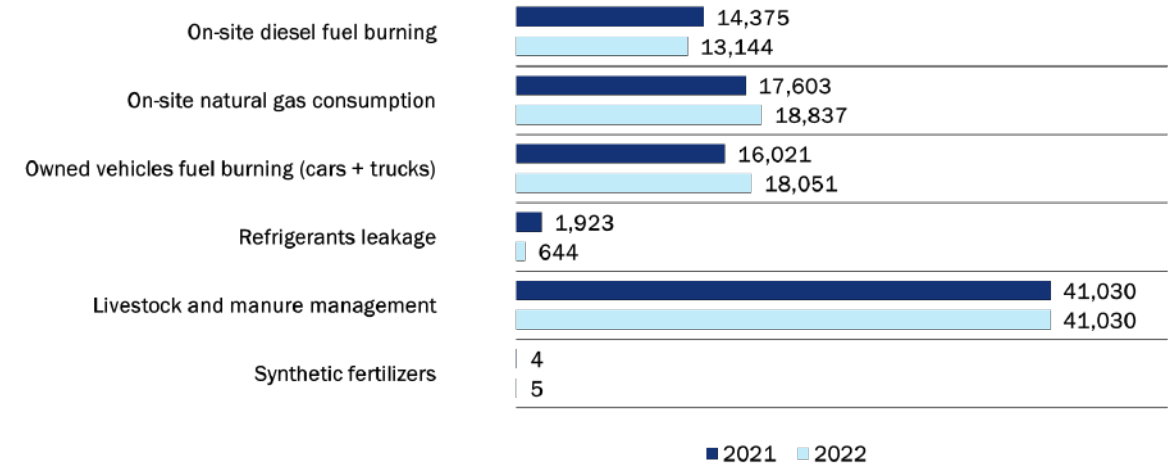
The total emissions for Juhayna for the year 2022 are **1,093,407 mtCO₂e**. Our total absolute emissions witnessed several changes in the past year. Specifically, our Scope 2 emissions decreased by **2.8%**, reflecting our efforts to reduce our environmental impact. However, we observed a slight increase of **0.83%** in our absolute Scope 1 emissions. Notably, our Scope 3 emissions

increased by approximately **7.5%**. This year, we made a concerted effort to gather more accurate and comprehensive data on our Scope 3 emissions, leading to the observed increase in this category of emissions.

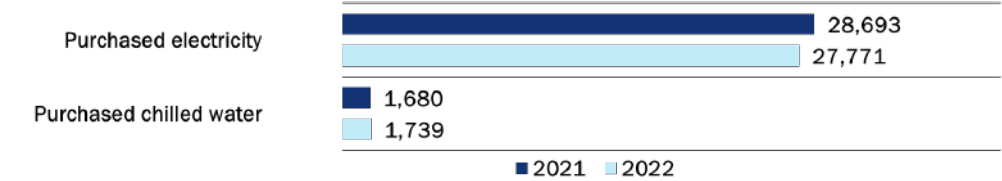
The following graphs shows the share of the different activity's emissions in each Scope for both years 2021 and 2022.



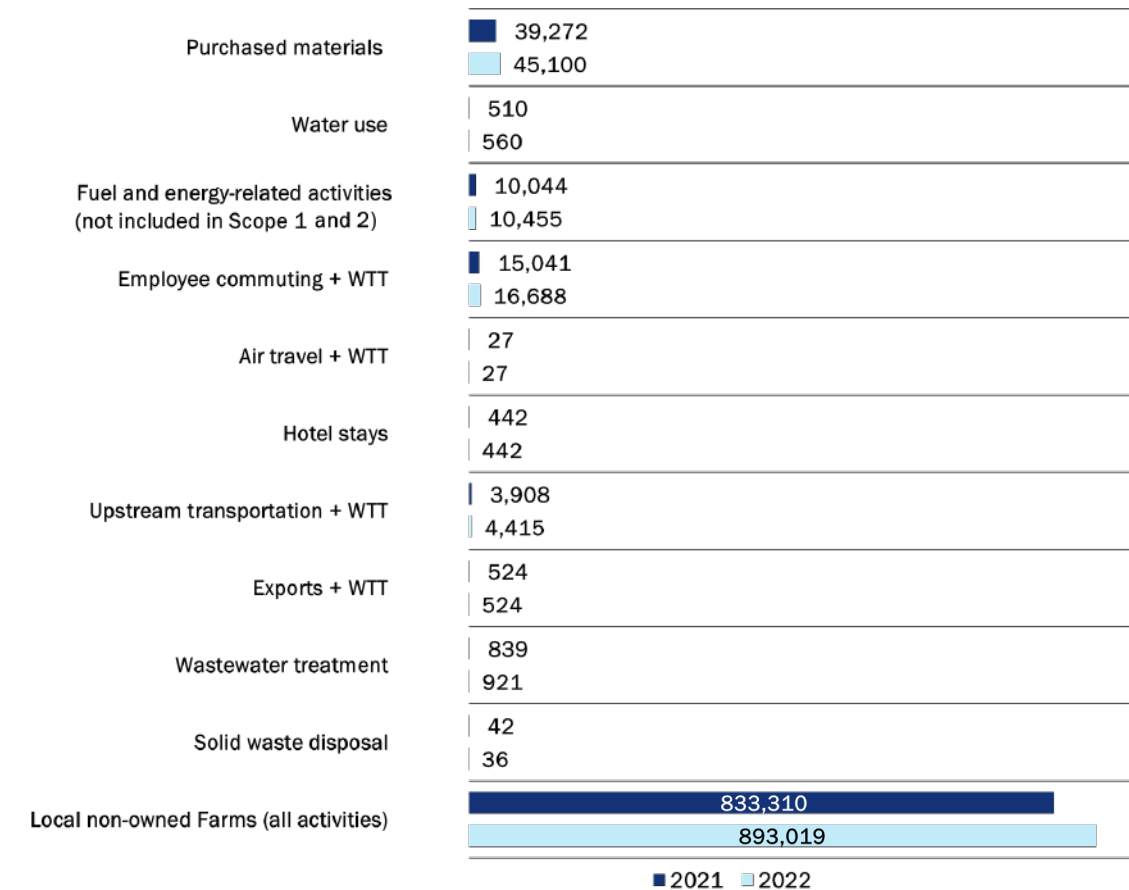
SCOPE 1



SCOPE 2



SCOPE 3



BENCHMARKING



The benchmarking process for Juhayna has been meticulously executed on two fronts. Firstly, externally, it involved a comprehensive assessment in comparison with similar businesses and dairy companies, providing valuable insights into our standing within the industry landscape. Secondly, internally, this benchmarking initiative

