Versowood Oy

Carbon footprint (Scope 1-3) years 2022-2023

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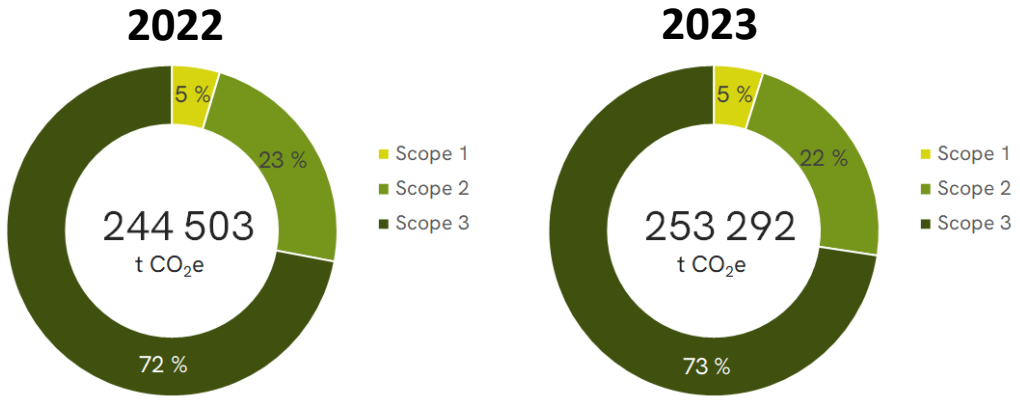
Term	Definition
CO_2 equivalent (CO_2e)	The universal unit of measurement to indicate the global warming potential (GWP) of the greenhouse gases, expressed in terms of the GWP of one unit of carbon dioxide.
Direct GHG emissions (scope 1 inventory)	Emissions from sources that are owned or controlled by the reporting company.
Emission factor	A factor that converts activity data into GHG emissions data (e.g., kg CO_2e emitted per liter of fuel consumed, kg CO_2e emitted per kilometer traveled, etc.).
Greenhouse gas (GHG)	GHG Protocol accounts for the seven gases covered by the UNFCCC: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulphur hexafluoride (SF_6), and nitrogen triflouride (NF_3).
Indirect GHG emissions	Emissions that are a consequence of the operations of the reporting company but occur at sources owned or controlled by another company. This includes scope 2 and scope 3.
Location-based method for scope 2 accounting	A method to quantify scope 2 GHG emissions based on average energy generation emission factors for defined locations, including local, subnational, or national boundaries.
Market-based method for scope 2 accounting	A method to quantify scope 2 GHG emissions based on GHG emissions emitted by the generators from which the reporter contractually purchases electricity bundled with instruments, or unbundled instruments on their own.
Operational control	A company has operational control over an operation if it has the full authority to introduce and implement its operating policies at the operation. Under the operational control approach, a company accounts for 100% of emissions from operations over which it has operational control.
Residual mix	The mix of energy generation resources and associated attributes such as GHG emissions in a defined geographic boundary left after contractual instruments have been claimed/retired/canceled. The residual mix can provide an emission factor for companies without contractual instruments to use in a market-based method calculation.
Scope 2 inventory	A reporting organization’s emissions associated with the generation of electricity, heating/cooling, or steam purchased for own consumption.
Scope 3 inventory	A reporting organization’s indirect emissions other than those covered in scope 2.

1. Summary

Versowood is Finland's largest private producer of sawn timber and further processed goods. Between their 14 units in Finland and 1 unit in Estonia, Versowood employs a total of nearly 900 people.

In this report, Versowood's carbon fooprint from years 2022-2023 is presented. Carbon footprint was calculated based on the Greenhouse Gas Protocol standard.

- Versowood's carbon footprint increased by ca. 4 % from year 2022 to 2023 (Picture 1).
- Distribution of emissions between the scopes remained closely similar between 2022 and 2023.
- Emissions from own operations (Scope 1) were caused by fuel use in work machines, vehicles and heating. In addition, small emissions originated from the use of refrigerants.
- Emissions from purchased energy (Scope 2) are presented on a market basis and include indirect emissions from the use of electricity and district heating.
- Value chain emissions (Scope 3) were mainly caused by transports to customers, use of sold products, and production of purchased products and services.



