Carbon Footprint Accounting 2022

Report made by CEMAsys, April 2023

Contents

Introduction

This report provides an overview of the estimated greenhouse gas (GHG) emissions related to Brav's entire product portfolio produced and sold in 2022. Carbon accounting is a fundamental tool for identifying, measuring, and taking tangible measures to reduce GHG emissions for a company. The annual carbon accounting report enables Brav to benchmark performance indicators and evaluate their progress over time.

The report covers the Brav offices and production facilities including the brands: Swix, Lundhags, Helsport, Ulvang, Toko, and Brav Teamwear.

The data included in this year's carbon accounting consist of GHG emissions from Scope 1 (consumption of fossil fuels from company leased vehicles and own forklift), Scope 2 (purchased electricity and district heating), and relevant Scope 3 categories (purchased goods and services, transportation from logistics, generated waste, business travel, employee commuting, use of sold products from textiles, and end-of-life treatment of sold products). The reported numbers are based on consumption data from internal and external sources and are converted into tonnes of carbon dioxide equivalents (tCO2e) by using relevant emission factors. The tCO2e emissions for Brav are both presented as a total of Brav's operations and broken down for each brand that Brav owns.

Brav wants to signal that in its role as a manufacturer and importer of products, they are aware of its influence on climate and the environment and are taking measures as a company to reduce its greenhouse gas emissions.

Methodology: Greenhouse Gas Protocol

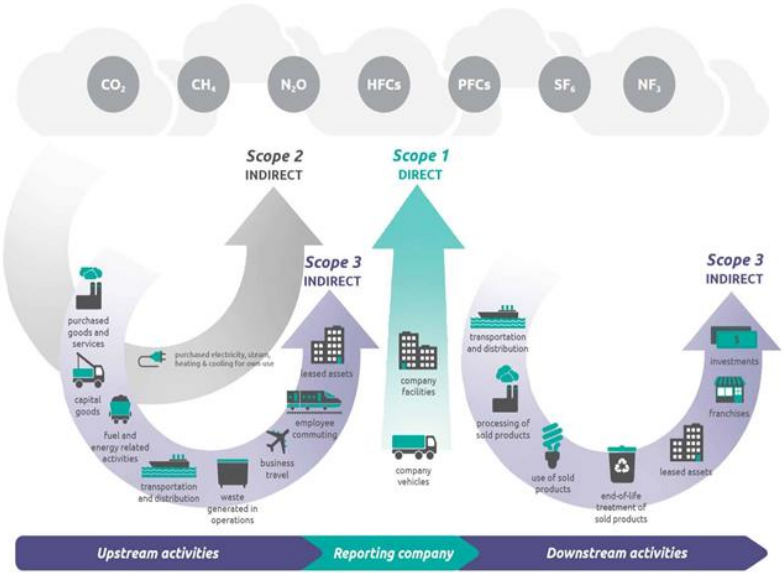
The Greenhouse Gas Protocol Initiative (GHG Protocol) is developed by the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD). The carbon footprint measurements and analysis is based on the international standard; A Corporate Accounting and Reporting Standard Revised Edition, currently one of four GHG Protocol accounting standards for calculating and reporting GHG emissions. The report considers the following greenhouse gases, all converted into CO2 – equivalents: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulphur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs), nitrogen trifluoride (NF_3).

The carbon inventory is divided into three main scopes of direct and indirect emissions.

Scope 1 includes all direct emission sources. Scope 1 is mandatory to report on and includes all use of fossil fuels for stationary combustion or transportation in owned and, depending on the consolidation approach selected, leased, or rented assets. It also includes any process emissions from e.g., chemical processes, industrial gases, direct methane emissions, etc.

Scope 2 is mandatory to report on and includes indirect emissions related to purchased energy; electricity and heating/cooling where the organization has operational control. The electricity emission factors used in CEMAsys are based on national gross electricity production mixes on 3 years rolling average from the International Energy Agency's statistics (IEA Stat). Emission factors per fuel type are based on assumptions in the IEA methodological framework. Factors for district heating/cooling are either based on actual (local) production mixes, or average IEA statistics.

