2024 Climate Report

Prodan in a glance

Climate Action

Carbon Footprint

Prodan in a glance

Introduction

Welcome to the 2024 Climate Report of Prodan.

As one of Denmark's leading material manufacturing companies, Prodan embraces its role in driving environmental responsibility and sustainable progress. This year's report reflects their continued commitment to measuring, understanding, and reducing its climate impact—both directly and across their value chain.

Why is Emissions Tracking Critical – Local and Global Perspective

Now in its fourth consecutive year, Prodan's Climate Report underscores the critical role of emissions calculation as a foundation for meaningful climate action. By consistently monitoring greenhouse gas emissions, the company gains deeper insight into its environmental footprint, enabling the identification of reduction opportunities, improved energy efficiency, and the cultivation of a sustainability-oriented culture throughout the organization.

Direct emissions, resulting from fossil fuel consumption for heating, transportation, and other industrial processes, represent Prodan's immediate local responsibility. Actively addressing these emissions drives innovation, operational optimization, and a transition toward cleaner energy sources.

Equally important are Prodan's **indirect emissions**, which span the entire value chain—from purchased electricity and supplier activities to product use and end-of-life disposal. By accounting for these impacts, the company acknowledges its role within a broader global system and actively collaborates with partners, suppliers, and customers to promote sustainable practices at every stage.

This report serves not only as a reflection of Prodan's current progress but also as a strategic guide for its journey toward a lower-carbon and more environmentally responsible future.

Prodan & materials manufacturing

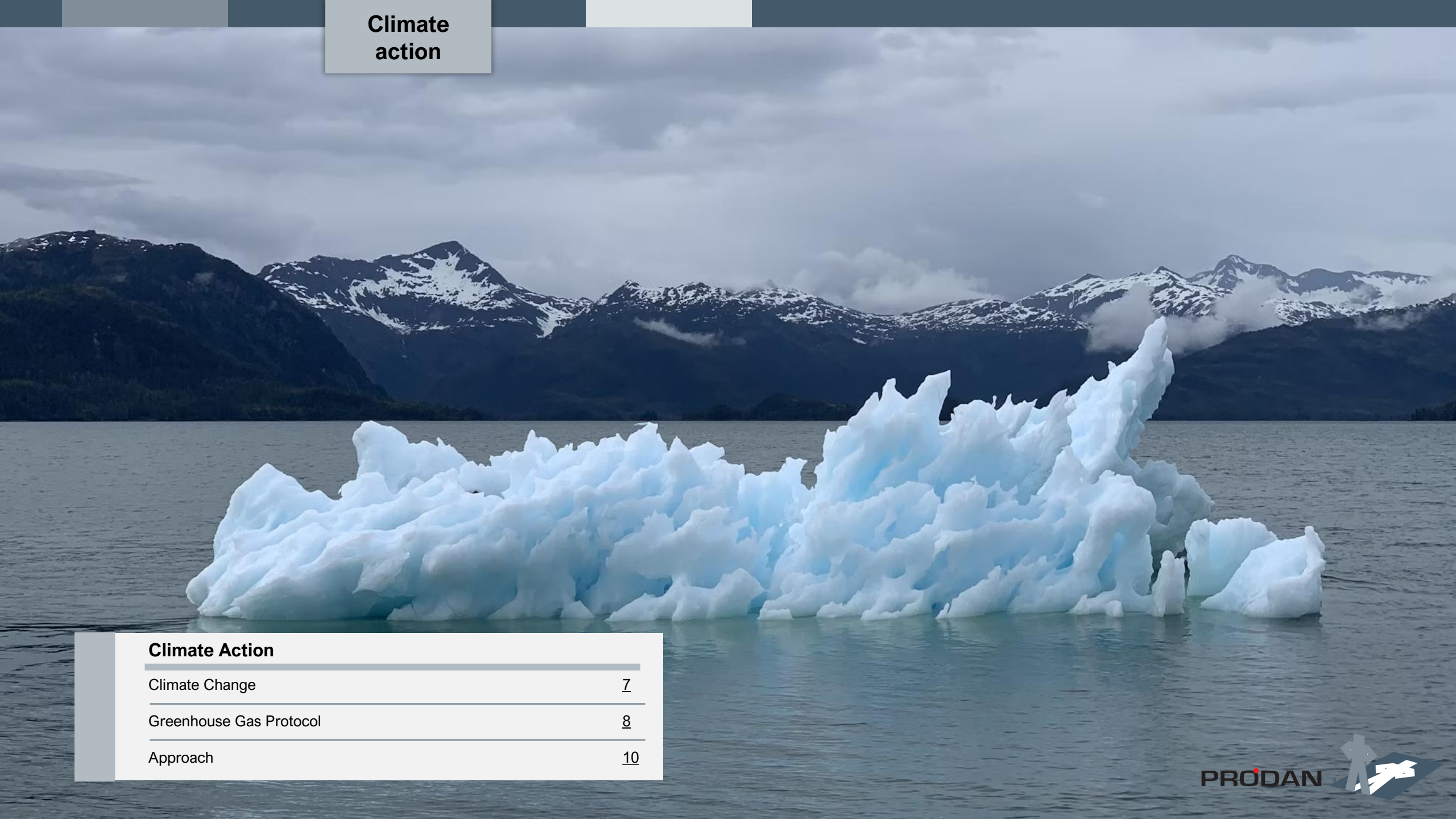
Prodan is a trusted Danish manufacturer specializing in high-quality metalworking and material processing solutions for a wide range of industries, including wind energy and offshore, agriculture, food and processing systems. From the start, the company has paired technical excellence with a strong commitment to environmental and social responsibility.

