



SARMED Carbon Footprint 2023

Summary Report

June 2024



This document is a summary of the Greenhouse Gas Emissions Report (GHG Inventory Report), the contents of which were verified by the accredited body TÜV AUSTRIA Hellas and the relevant Greenhouse Gas Verification Statement was issued.

Organizational boundaries: The organizational boundaries include the operations owned or controlled by SARMED, which means all the facilities operated by the company in Greece.

Methodology: The calculation of greenhouse gases was carried out in accordance with the requirements of the International Standard ISO 14064-1:2018 for the development of a Greenhouse Gas Emissions Management System.

Reference Period: SARMED's carbon footprint was calculated for the period 01/01/2023 – 31/12/2023.





Greenhouse Gas, GHG

Gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds

GHG source

Process that releases GHG into the atmosphere

GHG direct emissions

GHG emissions from GHG sources owned or controlled by the company

GHG indirect emissions

GHG emissions that is a consequence of an organization's operations and activities, but that arises from GHG sources that are not owned or controlled by the organization

Carbon dioxide equivalent, CO₂e

A metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

GHG Inventory

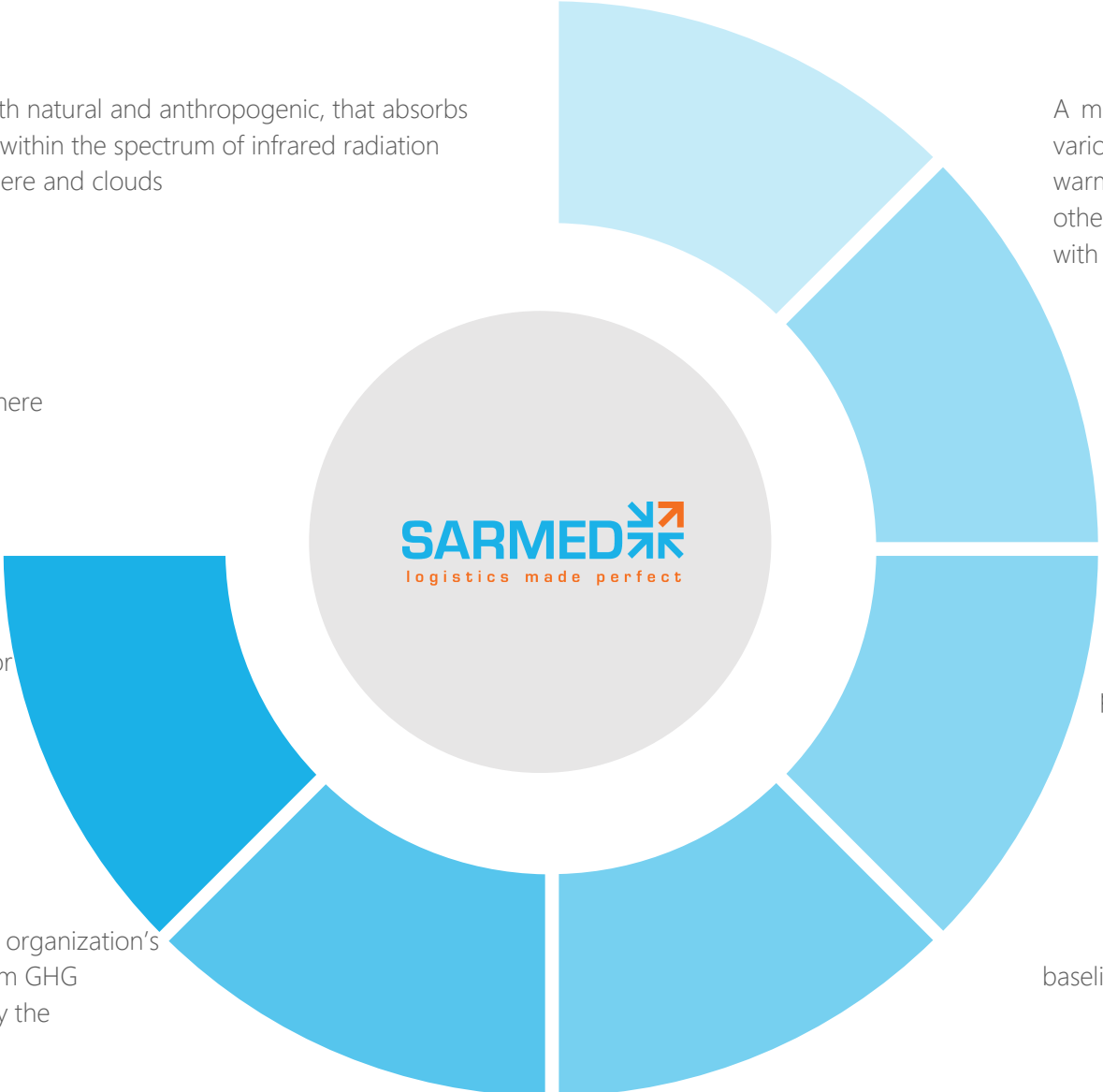
List of GHG sources and GHG sinks and their quantified GHG emissions and GHG removals