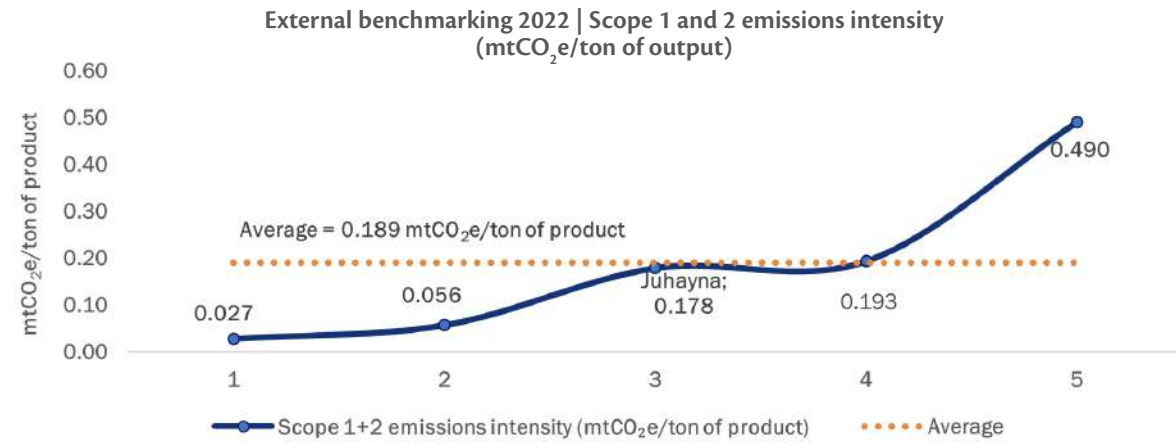
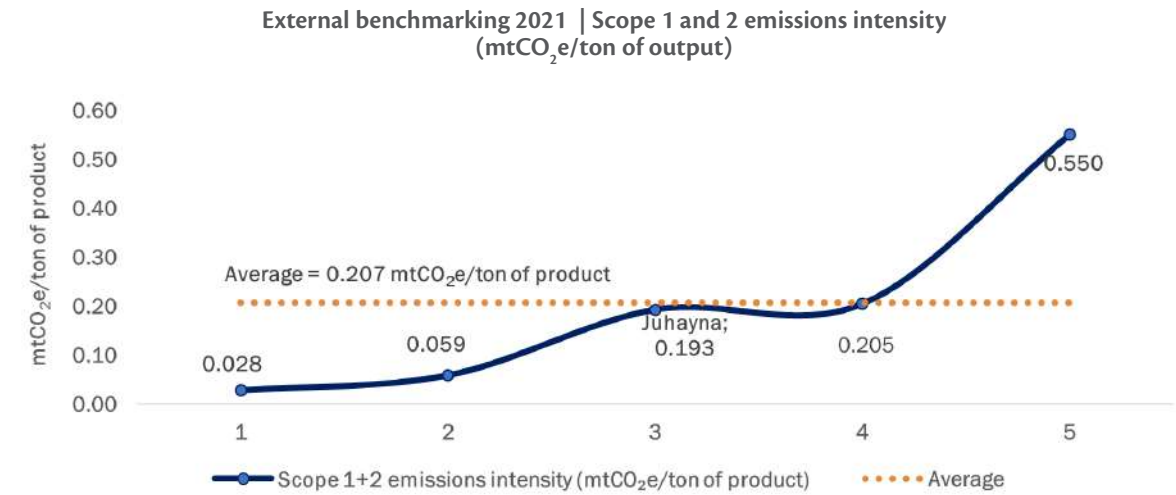
was undertaken separately for all segments of Juhayna's diverse business portfolio. This internal assessment has been instrumental in tracking and evaluating our progress within each distinct segment, thereby facilitating a granular understanding of our performance across the organization.

EXTERNAL BENCHMARKING

In the realm of external benchmarking, our evaluation focuses exclusively on Scope 1 and Scope 2 emissions. We have conducted an analysis for five distinct dairy companies that operate across diverse geographical regions around the globe, with Juhayna being one among them. It is crucial to bear in mind that external benchmarking serves as an informative reference point rather than an exacting measure due to the inherent disparities that stem from operating in disparate parts of the world. These disparities may encompass variations in system boundaries, business

activities, and slight deviations in methodologies employed for calculating carbon footprints, underscoring the nuanced nature of such comparisons.

The emission intensity is measured as $\text{mtCO}_2\text{e/ton}$ of product, where the lowest values in 2021 and 2022 were 0.028 and 0.027 $\text{mtCO}_2\text{e/ton}$ of product, respectively. Juhayna had an emission intensity of **0.193 $\text{mtCO}_2\text{e/ton}$ of product** in **2021** and **0.178 $\text{mtCO}_2\text{e/ton}$ of product** in **2022**, which is **below** the average values in both years; 0.207 and 0.189 $\text{mtCO}_2\text{e/ton}$ of product.



INTERNAL BENCHMARKING

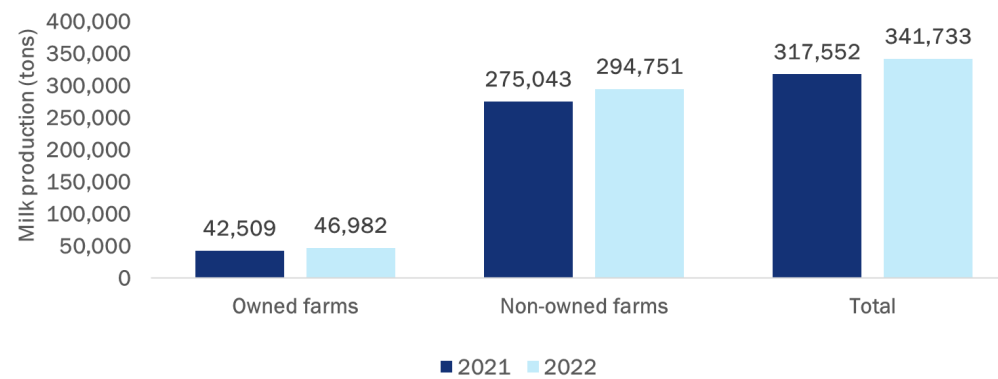
Besides assessing our business' performance externally, we also strive to track and improve our performance internally. Therefore, an internal benchmarking is conducted, considering Scope 1 and 2 emissions of our main sectors: farming, manufacturing, and distribution.

Farming

At Juhayna, we care very much about our farms, as well as the local farms to ensure the well-being of the cows, as well as the highest quality of milk. For Enmaa Farms, it is notable that their production for the year 2022 exhibited a noteworthy

upswing, recording a substantial **increase** of **10.5%** when compared to the production figures for the preceding year, 2021. In addition, the non-owned farms production **increased** in 2022 by **7.2%** compared to 2021.

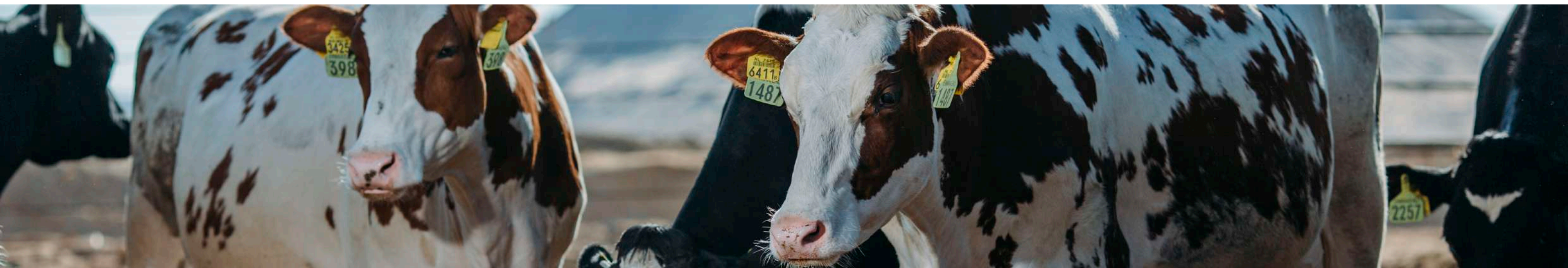
Milk production in 2021 and 2022



The intensity metrics of the farms include only Scope 1 emissions. Both of Juhayna's owned farms operate autonomously, disconnected from the grid, and rely on diesel generators for electricity generation. Notably, El-Esseila Farm has an integrated photovoltaic (PV) system thereby substituting a portion of fossil fuel consumption with renewable energy sources. Consequently, Juhayna's owned farms register no Scope 2 emissions. The intensity

metrics for El-Esseila and Al-Farafra farms were established with reference to tonnage of milk produced and crop area, respectively. Notably, the total Scope 1 emissions intensity for El-Esseila farm exhibited a commendable **reduction** of **16%** in 2022 when compared to the values recorded in 2021. Conversely, Al Farafra farm observed an **18% increase** in total Scope 1 emissions intensity in 2022 in comparison to the figures reported in 2021.