Scope 3 is voluntary to report on and includes indirect emissions resulting from value chain activities. The Scope 3 emissions are a result of the company's upstream and downstream activities, which are not controlled by the company, i.e., they are indirect. Examples are business travel, goods transportation, waste handling, consumption of products, etc. In general, carbon accounting should include information that users, both internal and external to the company, need for their decision-making. An important aspect of relevance is the selection of an appropriate inventory boundary that reflects the substance and economic reality of the company's business relationships.

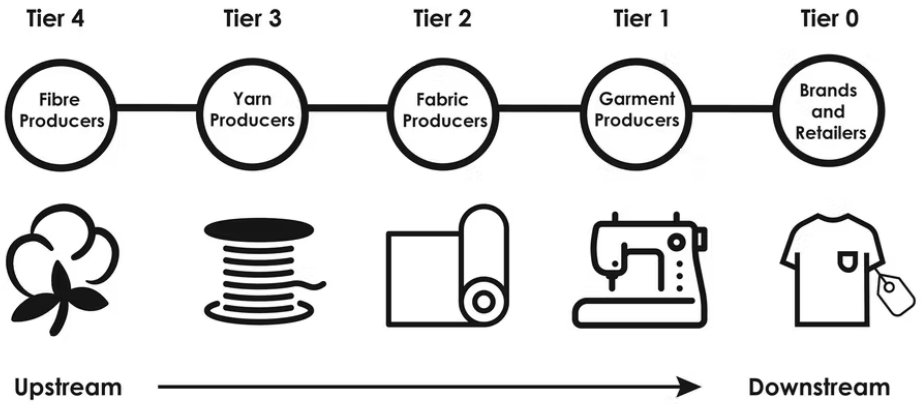


Methodology: Emission factors

The 2022 carbon accounting is developed using emission factors calculated based on methodologies recognized by CEMAsys as credible. CEMAsys has a dedicated emission factor team that identifies and updates emission factors continuously. However, we are conscious that other emission factors exist and there is no consensus on which emission factors should be used. CEMAsys use emission factors from well-known, internationally recognized sources, including Department for Environment, Food & Rural Affairs (DEFRA), The International Energy Agency (IEA), Ecoinvent, and other academic sources. CEMAsys is open about the sources and calculation methodology used in the emission factors and strives for consistency throughout the reporting periods. As for circumstances where there is a change in methodology, the company will communicate this in the reporting.

In 2022, there has been a change in methodology for the carbon accounting. Brav has changed the methodology approach by breaking down the materials and pairing them with the respective emission factors possible. A larger part of the materials has been included in 2022 compared to the 2021 carbon accounting. This improvement has increased Brav's emissions in Scope 3 and provides a more complete understanding of Brav's total emissions.

Context: carbon footprint in the textile industry



- Supply chains in the textile industry are often long, complex, and interconnectional, meaning it is important to ensure that the entire manufacturing process is captured when doing carbon accounting.
- This manufacturing process within the textile industry is split up into different tiers, with different manufacturers specializing in different aspects of the process. These tiers go from Tier 4 to Tier 1, each tier representing a different manufacturer, specialized in one aspect of the process.
- In the case of Brav, we have made sure to choose emissions factors covering the totality of the manufacturing process of the different garments (Tier 4 to Tier 1), to ensure that the carbon footprint is complete, including all relevant emissions.

Assumptions & Uncertainties

- For the purpose of this analysis, we have made assumptions about some of the materials used in production for Brav hard goods. In cases where the materials could not be identified, we have made assumptions about the material compositions and excluded the materials that did not have a proper emission factor. In total 1,7% of the materials have been excluded from the carbon accounting.