Picture 1. Versowood's carbon footprint in 2022 and 2023 (t CO_2e).

EMISSION INTENSITIES

498 t CO_2e/turnover (in M€)	498 t CO_2e/turnover (in M€)
280 t CO_2e/employee	290 t CO_2e/employee
0,09 t CO_2e/tonne of purchased wood	0,09 t CO_2e/tonne of purchased wood
0,10 t CO_2e/m^3 of harvested wood	0,11 t CO_2e/m^3 of harvested wood

2.
Basic information

Basic information, 1/2

- Etteplan Finland Oy has conducted the carbon footprint calculation presented in this report. Calculation was made following the Greenhouse Gas Protocol standards and guidelines (e.g., *Corporate standard* ja *Corporate value chain (Scope 3) standard*).
- Calculation includes Versowood's own operations (Scope 1 ja 2) and emissions related to the value chain (Scope 3). Categories included in calculation are presented on slide 8.
  - **Scope 1:** Direct emissions from own operations
  - **Scope 2:** Purchased energy (electricity, heat, cooling)
  - **Scope 3:** Other in value chain
- Operational control approach was used in the calculations, meaning that the GHG emissions from operations over which Versowood has control have been included. Emissions from fuel consumed in work machinery (both own and outsourced) and activities at rented premises are considered as Versowood's own operations.
- Calculation includes Versowood's domestic operations in the following 13 locations:

- Vierumäki
- Riihimäki
- Heinola
- Mikkeli
- Otava (Mikkeli)
- Hankasalmi
- Kissakoski
- Hartola
- Haukipudas
- Rovaniemi
- Pori
- Valkeakoski
- Muurla
- Juupajoki

Basic information, 2/2

- The emission factors used in the calculations are based on widely-used and trusted sources, including Statistics Finland, Energy Authority of Finland, Association of Issuing Bodies (AIB), The Department for Environment, Food and Rural Affairs (Defra), and licensed databases Sphera Managed LCA Content and Ecoinvent.
- The greenhouse gas emissions included in the inventory are CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 and NF_3. Characterization factors for each of these individual emissions are used to convert the results in CO_2 equivalents. Biogenic and land use change (LUC)-related CO_2 emissions are excluded.
- Emissions of electricity use have been calculated primarily on a market-based method. As information of the used electricity product was not available, residual grid mix of Finland (471 kg CO_2e/MWh, as published by Energy Authority) was used as emission factor for electricity use. This emission factor reflects the production distribution of electricity consumed in Finland, whose origin is not verified. Emission factor for electricity is the same in 2022 and 2023, because data for 2023 were not published by the time of the calculation.
- The carbon footprint has been calculated based on the data received from the Client of the report. The Client is responsible for the accuracy of the provided data.
- Carbon footprint calculation and the study report are not assured by a third party.
- The results are not absolute values and uncertainties related to the calculation should be considered when interpreting the results.

Included emission categories

Scope	Category	Included?
Scope 1	Fuel combustion	**Yes**
	Other direct emissions	**Yes**
	Use of own vehicles and work machines	**Yes**
Scope 2	Electricity production	**Yes**
	Heat/steam/cooling production	**Yes**
Scope 3	1. Purchased goods and services	**Yes**
	2. Capital goods (*not reported separately*)	**Yes**
	3. Fuel- and energy-related activities (upstream fuel emissions and T&D loss)	**Yes**
	4. Upstream transportation and distribution	**Yes**
	5. Waste generated in operations	**Yes**
	6. Business travel	**Yes**
	7. Employee commuting	**Yes**
	8. Upstream leased assets (*no identified emission sources that wouldn't be covered in other categories)*	No
	9. Downstream transportation and distribution	**Yes**
	10. Processing of sold products	No
	11. Use of sold products	**Yes**
	12. End-of-life treatment of sold products	**Yes**
	13. Downstream leased assets	No
	14. Franchising	No
	15. Investments	No