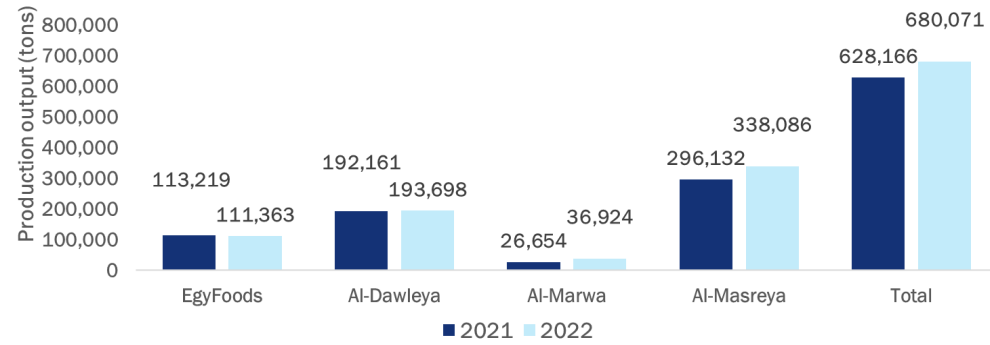
FARM	ON-SITE DIESEL	LIVESTOCK	SYNTHETIC FERTILIZERS	TOTAL SCOPE 1
DIRECT EMISSIONS INTENSITY (mtCO ₂ e/TON OF MILK)				
EL-ESSEILA 2021	0.230	0.96	-	1.195
EL-ESSEILA 2022	0.159	0.87	-	1.03
DIRECT EMISSIONS INTENSITY (mtCO ₂ e/CROP AREA)				
AL-FARAFRA 2021	3.073	-	0.0029	3.077
AL-FARAFRA 2022	3.734	-	0.0032	3.737



Manufacturing

Production of factories include all types of products including milk, yoghurt, juice, etc. In 2022, the total production of our four factories increased by **8.3%** compared to **2021**.

Factories production in 2021 and 2022



Across Juhayna's four factories, the lowest electricity emissions intensity in 2022 was witnessed in **Al-Marwa factory**, while the lowest natural gas emissions intensity in the same year was witnessed in **Al-Dawleya factory**. Overall, the lowest Scope 1 emissions intensity in 2022 is witnessed in **Al-Dawleya factory**.

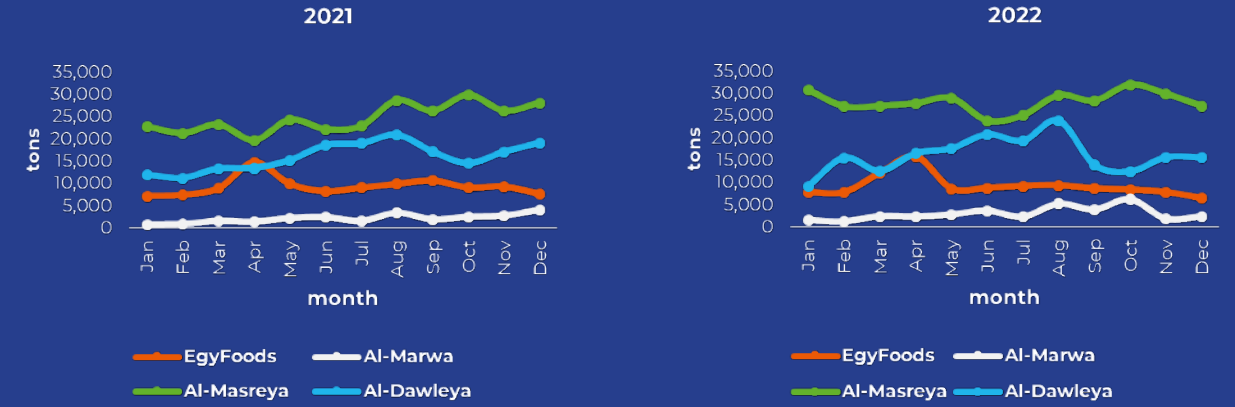
LOWEST EMISSIONS INTENSITY VALUES ACHIEVED DURING 2022

	UNIT	EGYFOODS	AL-DAWLEYA	AL-MARWA	AL-MASREYA
Natural Gas Emissions Intensity	mtCO ₂ e/ton	0.023	0.009	0.072	0.016
Electricity Emissions Intensity	product output	0.061	0.031	0.017	0.02
Scope 1 Emissions Intensity (Incl. Downstream Transp.)		0.083	0.041	0.09	0.043



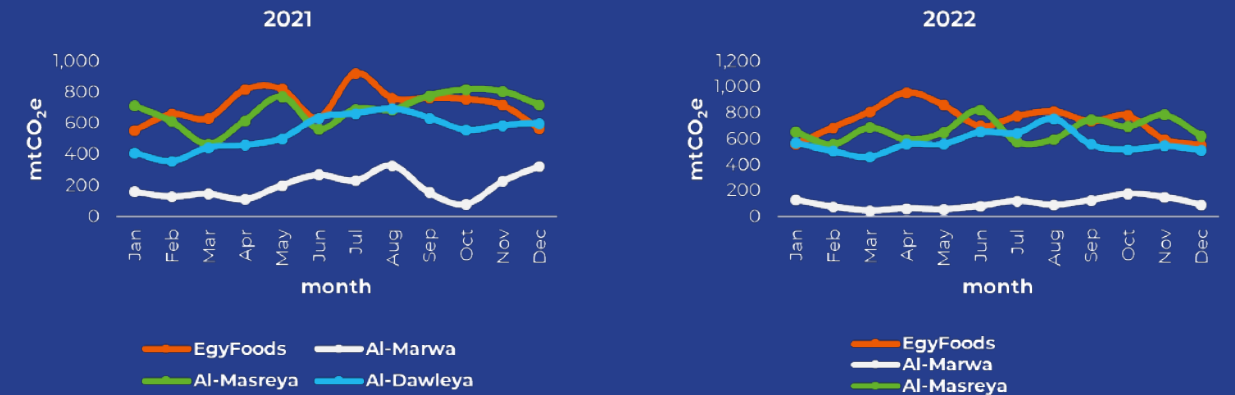
Factories output (tons of production)

The below charts shows the monthly production of each factory of Juhayna's factories in the years 2021 and 2022. It is notable that the largest producing factory is **Al-Masreya**, followed by **Al-Dawleya**.



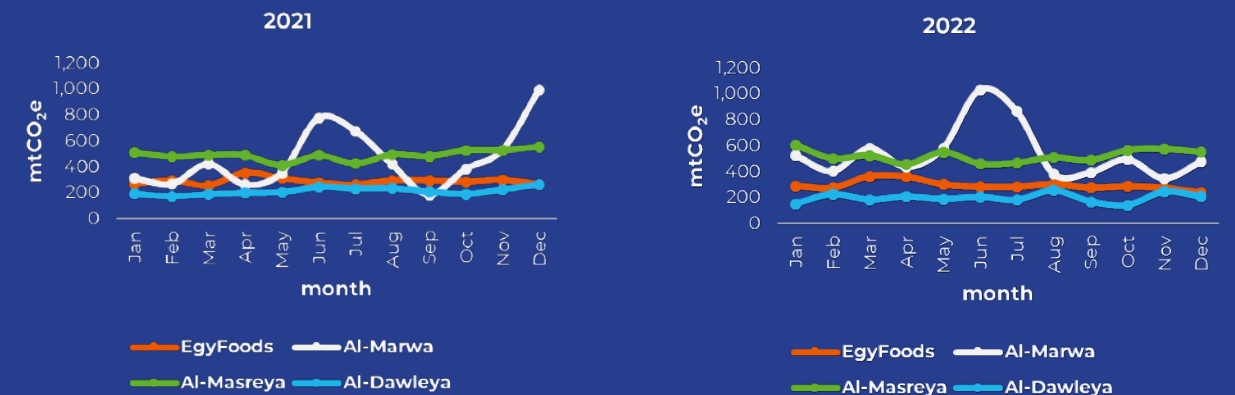
Factories electricity emissions (mtCO₂e/month)

The largest electricity consuming factory in 2021 and 2022 is **EgyFoods**, followed by **Al-Masreya**.



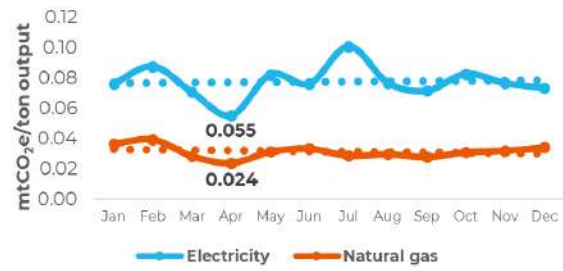
Factories natural gas emissions (mtCO₂e/month)

Al-Marwa factory is the largest consumer of natural gas between Juhayna's four factories in both years, followed by **Al-Masreya**.