- We have also made assumptions about the transportation of purchased goods where supplier-specific data were unavailable. The EcoTransIT tool was used to estimate the distance based on the countries of the main suppliers to Brav in Lillehammer.

- Emissions from employee commuting have been estimated based on the results and assumptions from an internal online survey for Brav employees. Some of the distances have been estimated based on the highest distance from the survey, or the transportation mode with the highest emission factor.

- Emissions from the use of sold products have been estimated based on the consumer treatment and washing of the garments. We have assumed that consumers wash all clothes at 30 and 40°C, which is in accordance with the washing instructions per product.

Assumptions & Uncertainties

- End-of-life treatment of sold products is calculated based on data from purchased goods and services. An assumption made is that there is no waste during production, and therefore all input in the purchased goods and services category which is made into a final product sold by Brav is accounted for in the End-of-life treatment of sold products category in Scope 3.

- The assumption made when calculating the End-of-life treatment of sold products for tools was to allocate the waste treatment method to all different materials due to the large variety of product offerings in this category.

- The assumption made when calculating the End-of-life treatment of sold products for poles is that all poles are thrown away at some point in the products' life. Therefore, Brav accounts for the End-of-life treatment of sold products in the year the products are sold. Poles are assumed to be treated as residual waste.

- End-of-life treatment of sold products ' packaging is calculated using all relevant waste fractions.

- The assumption made when calculating the End-of-life treatment of sold products for ski wax is that 5% of ski wax ends up in the bin, as most of the product ends up on the ski slopes. Therefore, only 5% of materials used to produce ski wax have been accounted for in the End-of-life treatment of sold products.

- An important point in the uncertainty analysis is that generic data will never give a complete picture of the actual conditions that apply to the purchase of textiles or other materials or services.

- Overall, the analysis has a high degree of certainty and provides a sensible picture of the climate impact of Brav's product portfolio.

Summary of main results

In 2022, the greenhouse gas emissions of Brav were 31 397.1 tons of CO2 equivalents (tCO2e). This was an increase of 8 514.4 tCO2e corresponding to 37.2% compared to 2021. An important reason for the increase in emissions was the changes in the reported data for carbon accounting. Improvements in data quality as well as the inclusions of Scope 3 categories have increased the overall emissions of Brav. Although total emissions increased in 2022, Brav is committed to continually reducing its carbon footprint.

The greenhouse gas emissions in 2022 had the following distribution:

- 38.6 tCO2e in Scope 1 (0.1% of total emissions)
- 72.2 tCO2e in Scope 2 (0.2% of total emissions)
- 31 286.3 tCO2e in Scope 3 (99.6% of total emissions)

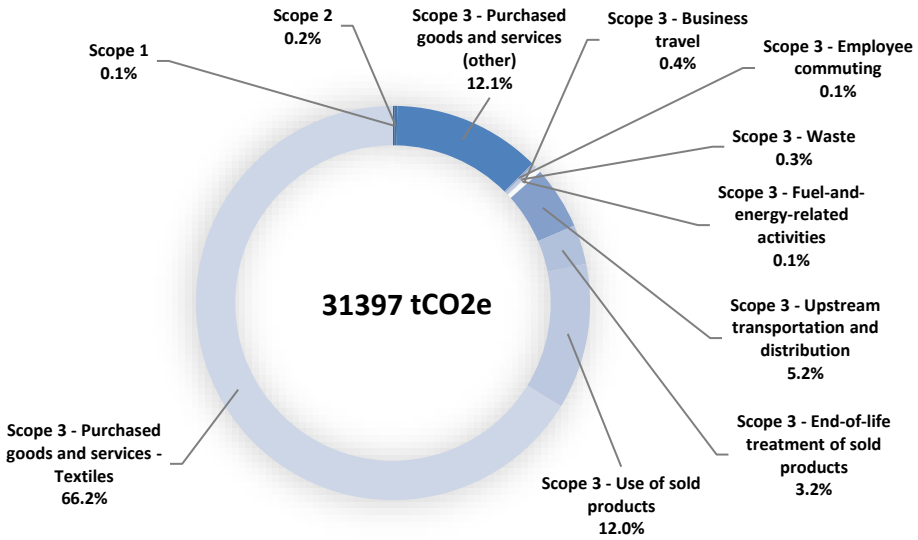
Scope 1
In 2022, total Scope 1 emissions from company-leased vehicles and company own forklifts were 38.6 tCO2e, which was an increase of 58.1% from 2021. The consumption of 12 548.2 liters of diesel accounted for 26.1 tCO2e, 5 155.3 liters of petrol accounted for 12 tCO2e and 1 059.3 liters of Bioethanol (E85) accounted for 0.4 tCO2e.