3.
Results and conclusions, 2022

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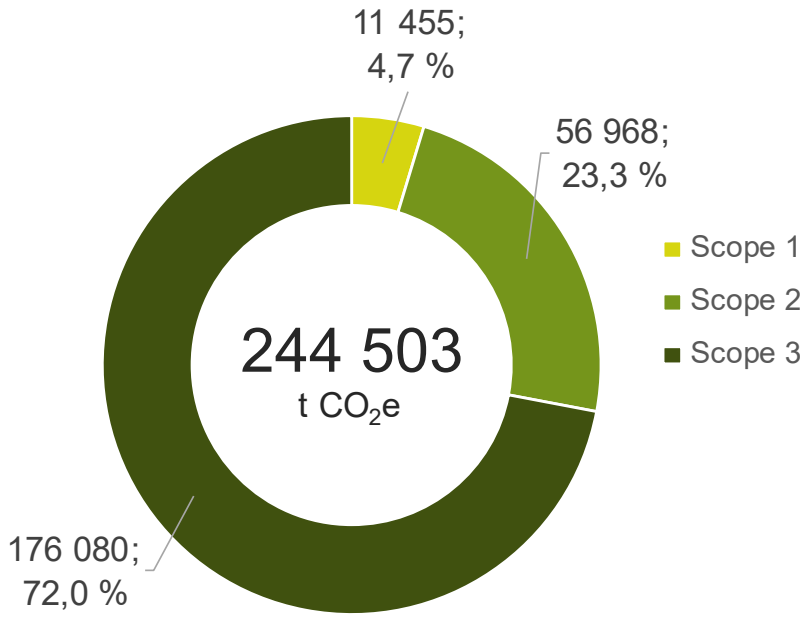
Versowood, total carbon footprint