GHG reduction initiatives

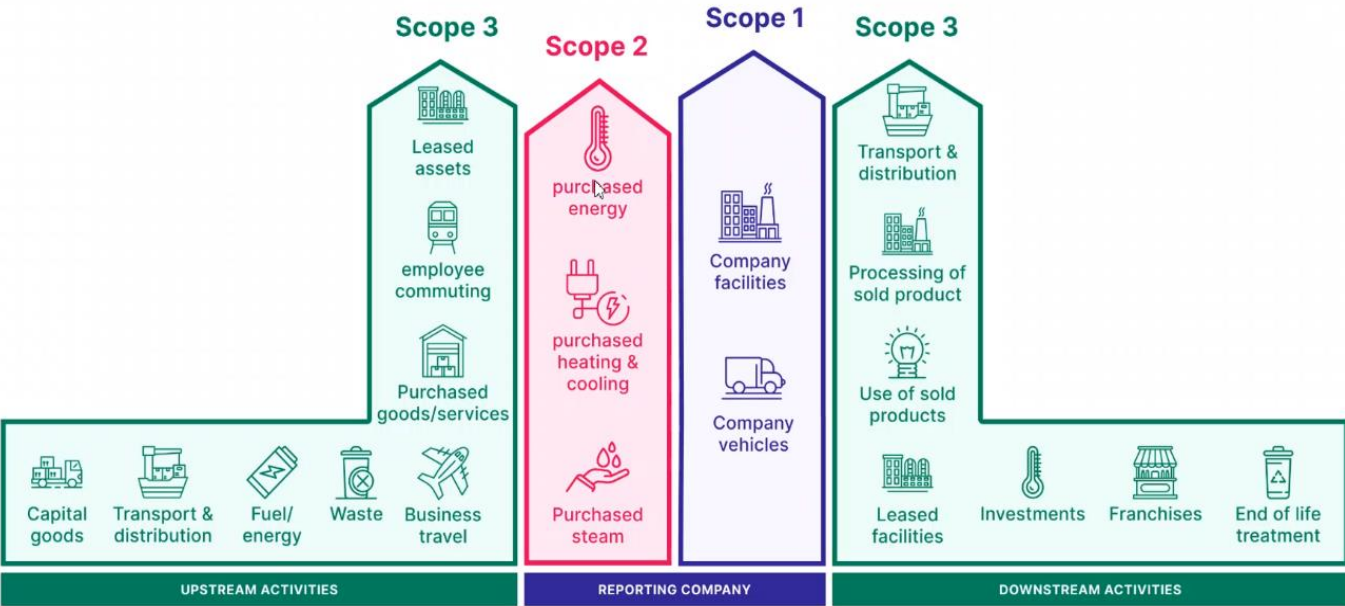
Specific activity or initiative, not organized as a GHG project, implemented by an organization on a discrete or continuous basis, to reduce or prevent direct or indirect GHG emissions or enhance direct or indirect GHG removals

GHG projects

Activity or activities that alter the conditions of a GHG baseline and which cause GHG emission reductions or GHG removal enhancements



Greenhouse Gas Emissions Management System



The company has developed a Greenhouse Gas Emissions Management System, in accordance with the International Standard ISO 14064-1:2018, which constitutes the framework for monitoring, managing and improving the company's performance in terms of managing greenhouse gas emissions and which is compliant with the emissions categories of the GreenHouse Gas (GHG) Protocol.

All greenhouse gas sources included in the declared reference limits have been identified and documented according to the categorization referred to Annex B of ISO 14064-1:2018.

The following were calculated:

- i. Direct emissions of greenhouse gases (Category 1/ Scope 1) from the activities that take place within the limits of the company's facilities,
- ii. Indirect emissions (Category 2/ Scope 2) associated with the purchase of electricity, and
- iii. Indirect emissions Categories 3,4,5 / Scope 3) from various sources according to ISO 14064-1:2018 and GHG Protocol.

GHG Protocol Scope	ISO 14064-1:2018 Category	Direct/Indirect emissions and removals	Example Sources
Scope 1	Category 1	Direct GHG emissions and removals	Fuel use
			Refrigerant leakages
			Direct emissions and removals from land use
Scope 2	Category 2	Indirect GHG emissions from imported energy	Purchased energy
Scope 3	Category 3	Indirect GHG emissions from Transportation	Business travel
			Staff commute
			Freight transport
			Transport of clients and visitors
			Downstream transport and distribution losses
			Refrigerant use (from chilled transport or air conditioner)
	Category 4	Indirect GHG emissions from products an organisation uses	Upstream emissions from fuel manufacture and distribution (well-to-tank)
			Electricity transmission and distribution losses
			Working from home
			Water supply and wastewater treatment
Category 5	Indirect GHG emissions (use of products from the organisation)	Materials and waste	
		Emissions generated through leased assets	
		General services used i.e., cleaning, consulting, maintenance, mail delivery, bank etc	
Category 6	Indirect GHG emissions (other sources)	Upstream leased assets	
		Total expected lifetime emissions of the product sold	
		End of life stage emissions	



Quantification method: Activity data based approach

Emissions were calculated based on the activity data of the service or product, such as quantities, transport activities, distance, energy consumption etc. and appropriate emission factors characterizing the use of services and products.

$$GHG = \text{Activity data} * \text{Emission factor} * \text{Global Warming Potential (GWP)}$$

The quantities of each greenhouse gas are converted into Carbon Dioxide Equivalents (CO₂e), using the global warming potential of the fifth Assessment report of the Intergovernmental Panel on Climate (IPCC) (AR5). The time horizon is 100 years.

GHG	Chemical formula	Global warming potential (GWP)
Carbon dioxide	CO ₂	1
Methane	CH ₄	28
Nitrous Oxide	N ₂ O	265

Calculation methodology



For the calculation of greenhouse gas emissions arising from the transport of products in Greece and abroad, the company used the EcoTransIT platform, which has been designed based on ISO 14083:2023 Greenhouse gases — Quantification and reporting of greenhouse gas emissions arising from transport chain operations.