Scope 2
Emissions from electricity were 28.7 tCO2e. Electricity was calculated with the location-based emission factor *Electricity Norway* and *Electricity Lithuania.* Emissions from electricity increased by 14% compared to 2021. This is because electricity consumption went from 1 784 585 kWh in 2021 to 1 811 005.3 in 2022.

Total emissions from district heating were 43.5 tCO2e in 2022. This was an increase of 701.4% compared to 2021 (38.1 tCO2e). The increase is both due to the addition of district heating in Lithuania (22 tCO2e) and an increase in the emission factor used for district heating in Lillehammer. The increase in the emission factor is due to more fossil fuels being used in the production of district heating in Lillehammer in 2021 (which is the year the 2022 emission factor is based on) with reference to fjernkontrollen.no. This resulted in a total increase of emissions from district heating in Lillehammer of 16 tCO2e (327%) compared with last year, despite the decrease in Brav's consumption of district heating by 10%.

Scope 3
The largest share of Brav's emissions is in Scope 3 from the value chain. Total Scope 3 emissions were 31 286.3 tCO2e in 2022, which was an increase of 8 458.6 tCO2e corresponding to 37.1% compared to 2021. There was an increase in emissions from purchased goods and services (26.9%), upstream transportation and distribution (68.9%), waste (516.7%), business travel (495%), and use of sold products (63.4%). The considerable increase in emissions from waste and business travel can be explained by an increase in reported waste categories and business travels in 2022 compared to 2021 due to better and more comprehensive data collection from Brav. The inclusion of the two categories of fuel-and-energy-related activities and end-of-life treatment of sold products also contributed to an increase in Scope 3 emissions.

