Arctic Paper Munkedals AB
Environmental Report 2025

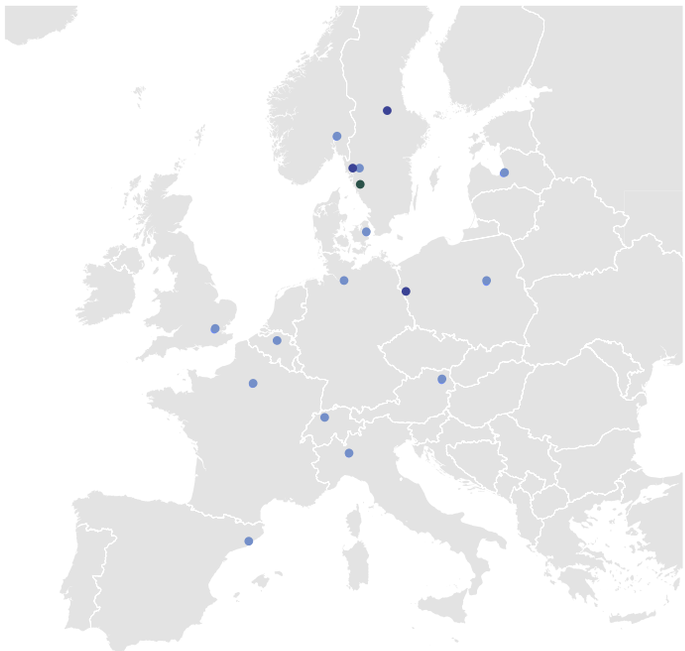
EMAS 2025

ARCTIC PAPER

Environmental Report 2025

Table of Contents

Arctic Paper | Europe



Sales Office Paper Mill Headquaters

Arctic Paper Munkedals AB

Paper has been manufactured in Munkedal for over 150 years. Paper production started in 1871 and today we are one of Europe's leading manufacturers of uncoated graphic paper. Our paper is mainly used for advertising, magazines and books.

Arctic Paper Munkedals AB is located on the Swedish west coast next to the Örekilsälven River – one of Sweden's finest salmon rivers. The river flows into the unique Gullmarn Fjord. Both the river and the fjord are areas of great environmental and natural value. Our production was adapted to nature's conditions early on by ceasing pulp production and completely ceasing to use chlorine-bleached pulp.

The vision of being the better alternative for every customer continues to drive our efforts to reduce environmental impact.

Sustainability perspectives are applied throughout our operations in everything from commitment to the selection of raw materials, to jointly creating a sustainable production process with responsible energy use and an optimized logistics system.

Arctic Paper S.A.

Arctic Paper S.A. is one of the leading manufacturers of high-quality graphic fine paper in Europe. The company produces coated and uncoated woodfree paper for quality-conscious customers such as printers, book publishers, newspaper publishers, advertising agencies, paper distributors and packaging companies.

The product portfolio includes well-known brands such as Amber, Arctic, G and Munken.

The company has three paper mills:
- Arctic Paper Munkedals, Sweden
- Arctic Paper Grycksbo, Sweden
- Arctic Paper Kostrzyn, Poland

The production capacity of the three mills is approximately 630,000 tonnes of paper per year. The majority is sold through the company's 14 own sales offices in Europe.

Arctic Paper S.A. has been listed on the Warsaw Stock Exchange since October 2009 and on NASDAQ in Stockholm since December 2012.

Printed on Munken Lynx 150 g/m²

Preface

At Arctic Paper Munkedals AB, we view sustainability and environmental responsibility as fundamental parts of our operations. Through our efforts, we strive not only to meet regulatory requirements but also to lead the way and actively contribute to a sustainable society. We are proud of our commitment to the environment and our ongoing initiatives to minimize our impact on nature. Our focus on using renewable raw materials – with our uncoated paper, which contains a high proportion of certified renewable material, as a cornerstone – is a clear example of our sense of responsibility. By continuously improving our processes and investing in sustainable solutions, we create long-term environmental benefits for ourselves and for society.

In 2025, we have taken new steps towards an even more sustainable future. We have made energy savings in our operations, primarily by rebuilding our steam distribution to our paper machines, leading to more energy-efficient conversions. We have started the work on building a new raw water plant, which will lead to a significantly reduced impact on the Munkedalsälven, Örekilsälven and Gullmarsfjorden by eliminating short-term regulation and separating sediment. A major investment in a new sheet cutter was also initiated, which will lead to more energy-efficient production and reduced external transport.

Our vision of achieving a completely closed water system remains a driving force in our work. By carefully analyzing and optimizing the use of our resources – such as water and chemicals – we strive to develop even more sustainable processes.

Our environmental management system, based on ISO 14001 and EMAS, ensures that we follow a structured and effective path toward continuous improvement. We aim for every employee at Arctic Paper Munkedals AB to feel a sense of responsibility for the environment, so that sustainability work permeates all aspects of our operations.

This EMAS environmental report presents our progress during 2025 and the goals we have set for the future. We continue our efforts to create a more sustainable future both for our company and for society.
We would like to thank our employees for their dedication and all our stakeholders for their trust and cooperation.