- ISO14083 compliant
- GLEC Framework



CALCULATION PARAMETERS

Input mode: Extended

Freight: Amount: 100, Weight: Bulk and Unit Load (Tonnes), Type: average goods, MTEU: 10

Define handling: -

Ferry: Ferry routing: normal

Origin: City district

On-site rail track available:

Transport service: TS 1

Transport mode	Vehicle type	Fuel type	Emission standard	Load factor	ETF
Truck	26-40 t	diesel	EURO 5	60 %	20 %

Cooling Unit: -

+ VIA

+ TRANSPORT SERVICE

Destination: City district

On-site rail track available:

CALCULATE RESET

$$\begin{aligned} \text{WTW energy consumption or emissions per transport} &= \\ &\text{Transport Distance} \\ & * \text{mass of freight transported} \\ & * (\text{TTW energy consumption or vehicle emissions per net tonne km} \\ & + \text{WTT energy consumption or emissions per net tonne km}) \end{aligned}$$

Overall results



Category 1 (Scope 1): 838,69 tCO₂e

Direct greenhouse gases emissions or removals

Category 2 (Scope 2): 5.578,91 tCO₂e

Indirect greenhouses gases emissions from imported energy/E

Category 3 (Scope 3): 3.352,29 tCO₂e

Indirect greenhouse gases from transportation

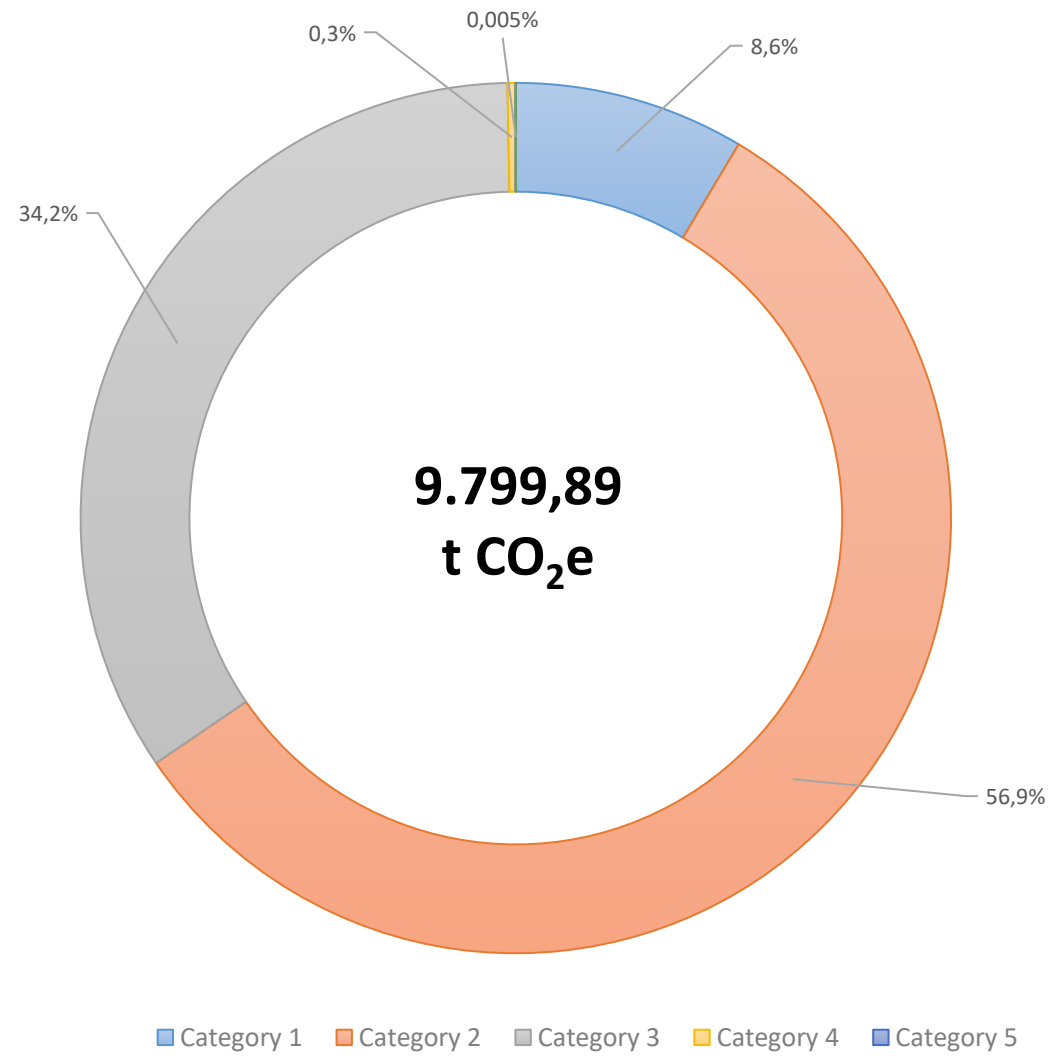
Category 4 (Scope 3): 29,53 tCO₂e

Indirect greenhouse gases emissions from products/services used by an organization

Category 5 (Scope 3): 0,47 tCO₂e

Indirect greenhouse gases emissions associated with the use of products from the organization