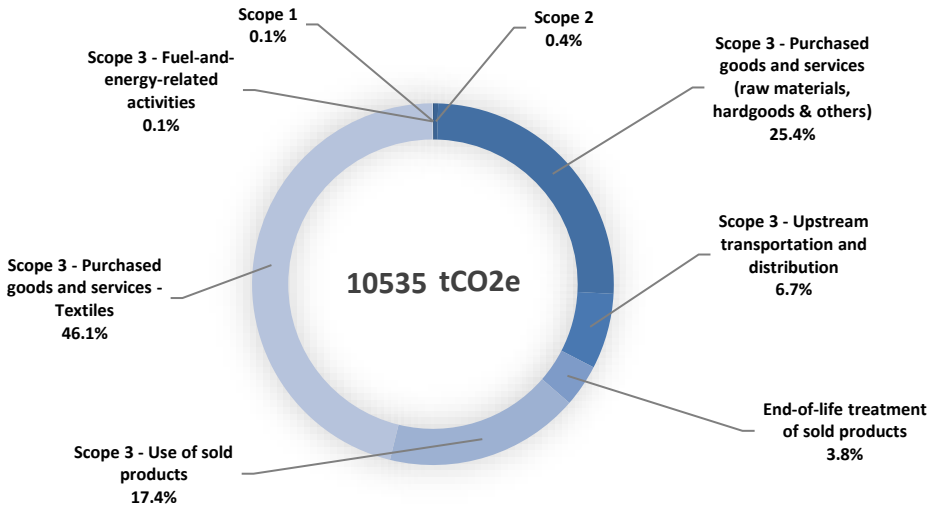
Brav Norway AS



Scope 1, 2, 3 2022 per GHG source of emissions

Scope categories	Unit	Consumption	tCO2e
Scope 1	**l**	**18,763**	**39**
Scope 2	**kWh**	**2,938,992**	**72**
Purchased goods and services (other)	**kg**	**920066.5**	**3811**
Purchased goods and services - textiles	**kg**	**1433440.1**	**20793**
Wool, fine (T1-4)	kg	248848.5	9354
Polyester fabric (T1-4)	kg	655466.8	5781
Nylon fabric (6) (T1-4)	kg	155633.4	2333
Nylon/Polyamide (PA) fabric (T1-4)	kg	96644.1	1148
Elastane/Spandex fabric (T1-4)	kg	68506.6	428
Cotton fabric, conventional (T1-4)	kg	45325.8	415
Leather, cow (T1-4)	kg	9908	271
Polyester fabric, recycled (T1-4)	kg	18024.4	126
Polyurethane fabric (T1-4)	kg	11753.1	122
Cotton fabric, organic (T1-4)	kg	14641	117
Silk fabric (T1-4)	kg	1280.2	116
Rubber (footwear)	kg	20523.7	96
Lyocell fabric (T1-4)	kg	6851.6	88
Acrylic fabric (T1-4)	kg	6377.5	73
Tencel fabric (T1-4)	kg	7644.4	71
Steel, stainless	kg	15696.8	66
Plastic avg. (virgin)	kg	20946.1	65
Nylon fabric, recycled (T1-4)	kg	4878.5	38
Aluminium	kg	3702.6	34
Down insulation	kg	19823.2	27
Leather, goat (T1-4)	kg	709.6	21
Wool, fine (T1-4)	kg	56.3	2
Rubber, synthetic	kg	197.9	1
Fuel-and-energy-related activities	**l / kWh**	**1811005.3 / 17703.5**	**19**
Upstream transportation and distribution	**tkm / kgCO2e**	**31246384.8 / 134226.4**	**1622**
Waste generated in operations	**kg**	**149146.7**	**91**
Business travel	**km / nights**	**1400565.4 / 69**	**134**
Employee commuting	**km**	**666464.7**	**46**
Use of sold products	**kg**	**1108336.7**	**3753**
End-of-life treatment of sold products	**kg**	**2011520.2**	**1017**
Total emissions			**31397**