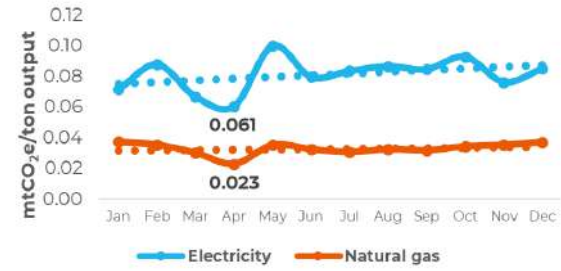


Scope 1 and 2 emissions are considered for all carbon intensity metrics, (mtCO₂e/ton output production). The lowest values of the year have been identified for each of the factories with regards to the electricity consumption and use of natural gas. These values were used to see what levels we could reach in manufacturing. If we could achieve these lowest values every month which we have reached during 2020 and 2022, then we could enhance our carbon footprint and reduce our emissions.

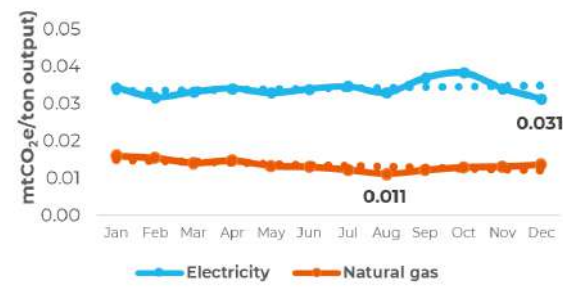
EgyFoods Scope 1 and 2 emissions intensity (mtCO₂e/ton output) - 2021



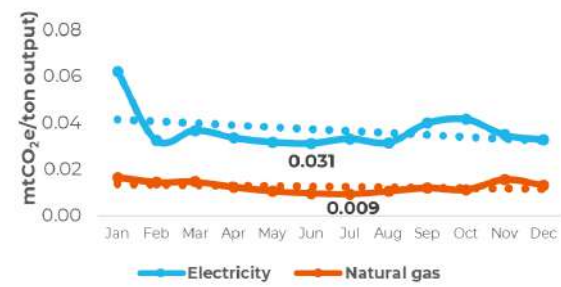
EgyFoods Scope 1 and 2 emissions intensity (mtCO₂e/ton output) - 2022



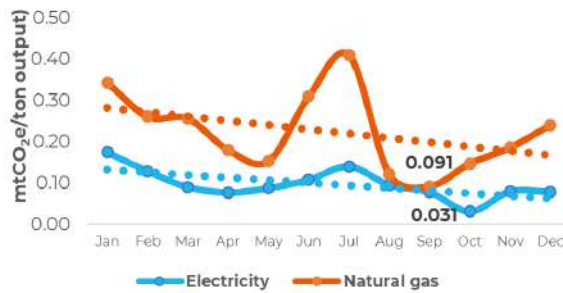
Al-Dawleya Scope 1 and 2 emissions intensity (mtCO₂e/ton output) - 2021



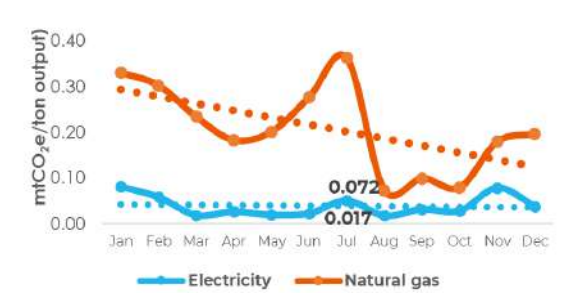
Al-Dawleya Scope 1 and 2 emissions intensity (mtCO₂e/ton output) - 2022



Al-Marwa Scope 1 and 2 emissions intensity (mtCO₂e/ton output) - 2021

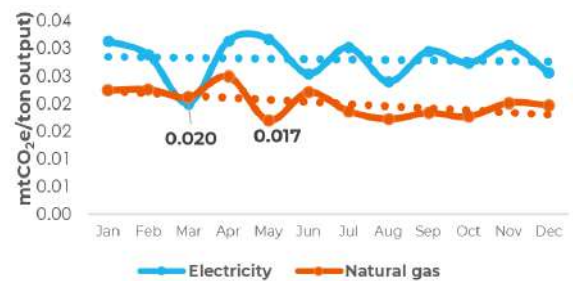


Al-Marwa Scope 1 and 2 emissions intensity (mtCO₂e/ton output) - 2022

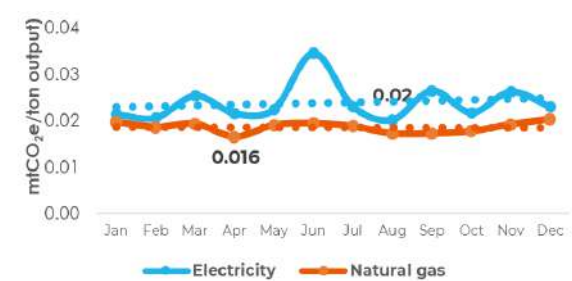




Al-Masreya Scope 1 and 2 emissions intensity (mtCO₂e/ton output) - 2021



Al-Masreya Scope 1 and 2 emissions intensity (mtCO₂e/ton output) - 2022



The lowest Scope 1 and 2 emissions intensity in both 2021 and 2022 is witnessed in the month of August with values of **0.065** and **0.057 mtCO₂e/ ton of product**, respectively.

Factories total carbon intensity Scope 1&2 (mtCO₂e/ ton production output) - for 2021 and 2022



Manufacturing Natural Gas

Across Juhayna’s four factories, here has been a noteworthy reduction in the emissions intensity associated with natural gas in the year 2022 as compared to the values recorded in 2021. These reductions have exhibited varying percentages, ranging from 4.2% to 20.9%, as illustrated in the table below.

LOWEST EMISSIONS INTENSITY VALUES ACHIEVED DURING 2021 AND 2022

	UNIT	2021 (BY)	2022	INDICATOR
EGYFOODS		0.024	0.023	-4.2% Reduction
AL-DAWLEYA	mtCO ₂ e/ton	0.011	0.009	-18.2% Reduction
AL-MARWA	product output	0.091	0.072	-20.9% Reduction
AL-MASREYA		0.017	0.016	-5.9% Reduction

Manufacturing Electricity Consumption

Al-Marwa factory has witnessed a substantial **reduction** in the emissions intensity linked to electricity consumption was observed in the year 2022, showcasing a notable decrease of **45%** when compared to the values reported in 2021. Conversely, in the case of EgyFoods, there was a contrasting trend as the emissions intensity associated with electricity consumption **increased** in 2022, registering a rise of **10.9%** compared to the values recorded in 2021.

LOWEST EMISSIONS INTENSITY VALUES ACHIEVED DURING 2021 AND 2022

	UNIT	2021 (BY)	2022	INDICATOR
EGYFOODS		0.055	0.061	+10.9% Increase
AL-DAWLEYA	mtCO ₂ e/ton	0.031	0.031	
AL-MARWA	product output	0.031	0.017	-45% Reduction
AL-MASREYA		0.02	0.02	