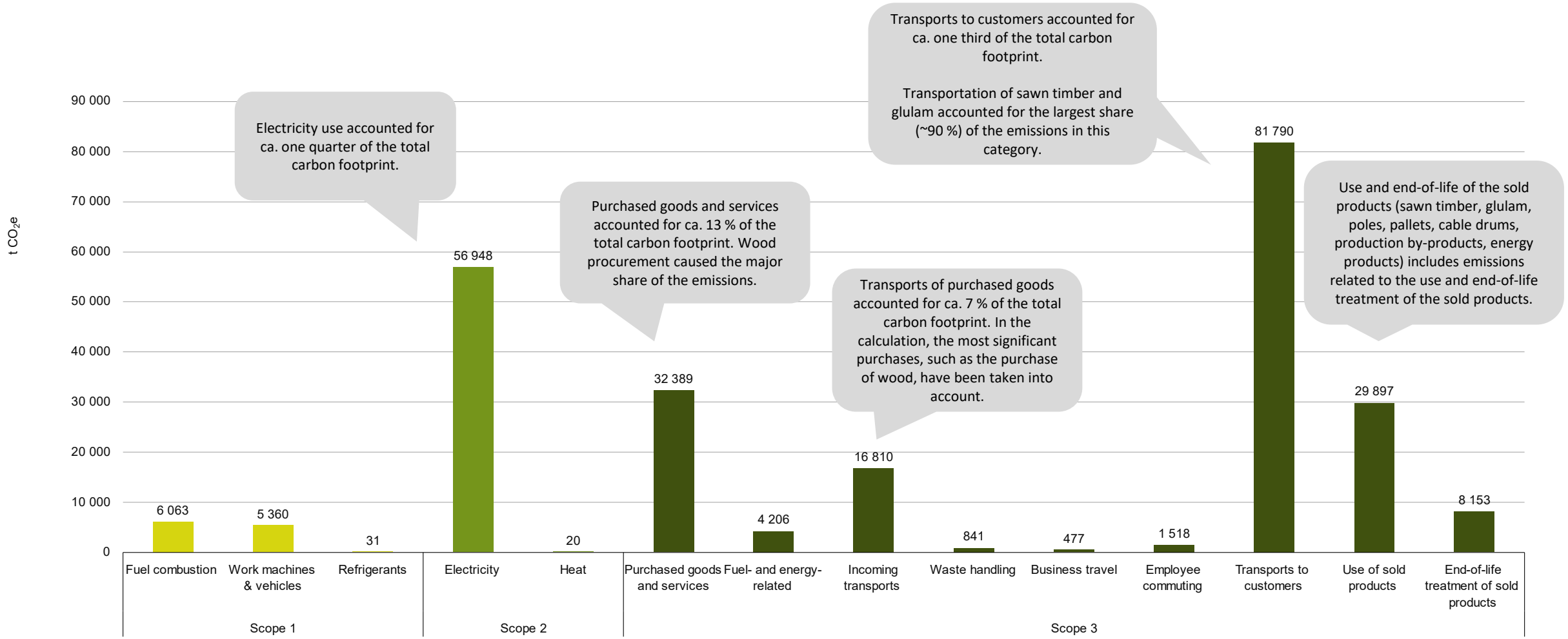
2022

Scope 1: 4.7 % of the total carbon footprint	Versowood's direct emissions in 2022 were 11 455 tonnes of CO_2e. Emissions were caused by fuel use in work machines and vehicles (47 %), fuel use in heating (53 %) and use of refrigerants (0.3 %).
Scope 2: 23.3 % of the total carbon footprint	Carbon footprint of purchased energy (electricity and district heating) calculated on market-basis was 56 968 t CO_2e in 2022. With location-based method, result is 10 050 t CO_2e. The figure on the right-hand side shows emissions calculated with the market-based method.
Scope 3: 72.0 % of the total carbon footprint	Versowood's carbon footprint of the value chain was 176 080 t CO_2e in 2022. Value chain emissions were mainly caused by transportations to customers, use of sold products, as well as production and transportation emissions related to the purchased products and services.



Versowood, carbon footprint by categories

2022



4.
Results and conclusions, 2023

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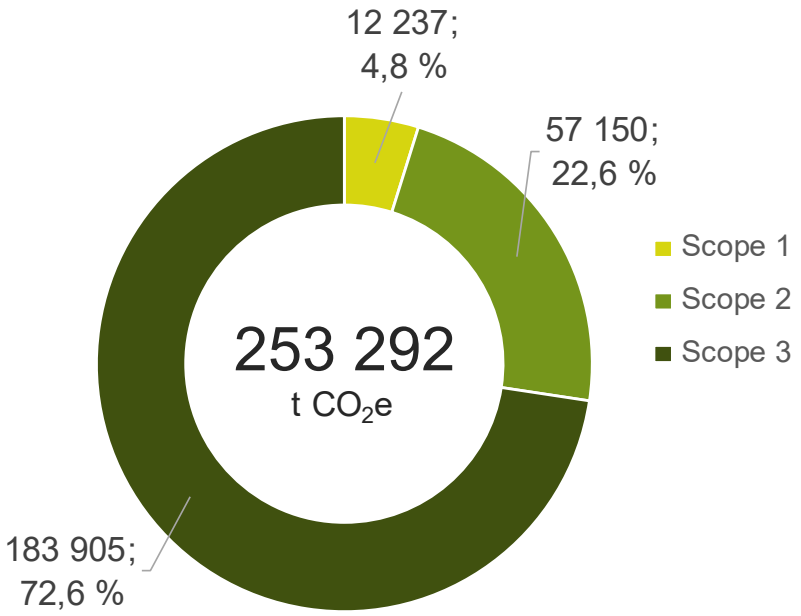
Versowood, kokonaishiilijalanjälki