Operating in a sector that plays a critical role in the global economy, and accounts for an estimated 30% of global industry emissions, Prodan recognizes the environmental impact of manufacturing. The extraction and processing of raw materials, particularly metals, along with energy-intensive processes like welding and metal fabrication, contribute heavily to industrial CO_2 emissions worldwide. In response, Prodan has embedded sustainability into its operations. The company is **ISO 14001** certified and actively reduces its environmental footprint through:

- Transitioning to **CO_2-neutral green electricity**
- **Optimizing** facilities and production processes
- Enhancing **waste separation systems**
- Managing **lighting, dust**, and **industrial noise** with precision
- **Assessing suppliers** for environmental responsibility
- Investing in **circular production** and **responsible material** alternatives

By aligning its practices with a clear sustainability strategy, Prodan not only improves its own performance but also influences the wider industrial landscape. As both a leader company and a trusted supplier, it continues to demonstrate how the manufacturing sector can evolve toward lower emissions and greater environmental accountability.

Climate action



Climate Action

Earth's atmosphere plays a crucial role in regulating temperature and supporting life.

Climate change describes the disruption of this balance, due to human activities.

The emission of **Greenhouse Gases** (GHGs), which trap heat, causes the greenhouse effect, leading to global temperatures increase and climate patterns disruption.

Main GHGs

Carbon dioxide (CO_2) - burning fossil fuels, industrial processes, and deforestation

Methane (CH_4) - natural and human sources like agriculture and landfills

Nitrous oxide (N_2O) - agriculture and industrial processes

Fluorinated gases - synthetic compounds used in various applications

Global Warming Potential (GWP) is a metric comparing warming effects of GHGs to CO_2 over a specified timeframe. CO_2 serves as the baseline with a GWP of 1. Other gases have higher GWPs, indicating stronger warming potential. Methane, for instance, has a GWP of 28-36, while nitrous oxide has a GWP of about 265-298.

Consequences of climate change include **sea-level rise**, **extreme weather events**, **altered precipitation**, and **biodiversity loss**, posing challenges for sustainable development.

The **IPCC (Intergovernmental Panel on Climate Change)** is the foremost scientific body which assesses climate change, providing comprehensive reports that synthesize the latest research and analyse the impacts, risks, and potential mitigation strategies associated with climate change. The IPCC assessment reports serve as invaluable resources, providing a comprehensive understanding of the urgency and complexity of climate change.

PRODAN

The **Greenhouse Gas Protocol** is a globally accepted and widely recognized accounting framework for measuring and managing GHG emissions in private and public sector operations.

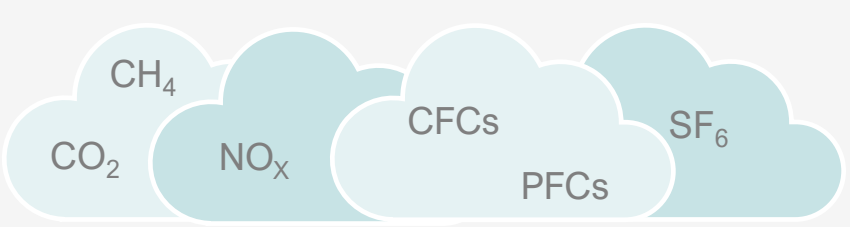
The GHG Protocol was developed by the **World Resources Institute** (WRI) and the **World Business Council for Sustainable Development** (WBCSD), and its purpose is to provide organizations with a standardized methodology to quantify and report emissions. By establishing consistent guidelines and principles, the GHG Protocol enables companies to track emissions over time, set reduction targets, and implement effective emission reduction strategies.