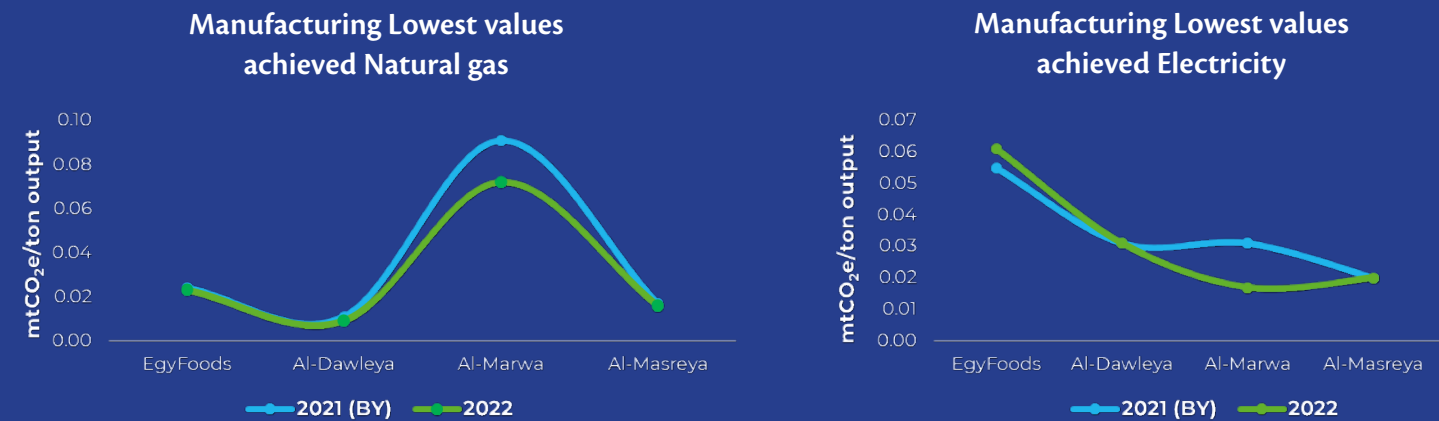
Manufacturing Carbon intensity Scope 1+2

Al-Dawleya, Al-Marwa, and Al-Masreya factories have witnessed a decrease in overall Scope 1 and 2 emissions intensity in 2022 compared to 2021, while only EgyFoods factory witnessed an increase of 5%.

LOWEST EMISSIONS INTENSITY VALUES ACHIEVED DURING 2021 AND 2022

	UNIT	2021 (BY)	2022	INDICATOR
EGYFOODS		0.079	0.083	+5% Increase
AL-DAWLEYA	mtCO ₂ e/ton	0.044	0.041	-6.8% Reduction
AL-MARWA	product output	0.169	0.09	-46.7% Reduction
AL-MASREYA		0.046	0.043	-6.5% Reduction

The below charts shows the lowest natural gas, electricity, and scope 1 and 2 emissions intensity witnessed in each factory in years 2021 and 2022.



Manufacturing Carbon intensity Scope 1+2

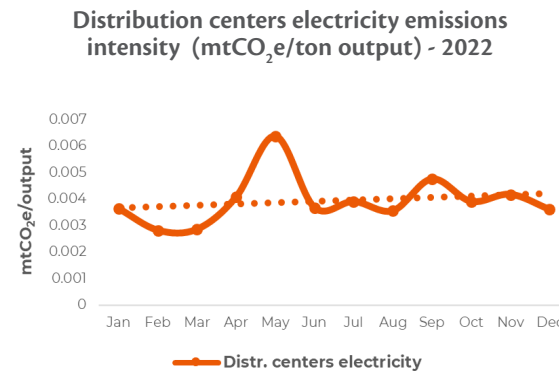
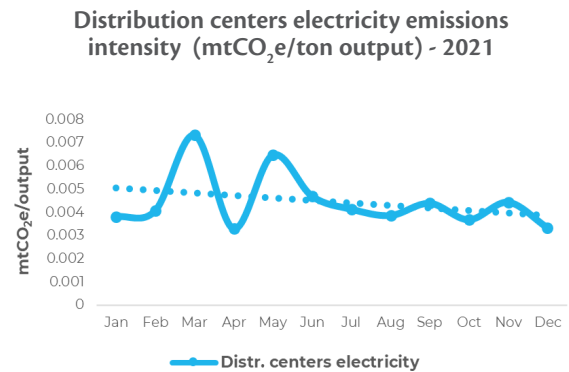
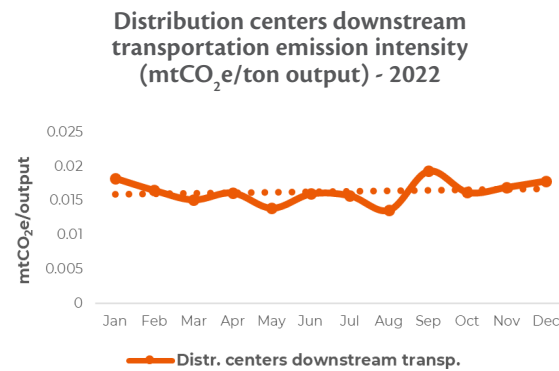
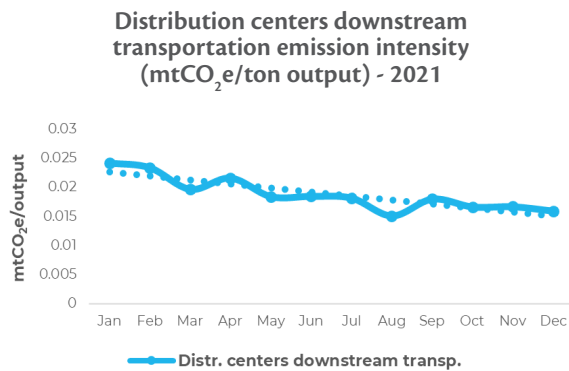


Distribution Centres

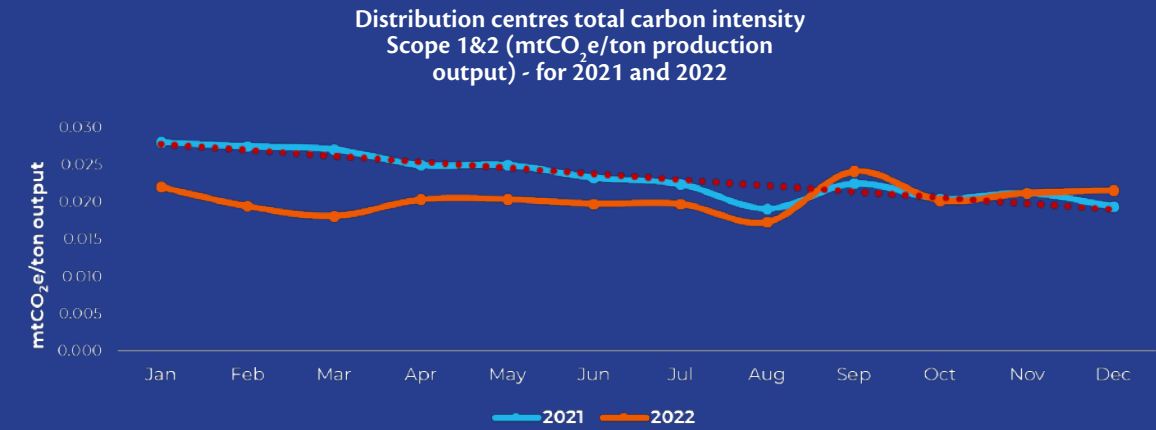
Like the farms and factories, the lowest values achieved during 2021 and 2022 have been identified for the use of natural gas, electricity consumption, fuel consumption in downstream transportation. As for the carbon intensity, Scope 1 and 2 emissions are considered.

LOWEST VALUES ACHIEVED DURING THE YEAR				
	UNIT	2021 (BY)	2022	INDICATOR
Downstream transportation (Warehouses to retail)	mtCO ₂ e/ton product output	0.015	0.014	-6.7% Reduction
Electricity		0.003	0.003	
Scope 1 and 2 Carbon intensity (incl. downstream transp.)		0.019	0.017	-10.5% Reduction

The below charts show the monthly downstream transportation and electricity consumption emissions intensity per month.



It is notable from the below chart that 2022 emissions intensity is generally lower than 2021, which shows our efforts in reducing our GHG emissions.





PERFORMANCE EVALUATION

CARBON INTENSITY

The carbon intensity increased in two areas: revenue and EBIT. Emissions per unit of revenue rose by about **7.60%**, indicating that a higher proportion of emissions is associated with the company's total revenue. In the case of EBIT, emissions increased by approximately **13%**, suggesting that a significant portion of emissions is tied to the company's profitability before

accounting for interest and taxes. This implies that a notable share of the environmental impact is associated with the core operational aspects of the business's financial performance. However, there was a decrease in carbon emissions intensity per unit of production, with both Scope 1 and 2 emissions decreasing by **7.7%**.