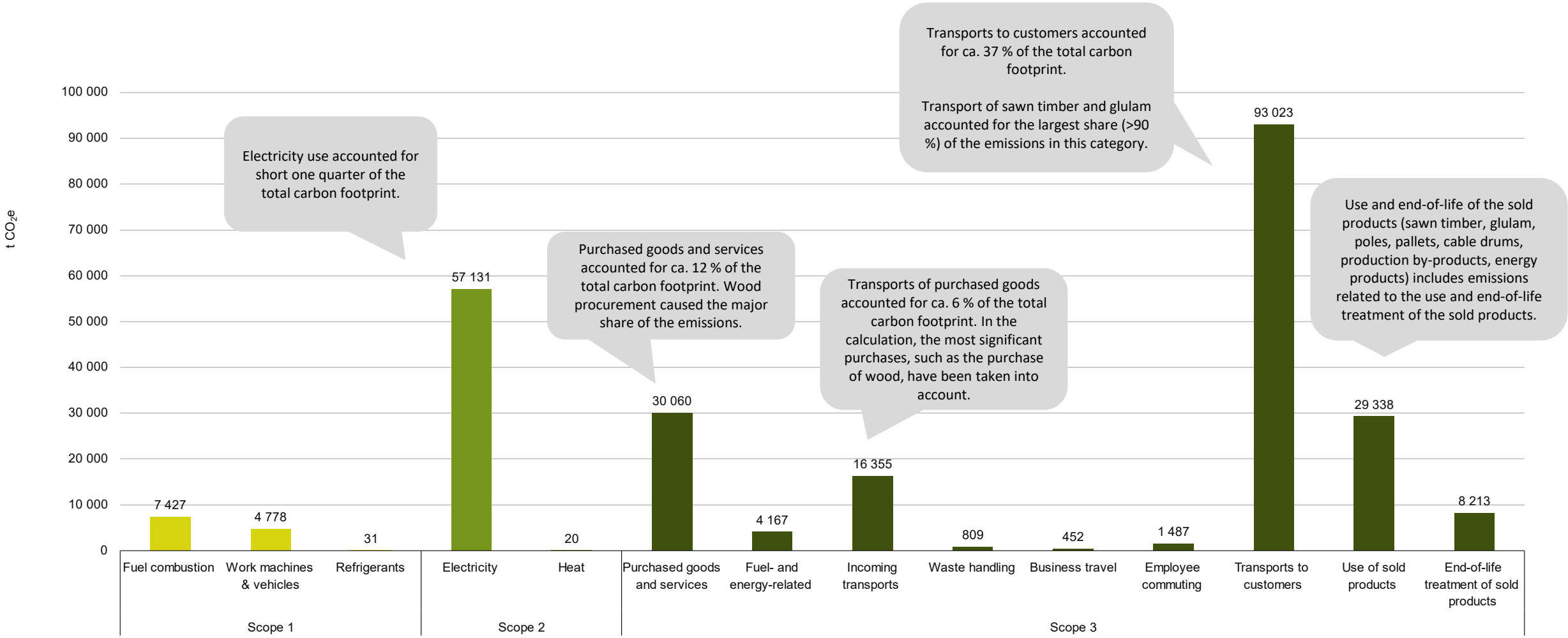
2023

Scope 1: 4.8 % of the total carbon footprint	Versowood's direct emissions in 2023 were 12 237 tonnes of CO_2e. Emissions were caused by fuel use in work machines and vehicles (39 %), fuel use in heating (61 %) and use of refrigerants (0,3 %).
Scope 2: 22.6 % of the total carbon footprint	Carbon footprint of purchased energy (electricity and district heating) calculated on market-basis was 57 150 t CO_2e in 2023. With location-based method, result is 10 082 t CO_2e. The figure on the right-hand side shows emissions calculated with the market-based method.
Scope 3: 72.6 % of the total carbon footprint	Versowood's carbon footprint of the value chain was 183 905 t CO_2e in 2023. Value chain emissions were mainly caused by transportations to customers, use of sold products, as well as production and transportation emissions related to the purchased products and services.