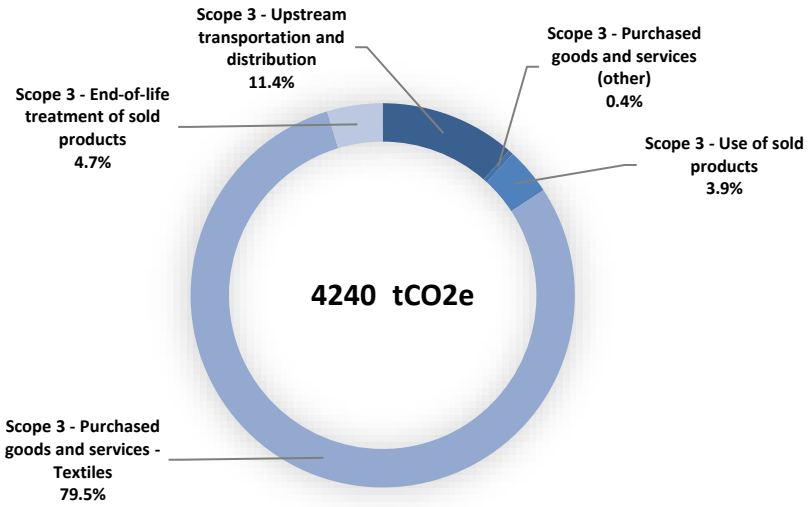
Swix



Scope 1, 2 and 3 2022 per GHG source of emissions

Scope categories	Unit	Consumption	tCO2e
Scope 1	**l**	**5,120**	**10**
Scope 2	**kWh**	**332,160**	**39**
Purchased goods and services (raw materials, hardgoods & others)	**kg**	**502586.7**	**2675**
Purchased goods and services - textiles	**kg**	**505369.9**	**4858**
Polyester fabric (T1-4)	kg	325050.8	2866.9
Nylon/Polyamide (PA) fabric (T1-4)	kg	68221.7	810.5
Elastane/Spandex fabric (T1-4)	kg	64720	404.5
Wool, fine (T1-4)	kg	9928.5	373.2
Cotton fabric, conventional (T1-4)	kg	15057.6	137.9
Polyurethane fabric (T1-4)	kg	8431.5	87.4
Nylon fabric (6) (T1-4)	kg	4700.5	70.5
Acrylic fabric (T1-4)	kg	4961.2	56.5
Leather, goat (T1-4)	kg	709.6	20.8
Polyester fabric, recycled (T1-4)	kg	1848.2	13
Tencel fabric (T1-4)	kg	1379.7	12.8
Wool, fine (T1-4)	kg	56.3	2.1
Nylon fabric, recycled (T1-4)	kg	106.4	0.8
Rubber, synthetic	kg	197.9	0.6
Fuel-and-energy-related activities	**l / kWh**	**4060.6 / 112140**	**8**
Upstream transportation and distribution	**tkm / kgCO2e**	**15052835.6 / 67115.8**	**711**
Use of sold products	**kg**	**504600.9**	**1836**
End-of-life treatment of sold products	**kg**	**857742.7**	**400**
Total emissions			**10535**

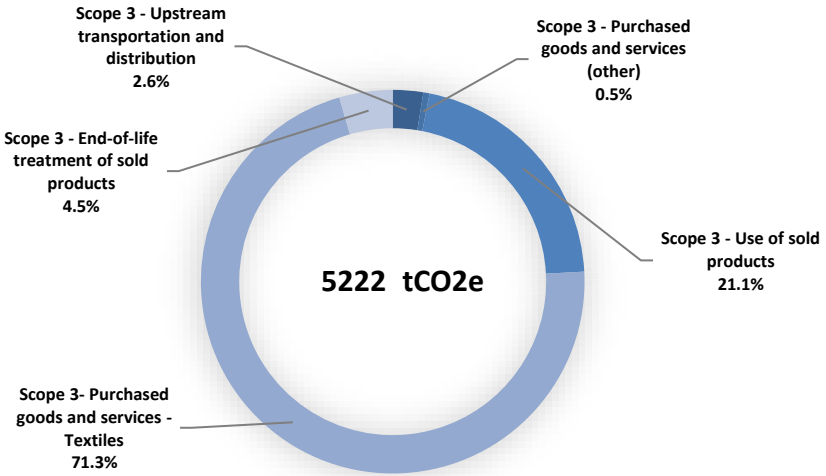
Lundhags



Scope 3 2022 per GHG source of emissions

Scope categories	Unit	Consumption	tCO2e
Purchased goods and services (other)	**kg**	**13792.1**	**18**
Purchased goods and services - textiles	**kg**	**302284.9**	**3373**
Polyester fabric (T1-4)		94759.6	836
Wool, fine (T1-4)		18599.4	699
Nylon fabric (6) (T1-4)		36735.5	551
Leather, cow (T1-4)		9908	271
Cotton fabric, conventional (T1-4)		27776.3	254
Nylon/Polyamide (PA) fabric (T1-4)		17013.4	202
Cotton fabric, organic (T1-4)		14641	117
Polyester fabric, recycled (T1-4)		16176.2	113
Rubber (footwear)		20523.7	96
Plastic avg. (virgin)		20946.1	65
Steel, stainless		11808.8	50
Polyurethane fabric (T1-4)		3294	34
Tencel fabric (T1-4)		2883.4	27
Nylon fabric, recycled (T1-4)		3326	26
Aluminium		1900.8	17
Elastane/Spandex fabric (T1-4)		1609.3	10
Acrylic fabric (T1-4)		383.4	4
Upstream transportation and distribution	**tkm / kgCO2e**	**4543581.4 / 30079.9**	**484**
Use of sold products	**kg**	**47873.9**	**167**
End-of-life treatment of sold products	**kg**	**309255.9**	**198**
Total emissions			**4240**