TOTAL GHG EMISSIONS: 9.799,89 tCO₂e



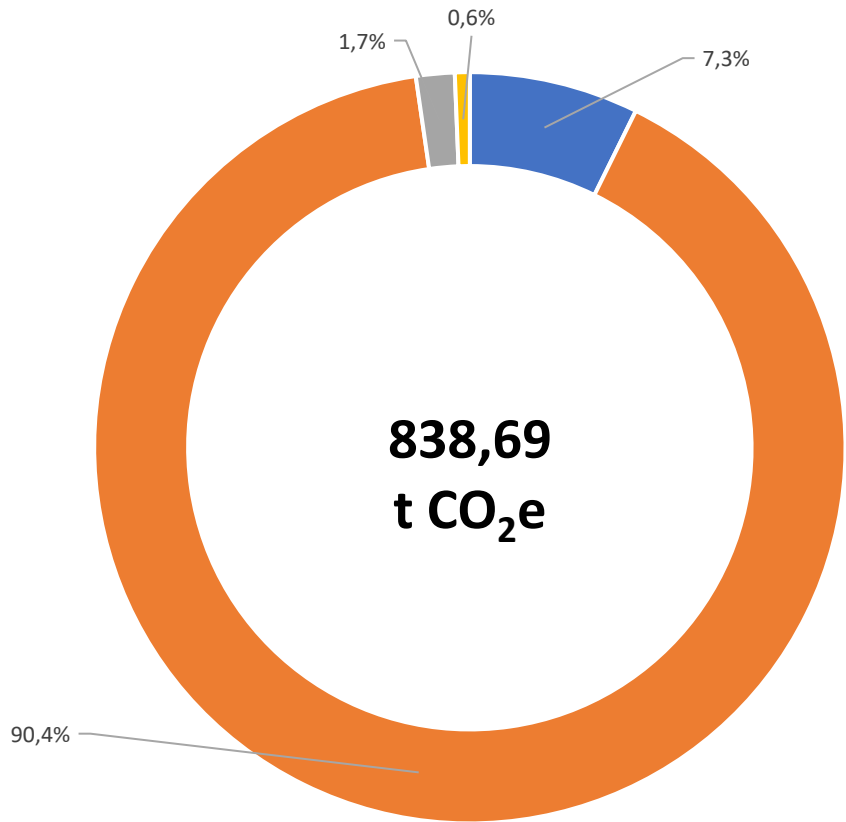


Category 1 (Scope 1)

Applies to:

- 1. Fuel consumption of the backup electricity generators (fixed combustion burners) used for the smooth operation of the company
- 2. Refrigerant leaks of the air conditioning / cooling units of the company's facilities.
- 3. Fuel consumption (diesel & gasoline) of the company's leasing vehicles.

Category 1 - Direct Greenhouse Gas Emissions



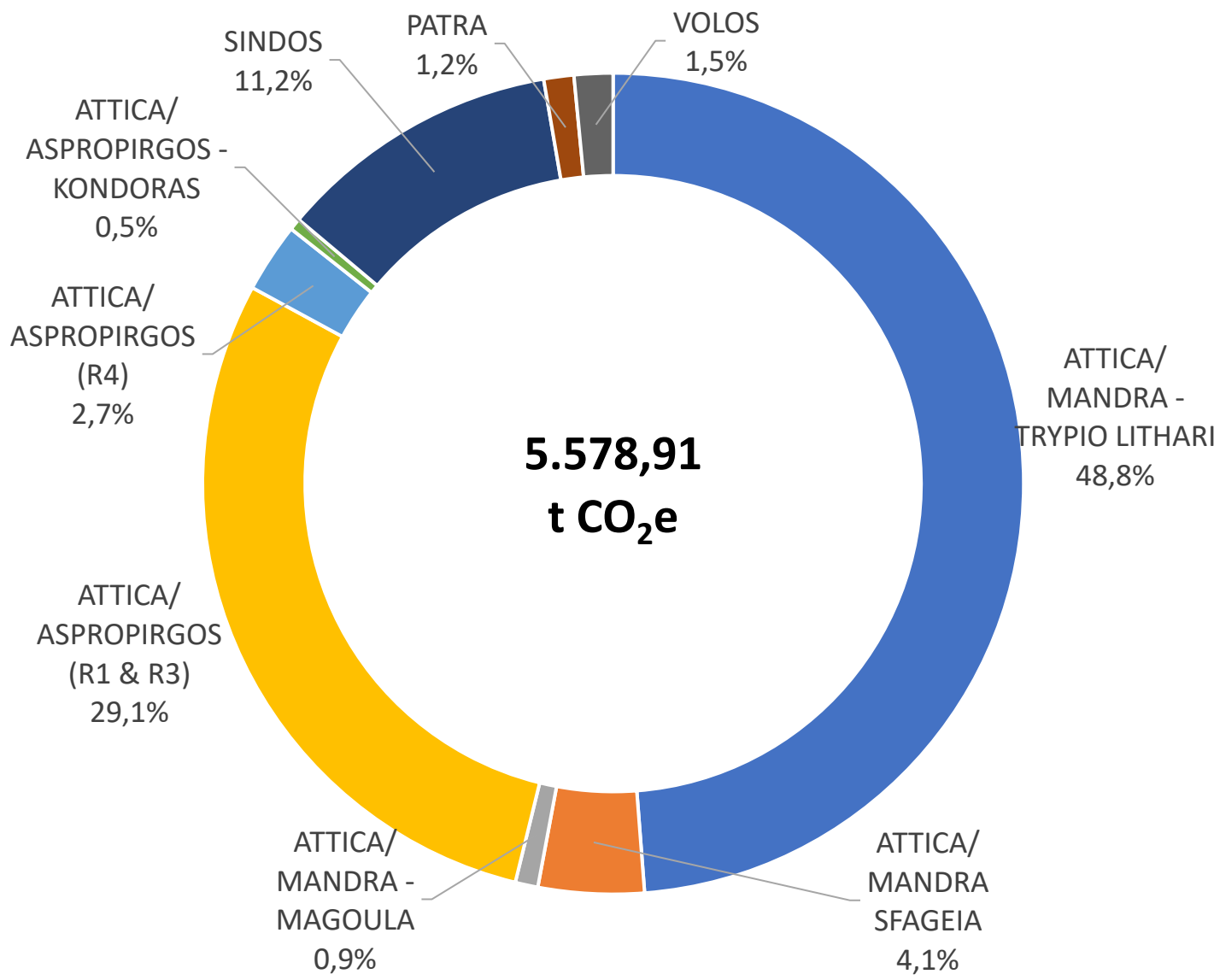
- 1.1 Fuel consumption for generators
- 1.2 Cooling leaks
- 1.3 Motor fuel consumption (diesel)
- 1.3 Motor fuel consumption (gasoline)





Category 2 (Scope 2)

Emissions that arise from the electricity consumption in all the company's facilities