WORLD RESOURCES INSTITUTE

wbcsd

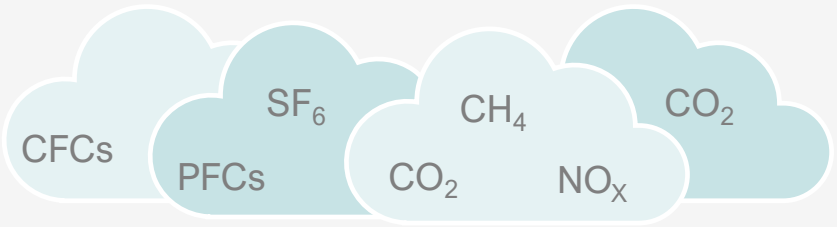
The GHG Protocol serves as a valuable tool for organizations seeking to understand and manage their environmental impact. It offers a comprehensive framework for emissions accounting and reporting, helping companies identify emission sources, assess their carbon footprint, and prioritize reduction opportunities. Additionally, the GHG Protocol enables organizations to enhance transparency and credibility in their sustainability reporting, enabling stakeholders, investors, and customers to make informed decisions based on reliable emissions data. By accounting for emissions according to the GHG Protocol, organizations can demonstrate their commitment to addressing climate change, while also improving operational efficiency and reducing costs.

According to the GHG Protocol, greenhouse gas emissions are categorized into **three scopes** to help organizations understand and manage their climate impact:



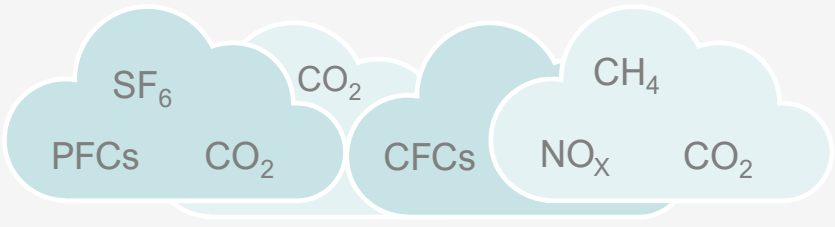
Scope 1

Scope 1 GHG emissions are generated from equipment that is owned or controled by Prodan. This includes the emissions from fuels that are combusted in stationary and mobile sources (vehicles, boilers, generators, etc.). Other GHG emissions like refrigerant and coolant gases are also included in Scope 1 emissions.



Scope 2

Scope 2 GHG emissions are associated with the purchase of electricity, warm water, steam or cooling. They are generated during the production of the energy consumed by Prodan but occur at sources outside of the company's boundaries.



Scope 3

Scope 3 GHG emissions occur throughout Prodan's value chain. They are the result of activities that are not directly owned or controlled by the company but are influenced by its operations. Scope 3 emissions include 15 upstream & downstream subcategories, which are further explained in pages 13-16.

Approach

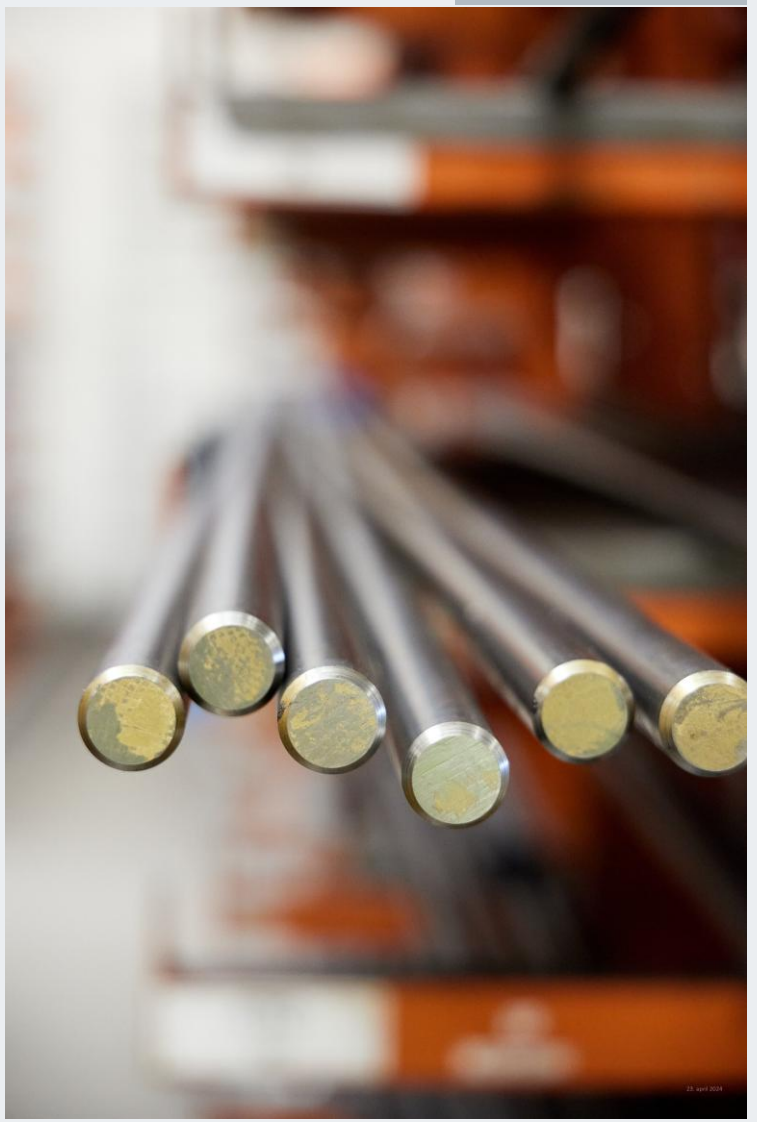
According to the GHG Protocol there are three approaches for developing organizational boundaries — the Equity Share, the Operational Control and the Financial Control Approach. Since Prodan has the complete authority to introduce and implement its operating policies, the **Operational Control approach** is used. This means that Prodan accounts for 100 percent of emissions from operations over which it has operational control of.