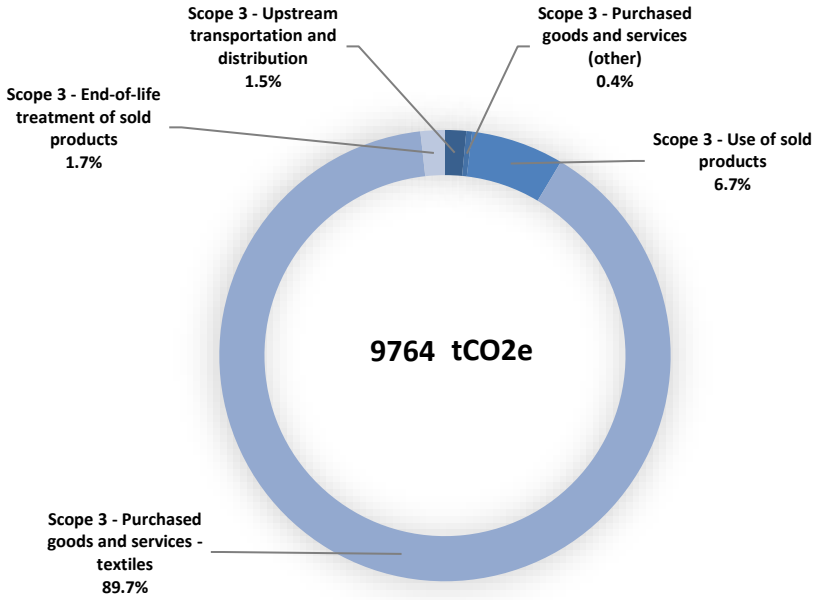
Helsport



Scope 3 2022 per GHG source of emissions

Scope categories	Unit	Consumption	tCO2e
Purchased goods and services (other)	**kg**	**10491.1**	**27**
Purchased goods and services - textiles	**kg**	**357633.9**	**3725**
Polyester fabric (T1-4)	kg	221104.5	1950
Nylon fabric (6) (T1-4)	kg	97210.6	1457
Nylon/Polyamide (PA) fabric (T1-4)	kg	10033.7	119
Silk fabric (T1-4)	kg	1280.2	116
Down insulation	kg	19823.2	27
Cotton fabric, conventional (T1-4)	kg	2491.9	23
Aluminium	kg	1801.8	16
Steel, stainless	kg	3888	16
Upstream transportation and distribution	**tkm / kgCO2e**	**6448816.3 / 14037.6**	**134**
Use of sold products	**kg**	**297967.5**	**1101**
End-of-life treatment of sold products	**kg**	**368125**	**235**
Total emissions			**5222**