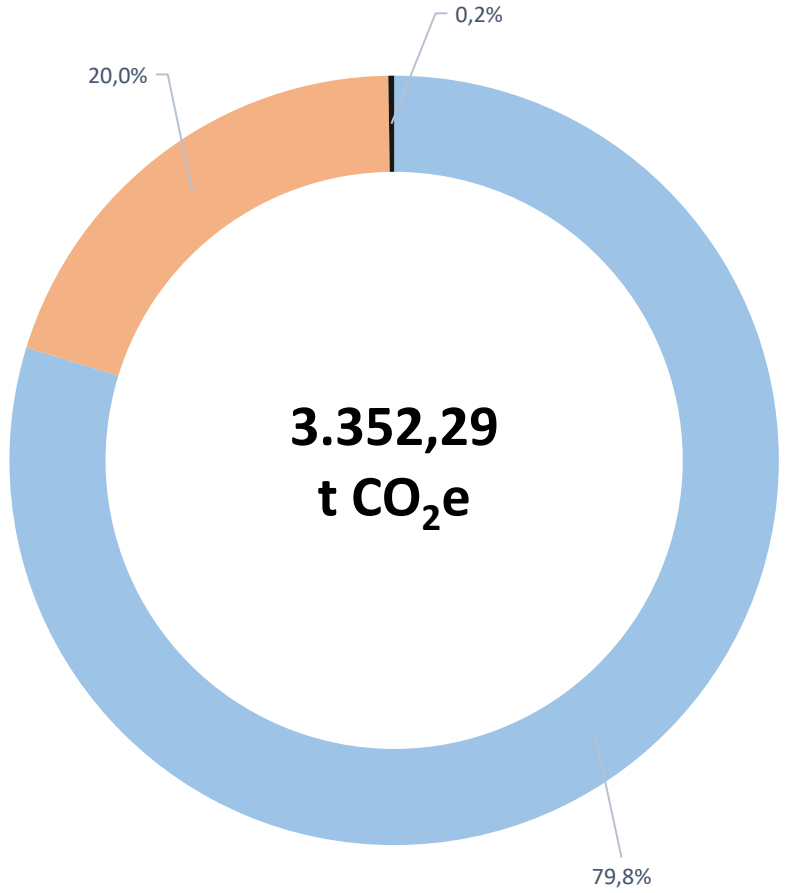


Category 3 (Scope 3)

Applies to:

- 1. Distribution of products from our facilities within Greece and abroad
- 2. Business air travel of the company's personnel

Category 3 - CO₂e emissions from transportation



- 3.1.1 Distribution of products from our facilities within Greece
- 3.1.2 Distribution of products from our facilities abroad
- 3.2 Business air travel



Category 4 (Scope 3)

Applies to:

- 1. **Municipal waste** (conventional waste)
- 2. **Facilities waste** (electrical equipment, plastic, paper, metal, forklifts lead-acid batteries, fluorescent tubes etc.)

Category 5 (Scope 3)

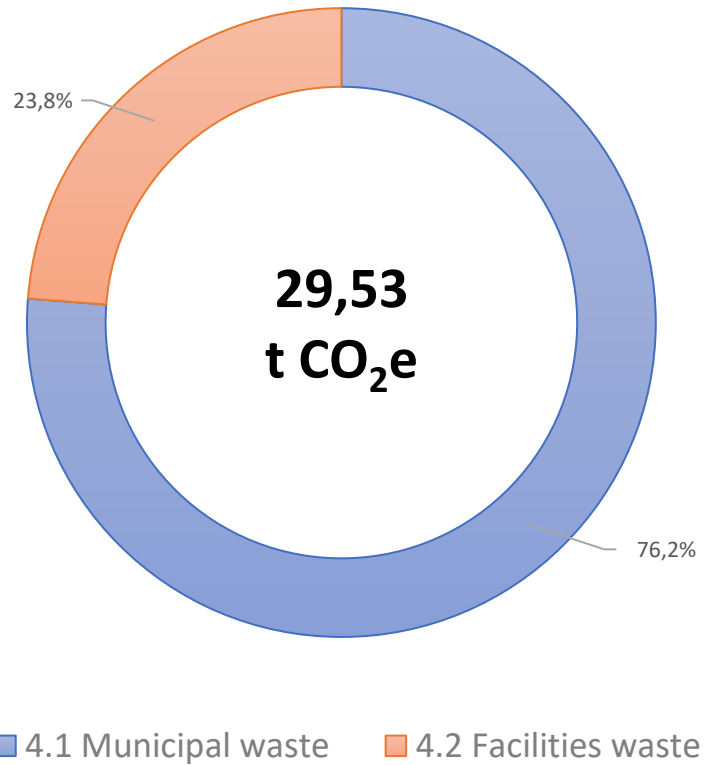
Applies to the **packaging materials** that were used to transport the products (pre-stretch film, stretch film)