Inventory boundaries determine which of the operations and emissions will be accounted for in Prodan's boundary. Consequently, Prodan's boundaries include **all operations** that arise from their administration building in **Randers, Denmark**.

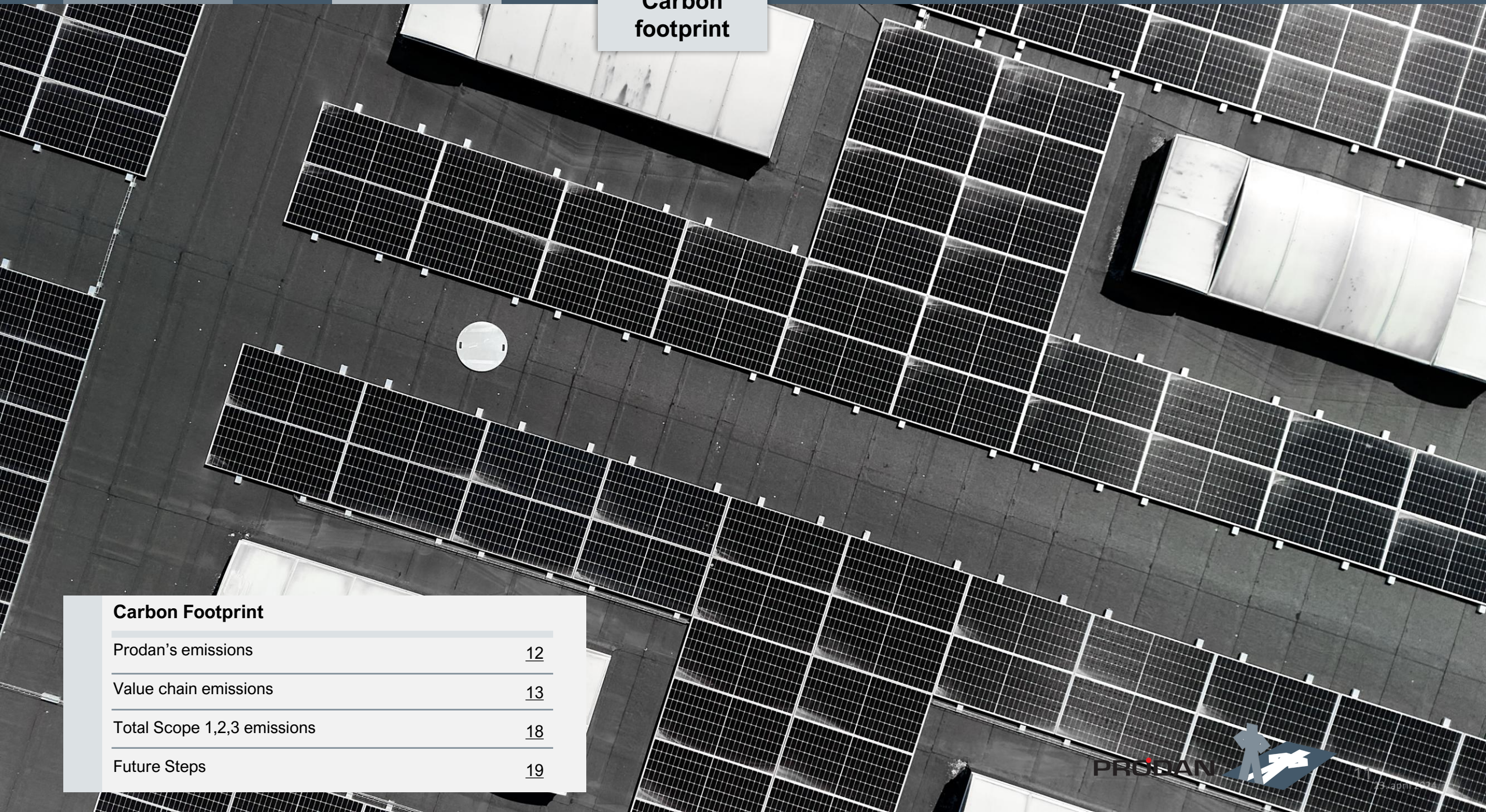
Based on the performed procedures and the obtained primary data, the selected information for the **12 months** period that ended on 31 December 2024, has been prepared in accordance with ethical requirements and GHG regulations.