Juhayna's Carbon Emissions Intensity 2021.2022
(Scope 1 & 2 emissions)

		2021 (BY)	2022	COMPARISON
EMISSIONS INTENSITY* (mtCO ₂ e/M.EGP)	REVENUE	9.91	10.67	+7.60%
	EBIT	104.69	118.27	+13.0%
ABSOLUTE EMISSIONS (mtCO ₂ e)	Scope 1	90,956	91,710	+0.83%
	Scope 2	30,373	29,510	-2.84%
	Scope 1+2	121,329	121,220	-0.09%
	Scope 3	903,958	972,187	+7.55%
	Total	1,025,287	1,093,407	+6.64%
EMISSIONS INTENSITY* (mtCO ₂ e/ton of product)	Scope 1	0.145	0.135	-6.90%
	Scope 2	0.048	0.043	-10.4%
	Scope 1+2	0.193	0.178	-7.77%

* Scope 1 and 2 emissions only

REDUCTION TARGETS

In 2015, following the Paris Agreement, we bore witness to an extraordinary and pivotal moment in international history. 196 parties came together to forge an ambitious agreement aimed at curbing global warming, with the resolute objective of keeping it well below 2°C above pre-industrial levels. Just three years later, in 2018, the Intergovernmental Panel on Climate Change (IPCC) issued a stark warning: to avert the catastrophic consequences of climate change, global warming must not exceed 1.5°C. These targets not only provide a clearly delineated roadmap for companies to reduce their greenhouse gas (GHG) emissions but also serve as a vital safeguard against the most severe repercussions of climate change while bolstering the resilience of businesses for the future.

In alignment with our unwavering commitment to actively contribute to global climate action and mitigate the impacts of climate change, we

have undertaken a significant step by revising our base year to 2021. Consequently, we have realigned our reduction targets in harmony with the 1.5°C scenario. These targets are strategically designed to span a nine-year period, from 2021 to 2030, during which we will diligently monitor, report on, and assess our progress while remaining steadfast in our pursuit of these critical objectives.

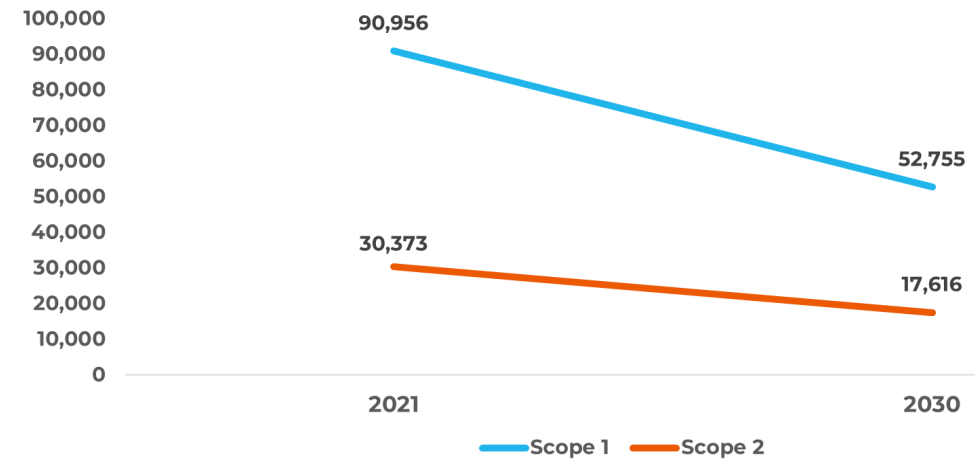
Reduction targets have been set to ensure that Juhayna's activities and related emissions contribute to a global temperature increase of no more than 1.5 degrees Celsius, in alignment with the goals of the Paris Agreement. Accordingly, Juhayna commits to reach a **42%** reduction in Scope 1 and 2 emissions by the year **2030**.


Juhayna has reduced its total absolute Scope 1 & 2 emissions by 0.09% in 2022 compared to 2021, which means that we have achieved **0.2%** of our reduction target.



	Base Year 2021	Target Year 2030	Reporting Year 2022	Target Reduction %	Status %
Scope 1 (mtCO ₂ e)	90,956	52,755	91,710	42%	+0.83% increase compared to 2021
Scope 2 (mtCO ₂ e)	30,373	17,616	29,510	42%	-2.84% decrease compared to 2021 (6.8% of the target achieved)
Scope 1+2 (mtCO₂e)	121,329	70,371	121,220	42%	-0.09% decrease compared to 2021 (0.2% of the target achieved)

Absolute Emissions Reduction Target





DECARBONIZATION PLAN

Throughout 2021 and 2022, we conducted a comprehensive reassessment of our previously established decarbonization plan, focusing on strategies to diminish GHG emissions and meet our predetermined objectives. Although a few initiatives remain outstanding, we are dedicated to addressing them in the forthcoming reporting period. Encouragingly, we have achieved significant advancements in select projects. Our unwavering commitment to achieving a decarbonized business underscores our determination to propel these crucial projects forward in the years ahead.

ACTIVITY & DESCRIPTION

STATUS

SAVING OPPORTUNITIES

Energy and Water Efficiency Audit (and Management System)

Deploy comprehensive energy and water management systems across all Juhayna's facilities, with a focus on consistently enhancing the energy and water consumption efficiency.



Several projects implemented

ENERGY

- Substituting the compressed air hose situated above the packaging equipment with a more energy-efficient system.
- Transferring the cooling load from Pasteurizer no.1 to Ammonia Plant no 1.
- Installing Schneider Electric's Galaxy VL UPS system
- Installing a new blower in the wastewater treatment plant
- Installing Energy management system software in El-Dawleya

WATER

- Wastewater reuse in irrigation

GAS

- Improving the combustion efficiency of systems utilizingAutoflame technology.
- Real-time measurement, monitoring, and assessment of the boiler's performance

Supply Chain Decarbonization and Climate Resilience Program

Program for supply chain decarbonization and climate resilience, including but not limited to training and capacity-building webinars and workshops, carbon footprint analysis, adoption of regenerative agriculture, resource efficiency (Energy and Water) audit, and environmental management system in accordance with ISO 140001



Some Progress

- Conducted a comprehensive supplier training program, which included 13 food packaging suppliers. The program focused on enhancing their understanding of both national and international food quality and safety standards.

- Upgraded Rayeb plastic caps to environmentally friendly, plant-based caps made of sugarcane and certified by the Bonsucro standards.



Under study

- Sourcing biodegradable spouts for some of our products,

ACTIVITY & DESCRIPTION

STATUS

SAVING OPPORTUNITIES

Climate-related Issues Incentive program development

Incentivize and support sustainability practices, to address climate-related challenges while focusing on the attainment of specific sustainability targets.



No progress

Waste Management Plan and Operating System

Develop and implement waste management strategy that addresses Juhayna's whole business, including its farms, headquarter, and distribution centres allowing for segregation, accurate quantification, and reuse/recycling/recovery.



Under study

Evaluating the feasibility of utilizing market returns, specifically in the yogurt and dairy sector, for animal feed. Additionally, exploring the potential of redirecting the plastic waste from Juhayna's returns to dedicated waste or recycling facilities. Presently, plastic waste is gathered on pallets and collected by waste management services.

Green Building Guidelines

Develop and adopt green building guidelines incl. refurbishment of buildings such as insulation, draught proofing, efficient lighting and lighting control, HVAC operational parameters and control, external/internal shading optimization, daylight and occupancy sensors and building energy and water efficiency and management.



Some Progress

100% switch to LED lighting across all facilities

ACTIVITY & DESCRIPTION

STATUS

SAVING OPPORTUNITIES

ACTIVITY & DESCRIPTION

STATUS

SAVING OPPORTUNITIES

Design, adopt and implement a refrigerant leakage reduction program

Keep meticulous records of all the acquired refrigerants, including their type, quantity, and precise area of use.



Completed

Monthly data recording of refrigerant leakage

Corporate culture

Introduce environmental culture through training and capacity-building programs.



No progress

Sustainability Policies

Introduce and adopt sustainability policies for all Juhayna's activities, with commitment to practices and standards to promote environmentally and socially responsible operations, including developing low-carbon business travel policy.