**0,47
t CO₂e**

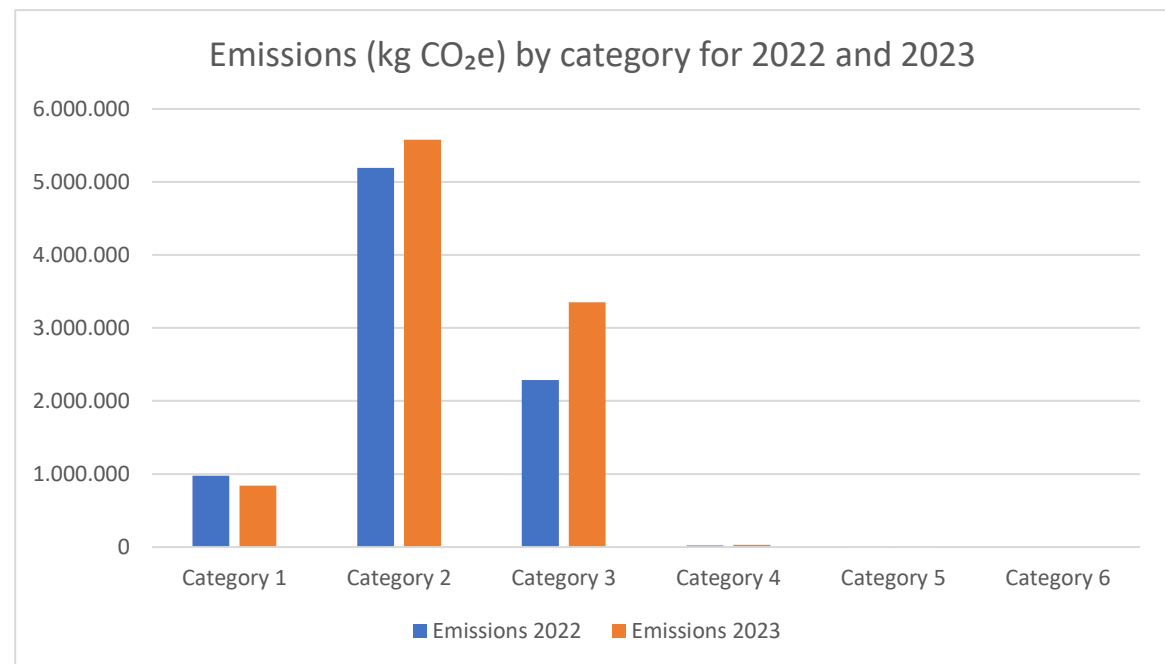
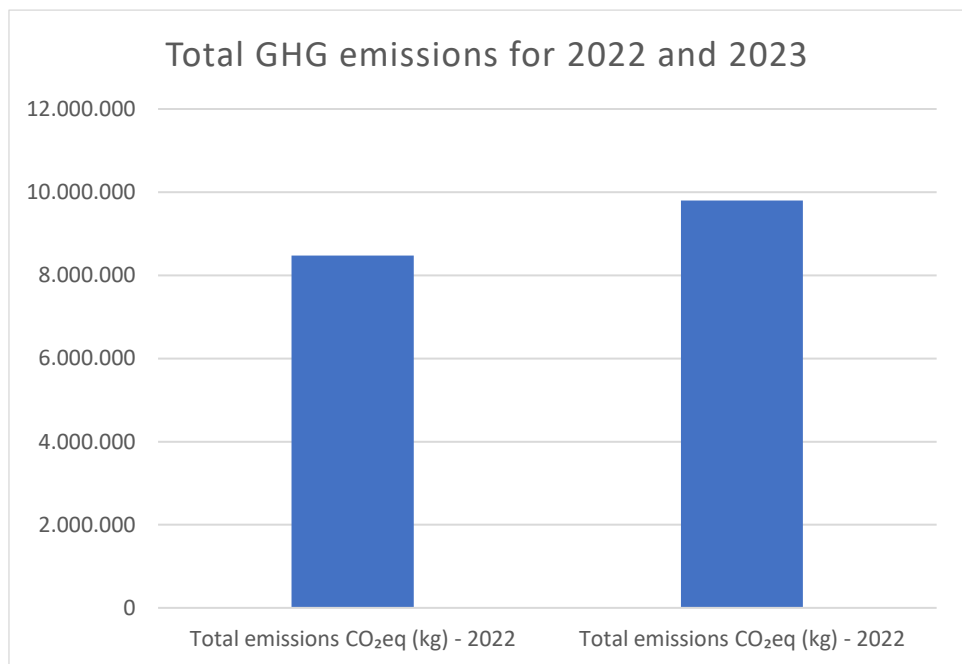


1.