The fundamental principles of **Relevance**, **Consistency, Transparency, Accuracy** and **Completement**, the Danish Code for Research Integrity and our Business Ethics were applied. An extensive and comprehensive system of collected data for quality control and other procedures regarding compliance with professional standards and ethical requirements is in place. The presented report was composed by an independent team with experience in sustainability reporting. The emissions calculations were performed by Prodan using the Danish tool **klimakompasset**.

The primary data that Prodan is solely responsible for selecting and providing are as of **31st of December 2024**, while the calculations were made as of **10th of April 2025**.



Carbon footprint



Carbon Footprint

Prodan's emissions

As part of its ongoing commitment to a more sustainable future, Prodan places strong emphasis on measuring, reporting, and reducing its **Scope 1** and **Scope 2** greenhouse gas (GHG) emissions. With a proactive stance on sustainability, the company continually works to lower its emissions and lessen its overall environmental impact.

Prodan is committed to achieving emissions reductions, through the implementation of innovative technologies, operational improvements, and employment of renewable energy. Through clear and detailed reporting of its Scope 1 and Scope 2 emissions, the company seeks to build trust and demonstrate accountability to its stakeholders, reinforcing its role as a responsible and forward-thinking industrial partner.

Scope	tn CO_2e	Share of total emissions
Scope 1	129.04	1.90%
Scope 2	0.00	0.00%
Scope 3	6,651.40	98.10%

In 2024, **Prodan's total Scope 1 GHG emissions amounted to 129.04 tn CO_2e, with a remarkable reduction** comparing to 230.51 tonnes of CO_2e in 2023. These emissions arise from the use of the company's **vehicles, as well as from** the **stationary combustion** of fuels for heating and processing purposes.

Despite the challenges posed by the increased production and expansion of business, a **significant reduction of 44%** in Scope 1 & 2 emissions, compared to 2023, is observed. **Scope 2** emissions (market-based) have been nullified due to the sourcing of **100% renewable electricity**, while Scope 1 emissions show a slow, but steady decrease from year to year.

Scope 3 Categories in tons of CO_2e		
Category	Upstream	Downstream
1. Purchased goods and services	5,908.98	
2. Capital goods	264.70	
3. Fuel- and energy-related activities	45.01	
4. Upstream transportation and distribution	59.95	
5. Waste in operations	11.24	
6. Business travel	0.70	
7. Employee commuting	166.76	
8. Upstream leased assets	10.22	
9. Downstream transportation and distribution		-
10. Processing of sold products		-
11. Use of sold products		-
12. End-of-life treatment of sold products		183.84
13. Downstream leased assets		-
14. Franchises		-
15. Investments		-
Total CO_2e emissions divided into upstream and downstream (tonnes)	6,467.56	183.84
Total CO_2e emissions(tonnes)		6,651.40

Purchased goods and services

This Scope 3 subcategory includes all the upstream emissions from the production of primary and secondary materials and services purchased by Prodan. It includes all upstream (i.e., cradle-to-gate) emissions from the production of products purchased by Prodan in 2024.