Kent Blom
MD Arctic Paper Munkedals AB

Printed on Munken Lynx 150 g/m²

Facts about Arctic Paper Munkedals AB

Products		
	Munken Design Range:	Munken Lynx, Munken Pure, Munken Polar, Munken Kristall Munken Pure Rough, Munken Polar Rough, Munken Lynx Rough, Munken Kristall Rough, Munken Lynx ID, Munken Pure ID, Munken Polar ID, Munken Kristall ID
	Munken Book Papers:	Munken Premium Cream, Munken Premium White, Munken Print Cream, Munken Print White
	Munken Kraft Papers:	Munken Kraft, Munken Kraft Highwhite
	Graphical Fine Paper:	Amber Graphic by Arctic Paper Munkedals

Energy	
Solid fuel boiler	30 MW
Steam boiler (electric)	35 MW
Hydropower plant	7.0 MW
Steam boiler (LNG)	42 MW

The Operations	
Capacity	145,000 tonnes/year
Sales	Export 90%, Sweden 10%
Employees	338

Paper Machines	**Width**	**Grammage**	**Speed**	**Capacity**
PM 5	3.22 m	60–240 g/m^2	750 m/min	67,500 tonnes/year
PM 8	3.97 m	60–150 g/m^2	800 m/min	77,500 tonnes/year

Sheet Cutters	**Sheet Width**	**Sheet Length**	**Capacity**
S1, S2, S3*, S11**, S12**	35–168 cm	42–188 cm	80,000 tonnes/year

Storage Capacity	
Munkedal	4,500 tonnes
Göteborg (central storage)	approx. 6,500 tonnes (part of a company shared warehouse of 21,000 m^2)
Åsensbruk	3,000 tonnes

Certificates

Environmental managemant system ISO 14001:2015	Bureau Veritas cert no: SE010943
Environmental managemant system EMAS 1221/2009	EMAS registration no: S-000248
Quality management system ISO 9001:2015	Bureau Veritas cert no: SE10944
Energy management system ISO 50001:2018	Bureau Veritas cert no: SE009197
Chain of Custody according to FSC®	SGS Cert no: SGSCH-COC-001693
Chain of Custody according to PEFC	SGS Cert no: SGSCH-PEFC-COC-000634
Cradle to Cradle Certified® Material Health at Silver level according to version 4.1	Cradle to Cradle Cert no: 12223
EU Ecolabel	EU Ecolabel licence SE/011/005

* laminating machine

** under construction

Environmental Management

Arctic Paper Munkedals AB has a long-standing tradition of safeguarding nature's interests and systematically reducing the environmental impact of its operations.
To improve and streamline its environmental efforts, the company has chosen to follow the ISO 14001 environmental management system and register under EMAS. These frameworks provide a structured platform for setting and tracking goals, key performance indicators, stakeholder requirements such as legal compliance (permit requirements that include BAT- Best Available Techniques), through tools like management reviews, legal compliance checks, SWOT-analysis etc.
Regular assessments are conducted to determine which activities may have a significant environmental impact, both locally and globally. This process helps identify our significant environmental aspects. By continuously measuring, monitoring, and, when necessary, revising operational goals, we can gradually improve our environmental performance. An important tool for ensuring the functionality of the system is regular internal and external audits. The results of these audits, along with other relevant information, provide management with an accurate view of the company's performance, enabling necessary improvements to the management system.

Environmental Policy

Environmental, Energy and Quality Policy for Arctic Paper Munkedals AB

Arctic Paper Munkedals AB's business concept is to produce and market uncoated paper of high quality. At the same time we shall be known for our sustainable environmental work and be able to offer our customers environmentally friendly products.

Through continuous improvement of our operations and management systems, as well as a strong commitment, we will always deliver high quality paper within each product segment, improve our energy performance and minimise and prevent negative environmental impact from the products and services we buy, manufacture and sell.

We will comply with and preferably exceed applicable legislation and other environmental, energy and quality requirements and work together to prevent environmental accidents.

Therefore, we shall:

- Make environmental, energy, and quality work an integral part of the company's long-term sustainable strategy by establishing rules and procedures at management level for how operations shall be organized and conducted.
- Consult with, inform, train, and engage our employees in environmental, energy, and quality matters.
- Produce, market, and sell products with the least possible environmental impact.
- Set requirements for and give priority to suppliers and contractors who ensure that raw materials, products, transport, and services are produced and delivered with proper quality and in an environmentally sustainable way.
- Take into account environmental and quality impacts, as well as effects on energy performance, when procuring, making new investments, carrying out new constructions or renovations, and making other changes in operations.
- Communicate openly about our environmental work and its impact with the public, customers, suppliers, authorities, and other stakeholders, in order to foster engagement.