Category 4 - CO₂e emissions from waste



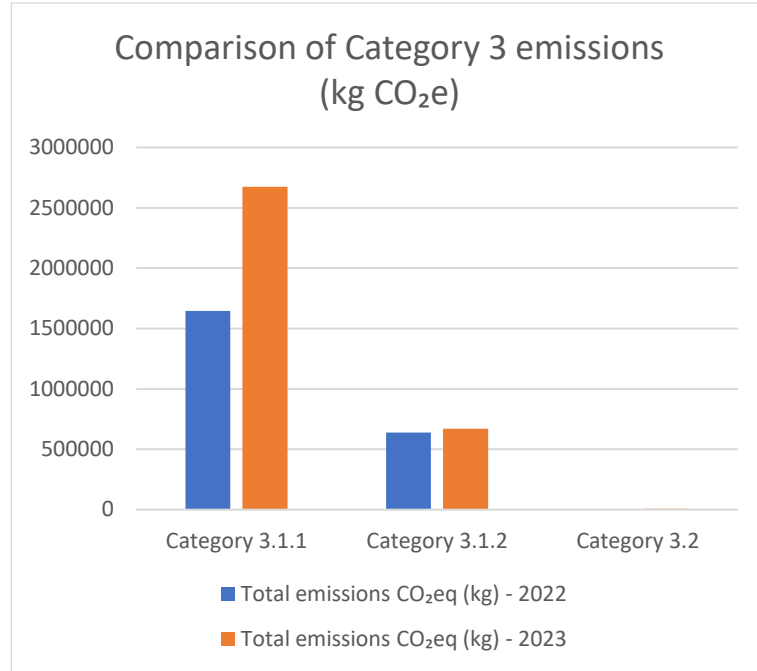
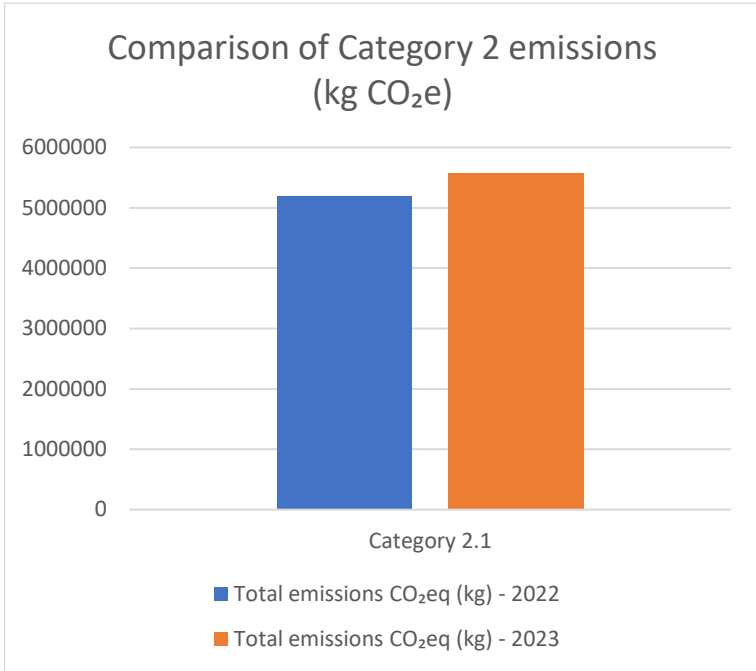
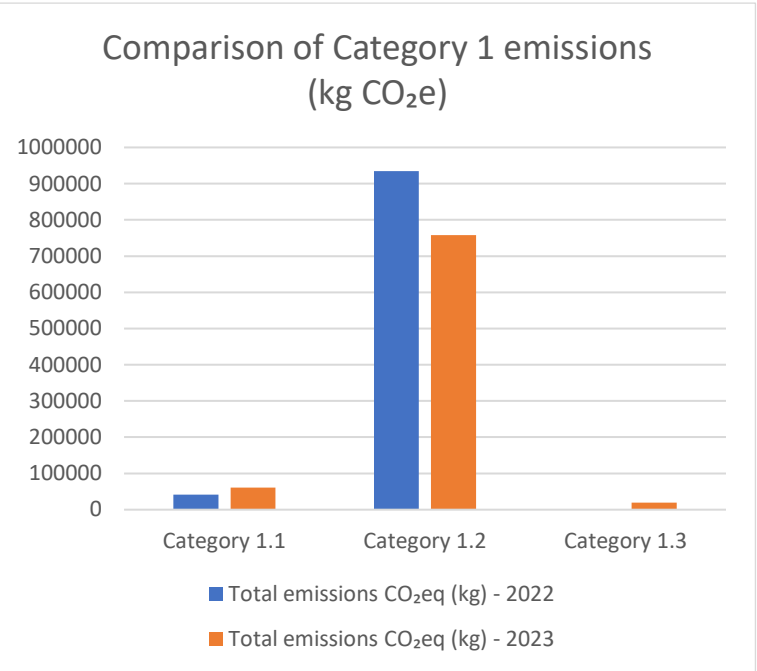
Results comparison of GHG emissions 2022 - 2023



Note: the comparison is performed according to the 2022 emissions as recalculated based on the coefficients used in the Climate Act statement in October 2023 (the coefficients apply only to categories 1 and 2)

Observations:

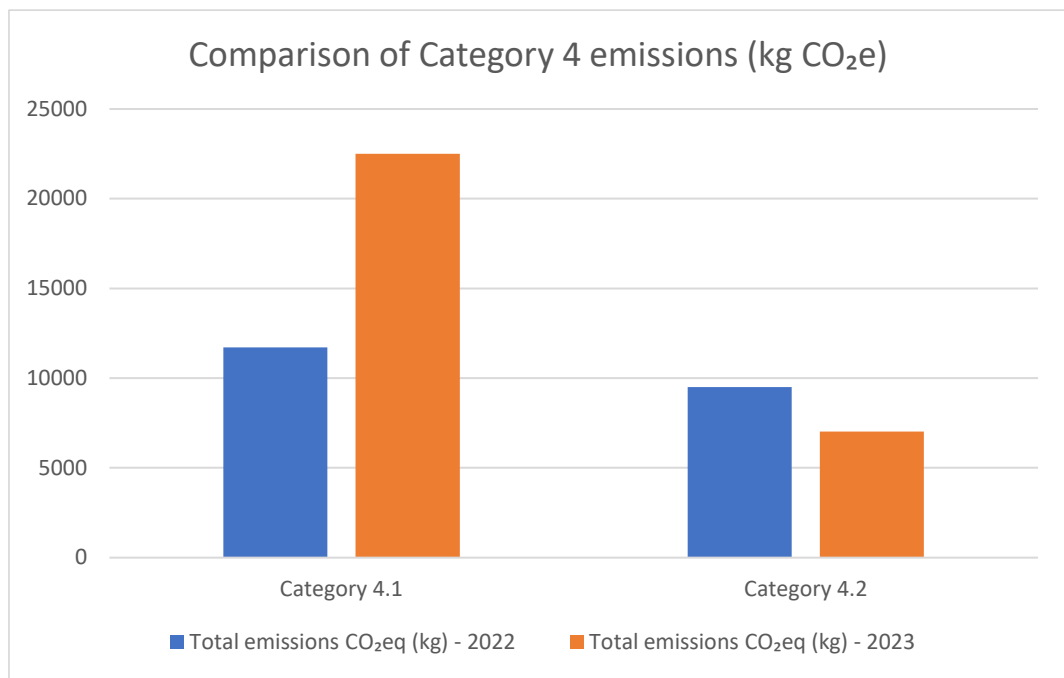
- Total emissions increase 15,6%
- Increase in emissions in every category except category 1