No progress

Analysis of Employee Commuting

Design, adopt and implement employee commuting data collection and analysis system



No progress

Company Fleet Vehicle Efficiency

Guarantee that the vehicles in the transportation fleet are operating effectively in terms of fuel consumption, implement routine inspections and maintenance.



Some Progress

Each driver is equipped with handheld devices serving approximately 120 clients. These devices also function as geospatial mapping tools, ensuring that payment processing is only enabled within the specified designated areas.



Under study

Considering the concept of outfitting Juhayna's trucks with GPS devices that not only monitor their routes but also track emissions, fuel consumption, and related data.



Annex



DEFINITIONS & TERMINOLOGY

Avoided emissions	Avoided emissions are emissions that would have been emitted into the atmosphere but are avoided. In Royal Herbs, PVs are utilized in Al-Bahareya farm and workers' accommodation to generate electricity, thus avoiding emissions that would otherwise have been generated by using another source for electricity generation.
Base year	A base year is a reference year in the past with which current emissions can be compared. 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.
Biogenic carbon	Emissions related to natural carbon cycle and resulting from the combustion, processing, harvesting, fermentation, digesting and decomposition of biological sources and they include CO ₂ removal because of afforestation and reforestation.
Carbon footprint	The amount of Carbon Dioxide that an individual, group, or organization lets into the atmosphere in a certain time frame.
CO ₂ e	Carbon dioxide equivalent or CO ₂ equivalent, abbreviated as CO ₂ e, is a metric used to compare the emissions from various GHGs based on their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.
CO ₂ e sequestration	The capture and secure storage of carbon that would otherwise be emitted to or remain in the atmosphere.
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. Besides the economic cost of lost commodities, fugitive emissions contribute to air pollution and climate change.
GHG protocol	Greenhouse Gas Protocol is a uniform methodology used to calculate the carbon footprint of an organization.
GWP	Global Warming Potential is an indication of the global warming effect of a greenhouse gas in comparison to the same weight of carbon dioxide.
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	Direct 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	Indirect 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	Indirect emissions resulting from other activities that are not covered in scope 1 and 2. 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 QUALITY

All data is retrieved from Juhayna's Database and is corresponding to activities occurring during 2021 and 2022. The data quality has been assessed and the unit and resolution of each line of the business are presented below.

- **Good:** no changes
- **Satisfactory:** could be improved
- **Weak:** priority area for improvement



SCP	ACTIVITY	2021 DATA	2022 DATA	UNITS	RESOLUTION	
HEADQUARTERS						
1	Mobile combustion	Passenger vehicles	70,888	63,446	liters	Data recorded on a yearly basis, includes vehicle type, fuel type and total fuel consumption.
		Truck vehicles	25,357	24,188	liters	Data recorded on a yearly basis, includes vehicle type, fuel type and total fuel consumption.
2	Purchased energy	Purchased electricity	234	248	MWh	Data recorded monthly for electricity consumption.
3	Purchased goods and services	Water use	13,181	13,181	m ³	The data recorded in 2021 and 2022 was found to be invalid, and as a result, the most recent reliable data from 2020 was utilized. To ensure more accurate and up-to-date monitoring of monthly water consumption, it is highly recommended to implement a tracking system.
3	Waste generated in operations	Wastewater treatment	11,863	11,863	m ³	
3	Business travel	Air travel	—	133,674	p.km	2021 Data provided was not usable. 2022 Data recorded on a yearly basis, includes number of passengers, flight route and flight distance for both international and domestic flights.
		Hotel stays	—	501	days	2021 Data provided was not usable. 2022 Data recorded monthly, includes number of people, days of stay and country of stay.
3	Employee commuting	Employee Commuting + WTT	Car	1,708,126	km	Data recorded on a yearly basis, includes vehicle type (bus/passenger vehicle), number of vehicles, and route distance. Data was collected through a survey.
			Bus	66,416,860	p.km	



SCP	ACTIVITY	2021 DATA	2022 DATA	UNITS	RESOLUTION	
DISTRIBUTION CENTERS						
1	Stationary combustion	Natural gas	43,455	40,575	m ³	Data recorded monthly for natural gas consumption.
1	Mobile combustion	Truck vehicles	4,312,150	4,102,111	liters	Data recorded monthly for fuel consumption and includes fuel type
1	Fugitive emissions	Refrigeration and other gases	325	N/A	kg	2021 Data recorded on a yearly basis, includes refrigerant type, in addition to the number and size of cylinders 2022 No data was recorded for refrigerant leakage since the recharged amount past year was deemed sufficient to meet the cooling needs of the HVAC system.
2	Purchased energy	Purchased electricity	6,472	5,878	MWh	Data recorded monthly for electricity consumption.
3	Purchased goods and services	Water use	82,990	58,964	m ³	Data recorded monthly for water consumption.
		Purchased materials	49	68	tons	Data recorded on an annual basis, includes the total weight and type of each material.
3	Waste generated in operations	Wastewater treatment	74,961	53,068	m ³	Data was calculated on a monthly basis for wastewater treatment, based on the assumption that the total discharge accounted for approximately 90% of the total water withdrawn.
		Solid waste disposal	576	650	tons	Data recorded on an annual basis, includes the total weight and type of each waste material.
3	Employee Commuting	Employee Commuting + WTT	66,416,860	69,839,810	p.km	Data recorded on an annual basis, includes transport mode, and total passenger kilometers covered. Data was collected through a survey.
3	Transportation and distribution	Up-Downstream Transportation (Courier shipment)	NA	369	ton.km	2021 Data not provided. 2022 Data recorded on an annual basis, includes shipment origin, destination, and transported weight
		Exports	NA	4,059	tons	2021 Data not provided. 2022 Data recorded on an annual basis, includes transport mode, vehicle type, shipment route, travelled distance, and transported weight.





SCP	ACTIVITY	2021 DATA	2022 DATA	UNITS	RESOLUTION	
FARMING OWNED FARMS						
1	Stationary combustion	Diesel used in generators	4,987,147	4,517,192	liters	<p>2021 Data recorded monthly for fuel consumption and includes fuel type, in Al-Eseila Farm. However, in Al-Farafra Farm data recorded as a total yearly value. Track system recommended to recorded data monthly.</p> <p>2022 Data recorded monthly for fuel consumption and includes fuel type.</p>
		Diesel used in machinery	325,806	351,834	liters	<p>2021 Data recorded monthly for fuel consumption and includes fuel type, in Al-Eseila Farm. However, in Al-Farafra Farm data recorded as a total yearly value. Track system recommended to recorded data monthly.</p> <p>2022 Data recorded monthly for fuel consumption and includes fuel type.</p>
1	Mobile combustion	Truck vehicles	18,306	18,603	liters	<p>2021 Al-Farafra Farm: Data recorded as a total yearly consumption. Tracking system recommended to record each month separately. And fuel type was not provided and assumed as Diesel. Al-Eseila Farm: Data recorded monthly for fuel consumption and includes fuel type.</p> <p>2022 Al-Farafra Farm: Data recorded as an average monthly value for fuel consumption. Tracking system recommended to record each month separately. And fuel type was not provided and assumed as Diesel. Al-Eseila Farm: Data recorded monthly for fuel consumption and includes fuel type.</p>
3	Purchased goods and services	Purchased materials	0.32	0.30	tons	Data recorded on an annual basis, includes the total weight and type of each material.
3	Waste generated in operations	Solid waste disposal	0.22	0.25	tons	Data recorded on an annual basis, includes the total weight and type of each waste material.
3	Transportation and distribution	Up-Downstream Transportation	42,509	46,998	ton	Data recorded on a yearly basis, includes vehicle type, total weight of transported product and distance travelled.
			4,272	4,272	km	
	Avoided emissions	PV Panels	1,703,580	1,703,580	kWh	<p>2021 The recorded data includes both the overall electricity consumption and the emissions that would have been generated by non-renewable energy sources – the use of diesel generators in Al-Eseila Farm.</p> <p>2022 Data given was irregular compared to previous years, and calculations were based on the available 2021 data instead</p>
	Biogenic Carbon	Planted trees				
LOCAL FARMS						
3	All Activities	Non-owned farms				<p>Available Scope 1, 2 and 3 data for local farms activities. However, there was a large difference between emissions in 2021 and 2022 of non-owned farms (with almost the same quantities of outsourced milk. Accordingly an alternative approach was taken to bring the emissions closer between the years and overcome differences in data collection received.</p> <p>2021 Out of a total of 135 local farms, 21 were reported, and their combined milk production amounted to 32,652 tons. This accounted for 12% of the overall milk production from local farms, which totaled 275,043 tons.</p> <p>2022 The count of local farms increased to 144, with 15 of them being reported. These 15 farms yielded a total milk production of 23,909 tons, representing 8% of the total milk production from local farms, which reached 294,751 tons.</p>