Versowood, carbon footprint by categories

2023



5.
Comparison,
2022-2023

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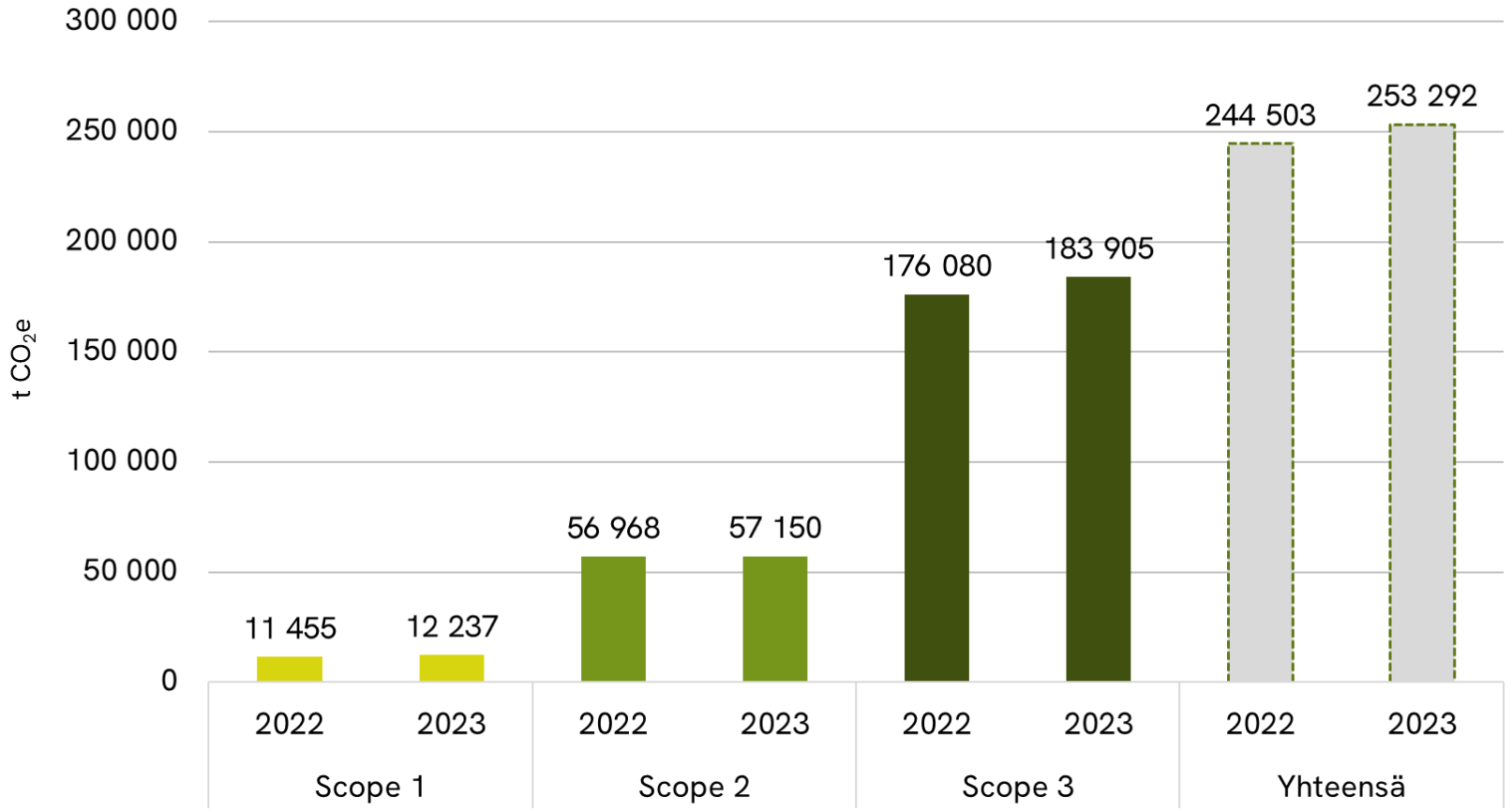
Versowood, development of the carbon footprint