For the calculation of the emissions a combination of methods was used, depending on the product, based on Klimakompasset. This subcategory played a pivotal role as the biggest contributor to Scope 3 emissions within Prodan's footprint with **5,908.98 tonnes of CO_2e in 2024**. This corresponds to more than 91.4% of the company's Scope 3 emissions. The great impact of this subcategory can be explained by the fact that, as a manufacturing company, Prodan purchases thousands of tonnes of raw materials which normally entail extraction and energy-intensive procedures. **Comparing to 2023, Prodan's emissions from this Scope 3 subcategory have been reduced by approximately 16%.**

Purchased capital goods

This subcategory encompasses emissions arising from the production of capital assets procured by Prodan during 2024. This was assessed using the **official tool of the Danish ministry of environment, Klimakompasset.**

The environmental evaluation considered the replacement of all fixtures inside Prodan's facilities (36 fixtures). It was revealed that the emissions associated with the production of these capital goods amounted to **264.7 tonnes of CO_2e in 2024.**

Fuel & Energy-related activities

Prodan's Scope 3 emissions for fuel- and energy-related activities encompass a broad spectrum, extending beyond on-site consumption. These emissions do not account for the electricity, heating or fuel consumption, but encompass the upstream activities involved in the extraction, processing, and transportation of fuels.

Additionally, they encompass transmission and distribution losses in the electricity supply chain and district heating distribution losses. **The total GHG emissions from fuel- and energy-related activities in 2024 were equal to 45.01 tonnes CO_2e.**

The emission factors used are sourced from the online tool Klimakompasset.

Upstream transportation and distribution

For Prodan, the upstream transportation and distribution Scope 3 emissions, **amounted to 59.95 tonnes of CO_2e**. These emissions stem from various sources such as transportation of raw materials, intermediary goods, and final products, as well as distribution logistics. Addressing these emissions is necessary for Prodan to minimize its carbon footprint and contribute to sustainability efforts. Implementing efficient transportation strategies, optimizing distribution routes, and exploring low-carbon alternatives are essential steps for Prodan to mitigate its upstream transportation and distribution emissions.

Waste generated in operations

Within this subcategory, emissions are accounted for based on the responsible disposal and treatment of **waste resulting from Prodan's daily operations**. In total, the organization generated **11.24 tonnes of CO_2e**. The emission factor used are sourced from the online platform, Klimakompasset.

Business Travel

This subcategory includes emissions stemming from employee transportation for work-related activities, utilizing third-party operated vehicles. In the emission calculation for flights, Radiative Forcing Index (RFI) is included, therefore taking into consideration that CO_2e emitted higher up in the atmosphere have a greater greenhouse effect than those emitted at land. **The total emissions related to business travel are 0.7 tonnes of CO_2e. There's a significant reduction of 56% in this subcategory emissions** comparing to those of 2023.

Employee commuting

This subcategory includes the emissions generated from employee commutes between the workplace and home. The person-kilometer emission factor used for passenger cars is sourced from Klimakompasset. **A total of 166.76 tonnes of CO_2e were generated by employee commuting in the reporting year**.

Leased Assets

This subcategory includes the emissions arising from the leasing of assets from third parties and it amounted to **a total of 10.22 tonnes of CO_2e**. Comparing to 2023, there is a **reduction of 27% in upstream leased assets' emissions**.

End-of-life treatment of sold products

End-of-life considerations encompass the environmental impact of products once they reach the end of their useful lifespan. Proper disposal and recycling are paramount in mitigating downstream emissions in this category. This proactive design philosophy, combined with its active participation in recycling initiatives, helps minimize the environmental footprint of its products when they reach the end of their useful life. For 2024, the downstream Scope 3 emissions from end-of-life processes **are equal to 183.84 tonnes CO_2e**. Due to its focused business model centered on manufacturing and distribution, its downstream emissions are inherently limited compared to industries with more complex value chains. This streamlined operational structure allows Prodan to concentrate its sustainability to make the most meaningful reductions.

Prodan remains committed to further reducing end-of-life emissions through innovation in product design, enhanced recycling partnerships, and the development of more sustainable disposal solutions. This focused approach to lifecycle managements reflects the company's dedication to measurable environmental stewardship and support the transition toward a circular economy. All of these, while maintaining its high standards of quality and performance!

Rest of Scope 3 categories

Prodan has **no emissions from the processing and the use of its sold products**, as they are not further processed after the sale, and they do not consume electricity or fuel to operate, during their use phase. Moreover, Prodan is not leasing any equipment or vehicles to 3rd parties, so there are **no emissions from downstream leasing activities**. The **downstream transportation** subcategory was not calculated due to the scarcity of data. Finally, since Prodan does **not own any franchises or investments**, there are no greenhouse gas emissions that are associated with those activities.