Ulvang

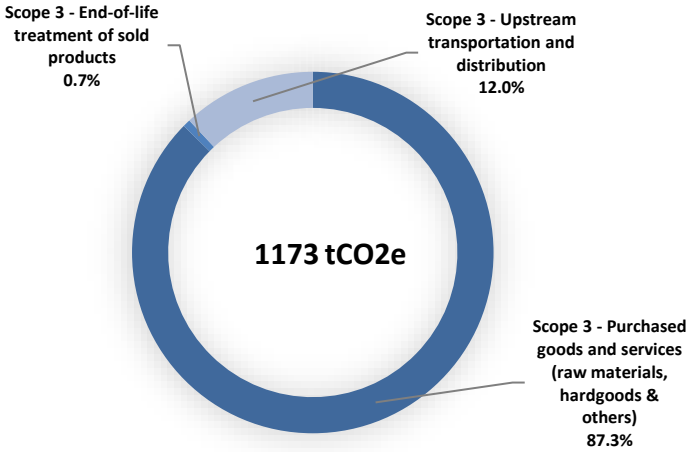


Scope 3 2022 per GHG source of emissions

Scope categories	Unit	Consumption	tCO2e
Purchased goods and services (other)	**kg**	**38477.8**	**40**
Purchased goods and services - textiles	**kg**	**258584.9**	**8756**
Wool, fine (T1-4)	kg	220320.6	8282
Nylon fabric (6) (T1-4)	kg	16986.8	254.6
Lyocell fabric (T1-4)	kg	6851.6	88.3
Polyester fabric (T1-4)	kg	5944.5	52.4
Tencel fabric (T1-4)	kg	3381.3	31.4
Nylon/Polyamide (PA) fabric (T1-4)	kg	1375.3	16.3
Acrylic fabric (T1-4)	kg	1032.9	11.8
Nylon fabric, recycled (T1-4)	kg	1446.1	11.2
Elastane/Spandex fabric (T1-4)	kg	1245.8	7.8
Upstream transportation and distribution	**tkm / kgCO2e**	**4797849.1 / 11816.1**	**148**
Use of sold products	**kg**	**257894.4**	**650**
End-of-life treatment of sold products	**kg**	**288362.5**	**170**
Total emissions			**9764**

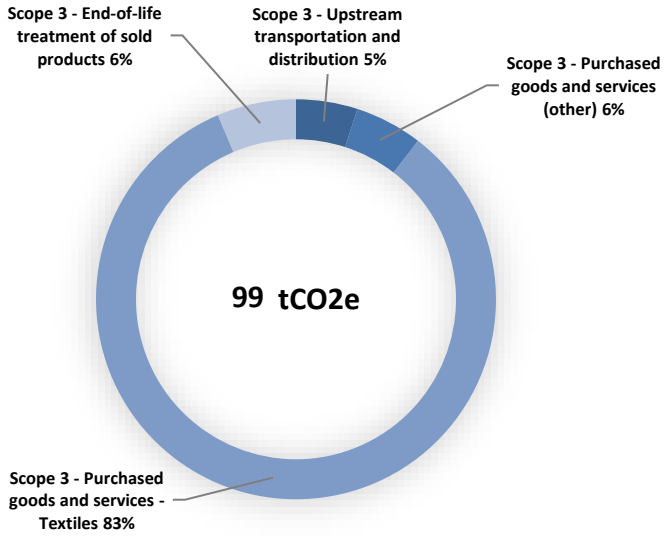
Toko

Scope 3 2022 per GHG source of emissions



Scope categories	Unit	Consumption	tCO2e
Purchased goods and services (raw materials, hardgoods & others)	kg / m3	314489.4	1025
Upstream transportation and distribution	tkm / kgCO2e	1703117.9 / 11177	140
End-of-life treatment of sold products	kg	178467.6	8
Total emissions			1173

Brav Teamwear



Scope 3 2022 per GHG source of emissions

Scope categories	Unit	Consumption	tCO2e
Purchased goods and services (other)	**kg**	**2095.6**	**5**
Purchased goods and services - textiles	**kg**	**9566.5**	**82**
Polyester fabric (T1-4)	kg	8607	76
Elastane/Spandex fabric (T1-4)	kg	932	6
Polyurethane fabric (T1-4)	kg	28	0.3
Upstream transportation and distribution	**tkm**	**19773.2**	**5**
End-of-life treatment of sold products	**kg**	**9566.5**	**6**
Total emissions			**99**

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The reference list above is incomplete but contains the essential references used in CEMAsys. In addition, several local/national sources may be relevant, depending on which emission factors are used.