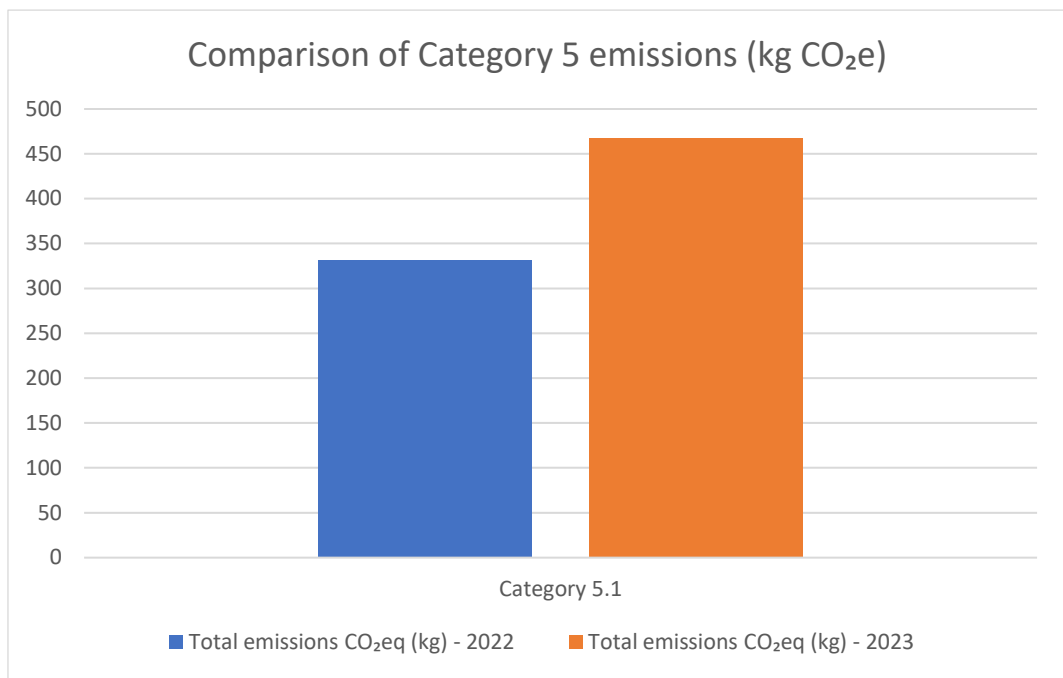
- **Category 1:** Emissions reduction of 14,1%
- **Category 1.1:** Emissions increase of 47% from fuel consumption generators
- **Category 1.2:** Emissions reduction of 18,8% from cooling units (energy upgrade of the chambers, installation of new modern chambers)
- **Category 1.3:** Addition for the first time of emissions from diesel and gasoline consumption of leasing vehicles

- **Category 2:** Emissions increase of 7,4% (Addition of consumption emissions of the new warehouse of Aspropirgos R1)

- **Category 3:** Emissions increase 46,7%
- **Category 3.1.1:** Increase of transports within Greece
- **Category 3.1.2:** Addition of China ports to the company's transports
- **Category 3.2:** Air travel emissions are not significantly different compared to the previous year



- **Category 4:** Emissions increase of 39,2%
- **Category 4.1:** Emissions increase of 92,3% from municipal waste, almost double since last year.
- **Category 4.2:** Emissions reduction of 26,1% in warehouse waste.

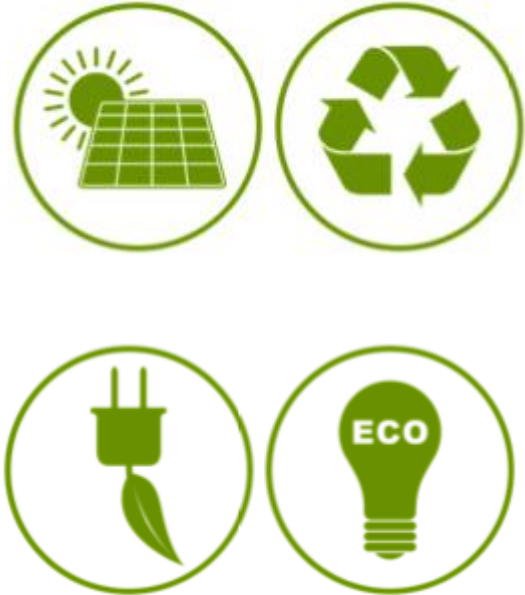


- **Category 5:** Emissions increase of 40,9% compared to the previous year
Only end-of-life emissions of packaging materials placed on the market are included. Emissions of this category are not expected to increase significantly in the coming years as the company does not place its own products on the market, the end of life of which would have to be calculated.

SARMED has set the following **energy and environmental targets**, which are closely monitored reviewed:

- Average reduction in consumed energy and respective emissions of CO₂e at least 20% per cubic meter of cooled storage until the 31st of December 2026, in comparison to the relevant values of 2020
- Reduction of Scope 1 and 2 emissions by thirty percent (30%) at least, until 2030 compared to the year 2019 (aligned with the provisions of the Greek Environmental Law)
- Gradually increasing in the use of paper from recycling or from sustainable forest management with FSC certification (Forest Stewardship Council certification) or equivalent, so that from 2025 onwards 100% of the company's needs are covered





Having adopted a sustainable business development model, SARMED has implemented during the past few years numerous energy and environmental programs, such as:

- Construction of new cooling/freezer rooms using ammonia, instead of freon, as a refrigerant, which has resulted in significantly lower consumption and zero direct greenhouse gas emissions.
- Installation of photovoltaic systems on the roofs of the company's facilities.
- Identification of energy-intensive activities via energy consumption meters installation with separate measurement of energy-intensive points.
- Supply and use of new electric forklifts with lower charging requirements
- Recycling large quantities of electrical and electronic equipment, forklift batteries, as well as non-hazardous waste (paper, plastic, wood)
- Participation in the circular economy – upcycling program “IN THE LOOP” of Thrace Plastics for recycling of stretch film and production higher value materials

We believe that
good can be made better
better can be made perfect