SCP	ACTIVITY	2021 DATA	2022 DATA	UNITS	RESOLUTION	
MANUFACTURING						
1	Stationary combustion	Natural gas	8,621,471	9,231,657	m ³	Data recorded monthly for natural gas consumption.
		Diesel used in generators	—	1,000	liters	2021 Data not provided. 2022 Data recorded on a yearly basis. Tracking system recommended to record each month separately.
2	Mobile combustion	Truck vehicles	1,488,286	2,488,539	liters	2021 Data recorded covers the first 7 months, but there is missing data for the remaining 5 months. Tracking system recommended to collect data consistently throughout the entire year. 2022 Data recorded monthly for fuel consumption and includes fuel type.
2	Fugitive emissions	Refrigeration and other gases	996	432	kg	Data recorded on a yearly basis, includes refrigerant type, in addition to the number and size of cylinders
2	Purchased energy	Purchased electricity	59,965	54,418	MWh	2021 Data recorded monthly for electricity consumption. 2022 Data recorded monthly for electricity consumption, however, there is an exception for the month of January in AlDawleya Factory, where data input is missing. The assumption of an average value for the factory's electricity consumption for the missing month of January has been made. It is recommended to collect complete and accurate data for all months in future reporting periods to enhance the reliability of emissions calculations and assessments.
		Purchased chilled water	3,904	3,792	MWh	Data recorded monthly for purchased chilled water consumption in El Masreya Factory
3	Purchased goods and services	Water use	1,592,511	1,512,292	m ³	2021 Data recorded monthly for water consumption. 2022 Data recorded monthly for water consumption, but there are instances where multiple months' consumption has been grouped together. Tracking system recommended to record data for each month separately, allowing for more accurate reporting and analysis of water-related emissions in each month.
		Purchased materials	5,519	20,862	tons	Data recorded on an annual basis, includes the total weight and type of each material.
3	Waste generated in operations	Wastewater treatment	1,433,260	1,361,063	m ³	Data was calculated on a monthly basis for wastewater treatment, based on the assumption that the total discharge accounted for approximately 90% of the total water withdrawn.
3	Employee Commuting	Employee Commuting + WTT	Cars	5,199,810	km	Data recorded on a yearly basis, includes vehicle type (bus/passenger vehicle), number of vehicles, and route distance. Data was collected through a survey.
			Bus	48,585,290	54,448,797	
	Avoided emissions	PV Panels	29,638	30,200	kWh	The recorded data includes both the overall electricity consumption and the emissions that would have been generated by non-renewable energy sources - electricity grid in Al-Dawleya.

RELEVANCY AND EXCLUSIONS

The following table describes the GHG emissions sources that were excluded from Juhayna's GHG inventory due to several reasons, including: lack of data, and data that is beyond Juhayna's operation and control and hence considered technically infeasible to attain. The exclusion rationale per activity has also been specified.

Data for the Assiut Factory, which operates for several months each year to meet the heightened demand during Ramadan, was not recorded. The factory, encompassing an area

of 29,600 square meters, inclusive of the refrigeration unit, or 14,260 square meters when excluding the refrigeration unit, remains a valuable part of our operations. In 2021, it operated in April (Ramadan), June, and December, achieving a combined productivity of 2,091 tons. In 2022, the factory was operational during April (Ramadan) and December, with a total production of 2,112 tons. It's worth noting that, despite its limited productivity, and producing only 75-gram yogurt servings, data recording for this factory should be incorporated into the upcoming reporting period.

#	ACTIVITY	DESCRIPTION	EMISSIONS (mtCO ₂ e)	STATUS
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1	Purchased goods and services	The emissions reported under this category are associated with the consumption of packaging materials (Tetra-pak) and supplies such as commodities used across our facilities, including wood pallets, plastics, paper and board, and others (ink, gloves, uniforms, face masks), in addition to emissions from water consumption.	45,660	Relevant, calculated
2	Capital goods	This activity includes the emissions from embodied carbon in Juhayna's owned assets, buildings, etc.	-	Relevant, not yet calculated
3	Fuel and energy-related activities (not included in Scope 1 and 2)	The reported value corresponds to the Well to tank (WTT) emissions which result from production of a fuel, including resource extraction, initial processing, transport, fuel production, distribution and marketing, and delivery. WTT emissions included all fuel burning activities accounted for under Scope 1: - On-site diesel consumed in our farms to generate electricity, and natural gas consumed in our factories and distribution centers. In addition to fuel consumed in owned vehicles.	10,455	Relevant, calculated
4	Upstream transportation and distribution	The emissions under this category are associated with the direct fuel burning by the distribution fleet that transports the raw milk from our owned farms and from our local network of farms to our manufacturing facilities.	4,415	Relevant, calculated



#	ACTIVITY	DESCRIPTION	EMISSIONS (mtCO ₂ e)	STATUS
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5	Waste generated in operations	The reported figure includes emissions from solid waste generated in the four factories, Al-Farafra Farm, and Distribution Centers. It also encompasses emissions from the treatment of wastewater discharged from these facilities.	957	Relevant, calculated
6	Business travel	This activity includes emissions from business travel by air and by land. In addition, it also includes emissions from hotel stays in different countries. Emissions in this category include Well-To-Tank (WTT) emissions.	470	Relevant, calculated
7	Employee commuting	The reported value for emissions corresponds to the emissions generated from employee commuting. This data is based on survey results provided by employees at our four factories, distribution centers, and headquarters. The survey collects information on various factors, including vehicle type, fuel type, number of vehicles, and route distance.	16,688	Relevant, calculated
8	Upstream leased assets	Juhayna does not have any upstream leased assets.	-	Not relevant, explanation provided
9	Downstream transportation & distribution	It corresponds to emissions associated with the downstream land and marine shipping of our products only (exports emissions).	524	Relevant, calculated
10	Processing of sold products	Juhayna sells finished food products ready for direct consumption, which do not require any further industrial processing.	-	Not relevant, explanation provided
11	Use of sold products	Emissions from this category could include energy use at retail outlets by Juhayna's refrigerators, which were not evaluated yet, due to limited data availability from retail outlets	-	Relevant, not yet calculated
12	End of life treatment of sold products	Out of Juhayna's operational boundaries and scope.	-	Not relevant, explanation provided
13	Downstream leased assets	Juhayna does not have any downstream leased assets to any third party.	-	Not relevant, explanation provided
14	Franchises	Not relevant to Juhayna's business model; hence it has been excluded.	-	Not relevant, explanation provided
15	Investments	Not relevant to Juhayna's business model; hence it has been excluded.	-	Not relevant, explanation provided



QUALITY ASSURANCE STATEMENT



To the **Juhayna** Board of Directors’,

We have been appointed by **Juhayna** to conduct carbon footprint calculations pertaining to **Juhayna’s** operational activities for the period **1st of January 2021 to the 31st of December 2021**, and from the **1st of January 2022 to the 31st of December 2022**. The scope extends to Juhayna's two owned farms, as well as the local farms from which Juhayna procures its milk supply. Furthermore, it encompasses the operations of Juhayna's four factories, along with its 29 distribution centers 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 carbon footprint 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 **Juhayna**. 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 **Juhayna’s** raw data used in the carbon footprint calculations have not been thoroughly collected, verified, and truly represent **Juhayna’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 **Juhayna** for the provided assurance and conclusion

Dr. Abdelhamid Beshara, Founder and Chief Executive Officer
MASADER, ENVIRONMENTAL & ENERGY SERVICES S.A.E CAIRO,
November 2023

Abdelhamid Beshara



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.

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