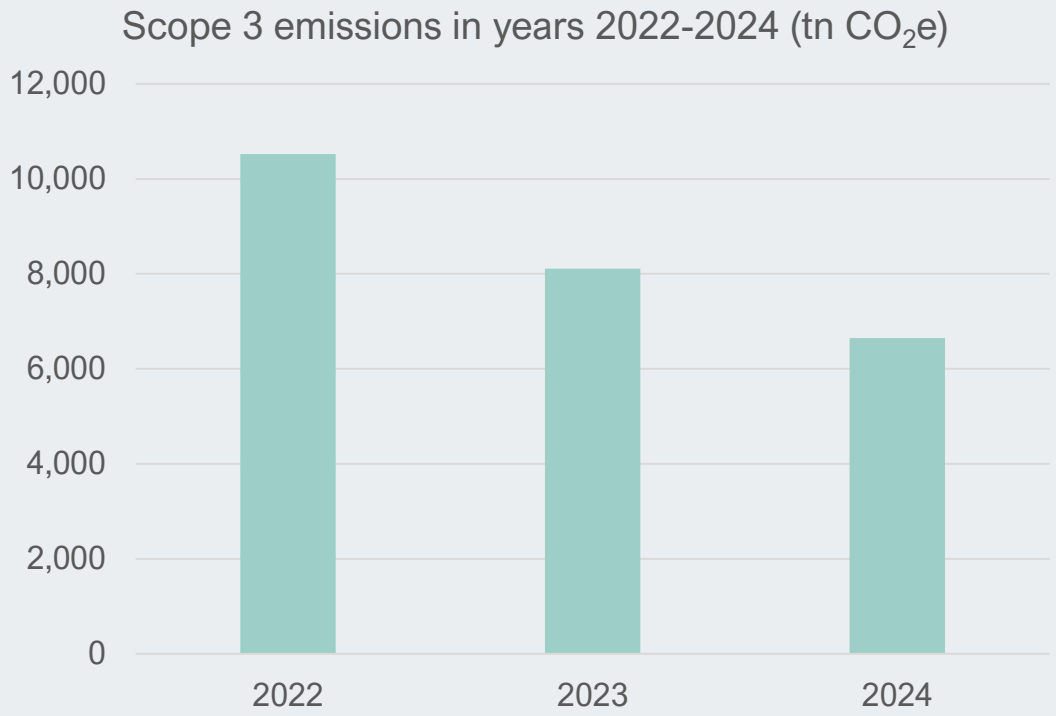
Evolution of Scope 3 Emissions

Prodan's Scope 3 emissions show a **steady reduction** comparing to the 2022 baseline.

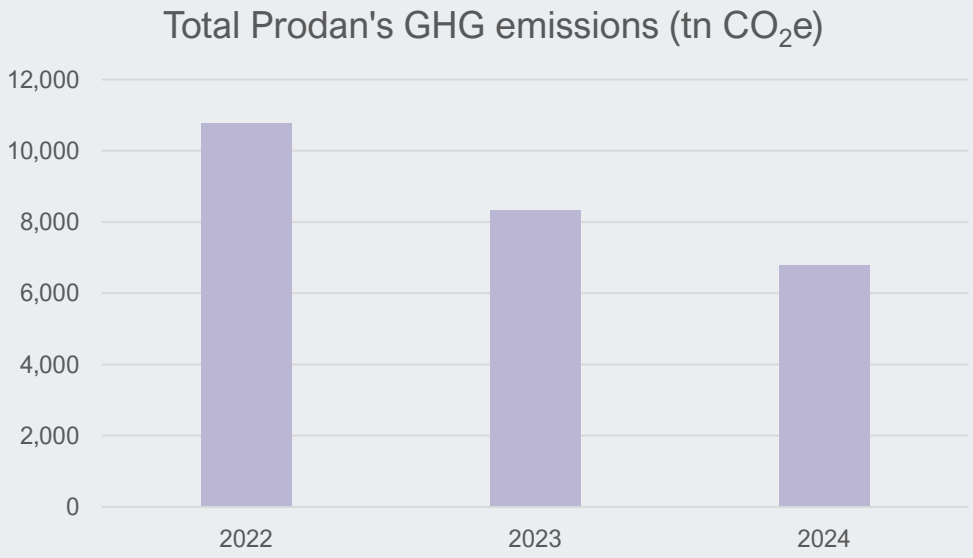
Amongst the Scope 3 categories with the largest contribution have consistently been **purchased goods & services**, **upstream transportation & distribution** and **employee commuting.**

The figures have been slightly influenced by ongoing changes in calculation methodologies, as well as the greener policy of the company itself. As our understanding of environmental impact grows, so does the precision and scope of these methods. Moving forward, Prodan will maintain consistency by continuing to use Klimakompasset for emissions calculations, as it has already occurred between 2023 and 2024.

By refining these methodologies and ensuring alignment across reports, we can improve data reliability—strengthening the foundation for sustainability decisions.