2022-2023



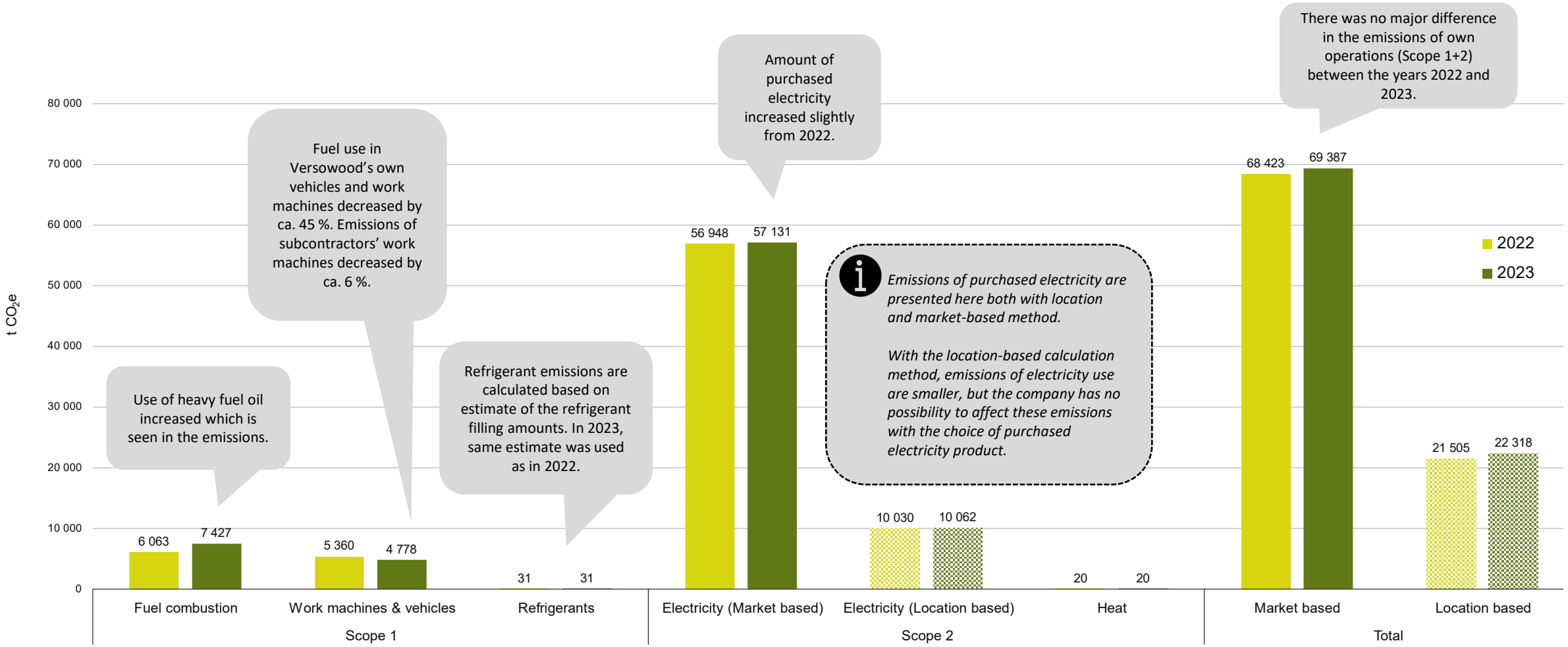
Versowood's absolute market-based emissions increased by ca. 4 % from the year 2022 to 2023.

Share of the direct emissions (Scope 1) was ca. 5 % in both years and share of the purchased energy ca. 23 %.

Value chain emissions corresponded to the largest share of the total emissions, and increased by ca. 4 % from 2022 to 2023. The most significant change in the value chain emissions was caused by the increase in transport emissions.

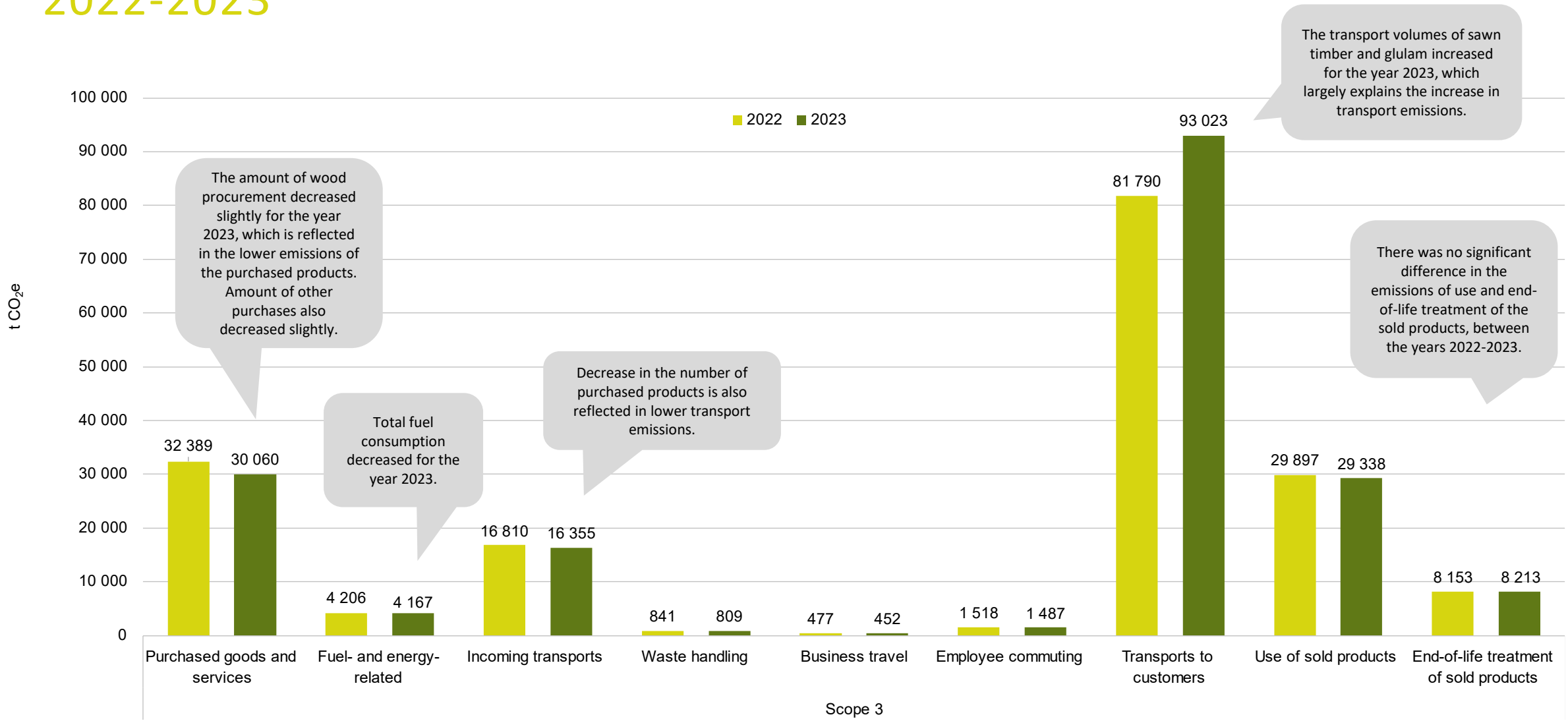
Versowood, carbon footprint of own operations (Scope 1-2)

2022-2023



Versowood, carbon footprint of the value chain (Scope 3)

2022-2023



Emissions by category (market-based)

Scope	Emission category	Carbon footprint, t CO_2e (2022)	% of total emissions (2022)	Carbon footprint, t CO_2e (2023)	% of total emissions (2023)	Change in emissions 2022-2023 (%)
Scope 1	Fuel combustion	6 063	2.5	7 427	2.9	+22.5
	Work machines & vehicles	5 360	2.2	4 778	1.9	-10.9
	Direct emissions [a]	31	0.01	31	0.0	+0.0
Scope 2	Electricity (market-based)	56 948	23.3	57 131	22.6	+0.3
	Heat	20	0.01	20	0.01	-1.7
Scope 3	Purchased goods and services	32 389	13.2	30 060	11.9	-7.2
	Purchased capital goods [b]	0	0.0	0	0.0	0.0
	Fuel- and energy-related	4 206	1.7	4 167	1.6	-0.9
	Incoming transports (Upstream transportation)	16 810	6.9	16 355	6.5	-2.7
	Waste handling	841	0.3	809	0.3	-3.8
	Business travel	477	0.2	452	0.2	-5.2
	Employee commuting	1 518	0.6	1 487	0.6	-2.1
	Transports to customers [c]	81 790	33.5	93 023	36.7	+13.7
	Use of sold products	29 897	12.2	29 338	11.6	-1.9
	End-of-life treatment of sold products	8 153	3.3	8 213	3.2	+0.7
Total		**244 503**	**100 %**	**253 292**	**100 %**	**+ 3.6 %**

[a] Includes refrigerant emissions.
[b] Capital goods are included in the category purchased goods and services (not reported separately).
[c] Transports to customers are also upstream transportations as they are paid by Versowood.

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For the better.