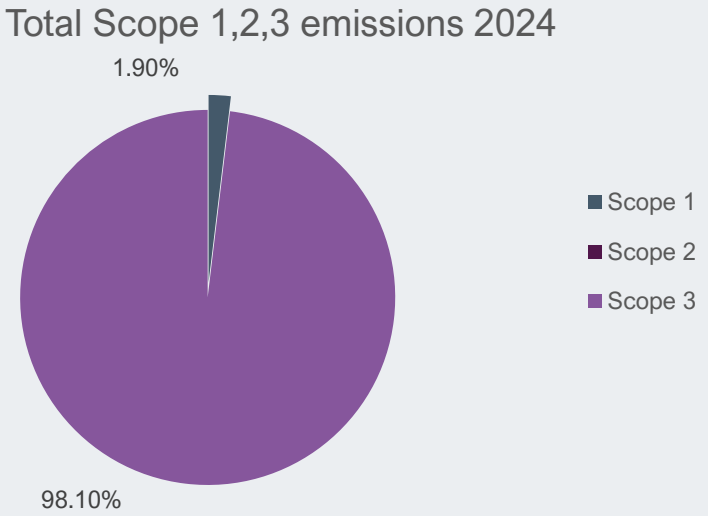
Total Scope 1,2,3 Emissions



The total GHG emissions for Prodan in 2024 are equal to **6,651.63 tonnes CO_2e**.

Prodan places utmost importance on measuring, reporting, and mitigating both Scope 1 and Scope 2 greenhouse gas (GHG) emissions. Adopting a proactive stance, Prodan continually seeks ways to reduce its carbon footprint through the adoption of innovative technologies and the utilization of renewable energy sources. **In 2024, the company achieved a notable 44% reduction in Scope 1 and Scope 2 emissions compared to 2023, with Scope 2 emissions effectively nullified owing to the procurement of 100% renewable electricity**.

Despite these accomplishments, Scope 3 emissions, spanning purchased goods, upstream transportation and distribution, waste generation, business travel, employee commuting, and leased assets, exhibit some variation across reporting years. Prodan remains steadfast in its commitment to transparency and accountability, actively working to harmonize methodologies and drive emissions reduction initiatives across all scopes, thus reaffirming its dedication to fostering a sustainable future. **Overall, there is a significant reduction in Prodan's total Greenhouse Gas emissions. More specifically, compared to 2022 the company's carbon footprint is reduced by 38%.**



Improved Data Collection and Reporting

There are proposals to strengthen data collection systems by measuring emissions across the entire value chain in kilograms rather than based on DKK spent on purchased goods. This shift would allow for more precise tracking of emission trends and better-informed decision-making. Additionally, requiring third-party logistics providers to share emissions data from transportation could enhance the accuracy of monitoring supply chain-related emissions.

Supply Chain Optimization

Further efforts to optimize the supply chain could reduce emissions intensity. Strategies include partnering with sustainable suppliers that provide product-level emissions data and prioritizing locally sourced goods to minimize transportation distances.

Stakeholder Engagement and Transparency

Increasing transparency and collaboration with stakeholders—such as customers, investors, and suppliers—can strengthen emissions reduction initiatives. Open dialogue and shared commitments will help mobilize collective action toward long-term sustainability goals.

Carbon footprint

At Prodan A/S, sustainability is at the heart of operations. The sheet metal processing machinery, software, and automation systems are designed with an unwavering commitment to environmental responsibility, without ever compromising on quality. Powered by 100% renewable electricity and driven by innovation, Prodan's processes ensure that every product reflects its dedication to a greener future.

Sustainable future steps

Responsible Sourcing & Eco-Conscious Production

From raw materials to finished products, we partner with suppliers who share our sustainability values. By carefully selecting eco-friendly materials and ethical partners, we embed sustainability into every stage of production.

Waste Reduction & Circular Practices

Efficiency and sustainability go hand in hand at Prodan. Through circular economy principles, we minimize waste by prioritizing recycling, reuse, and optimal resource utilization. Our manufacturing processes are engineered to reduce environmental impact while delivering high-performance solutions for the sheet metal industry.

Sustainable solutions for Responsible Operations

Driving Sustainability Across Industries

Prodan empowers mission-critical sectors with sustainable manufacturing solutions:

- Offshore operations: Specialized components withstand extreme conditions while enhancing safety and efficiency
- Wind energy: Precision parts that maximize renewable energy production
- Industrial applications: Sustainable alternatives for traditional manufacturing needs

Built for Performance, Designed for Sustainability

Solutions that help customers:

- Reduce environmental impact without compromising quality
- Enhance operational efficiency in demanding conditions
- Meet stringent sustainability targets
- Maintain reliability in critical applications