Kent Blom
VD Arctic Paper Munkedals AB

Printed on Munken Lynx 150 g/m²

Paper Production

Pulp Reception

The mill does not manufacture its own pulp; instead, it purchases it in the form of bales from external suppliers. After arrival at the mill, the pulp bales are stored in the pulp warehouse until needed. The pulp bales are slushed in process water, which has been purified internally, and then ground in refiners so that the fibres are softened and swell. Grinding is important for the paper's strength properties. Various raw materials and chemicals such as filler chalk, adhesives and starch are added. The pulp is filtered in several steps to remove foreign particles.

Paper Machine

Headbox and Wire Section

The function of the headbox is to distribute the diluted stock over the whole width of the wire. Dewatering and forming of the web take place in the wire section.

Press Section

The web is dewatered still further in the press section. Here, the paper is given the right density and surface structure.

Drying Section

The paper is dried in the drying section with the help of steam-heated cylinders.

Surface Sizing

After drying, the surface on both sides of the paper is surface sized in a sizing/coating process. Surface sizing the paper gives it a smoother and stronger surface with improved printing properties. The surface is dried after the process with infra driers and a second drying section of steam-heated cylinders.

Machine Calendering and Tambour

The web passes through a calender, which gives it its final surface structure. The finished web is rolled onto a tambour and moved to the winding machine.

Winding Machine

In the winding machine, the large reel is divided into smaller reels in line with the customer's order. The different sizes of reels are combined so that the width of the web is optimally utilised.

Finishing

Paper Cutting Machines

The reels proceed for further conversion. In paper cutting machines, they are cut into sheets in varying formats as requested by the customer. Some of the sheets are packaged in an automatic bale packaging machine.

Pallet Pack

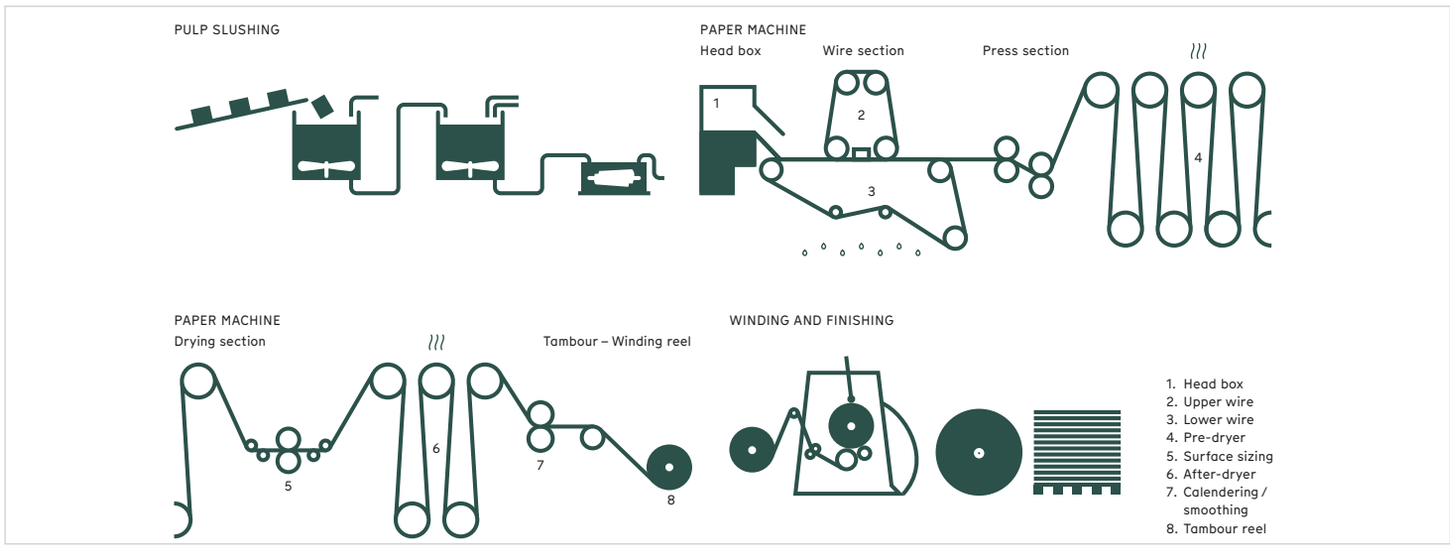
The sheet pallets are provided with a cardboard lid made of recycled paper and shrink-wrapped.

Reel Pack

Reels to be delivered directly to the customer are fitted with protective packaging and labelled so that they can be identified.

Storage and Shipping

The finished reels and pallets of sheets are placed in the mill's warehouse for finished goods until they are released from inventory for transportation to corporate warehouse or the customer by road, rail or sea depending on the customer's geographical location.



Purification Plant

The process wastewater is channelled to our final purification process. The water is purified through a combination of biological and chemical treatments.

a) The first stage is the buffer tower. This is where the decomposition of pollutants commences. Here we add nitrogen and phosphorus to provide nutrients for the bacteria in the water. Air is blown into the base of the tower, to oxygenate the water.

b) The next stage is a bio-bed, which is filled with solid plastic material and has a very large surface area – roughly equivalent to 10 football pitches (60,000 m²). Here a biofilm of bacteria and larger creatures are formed, which continues to break down pollutants in the water.

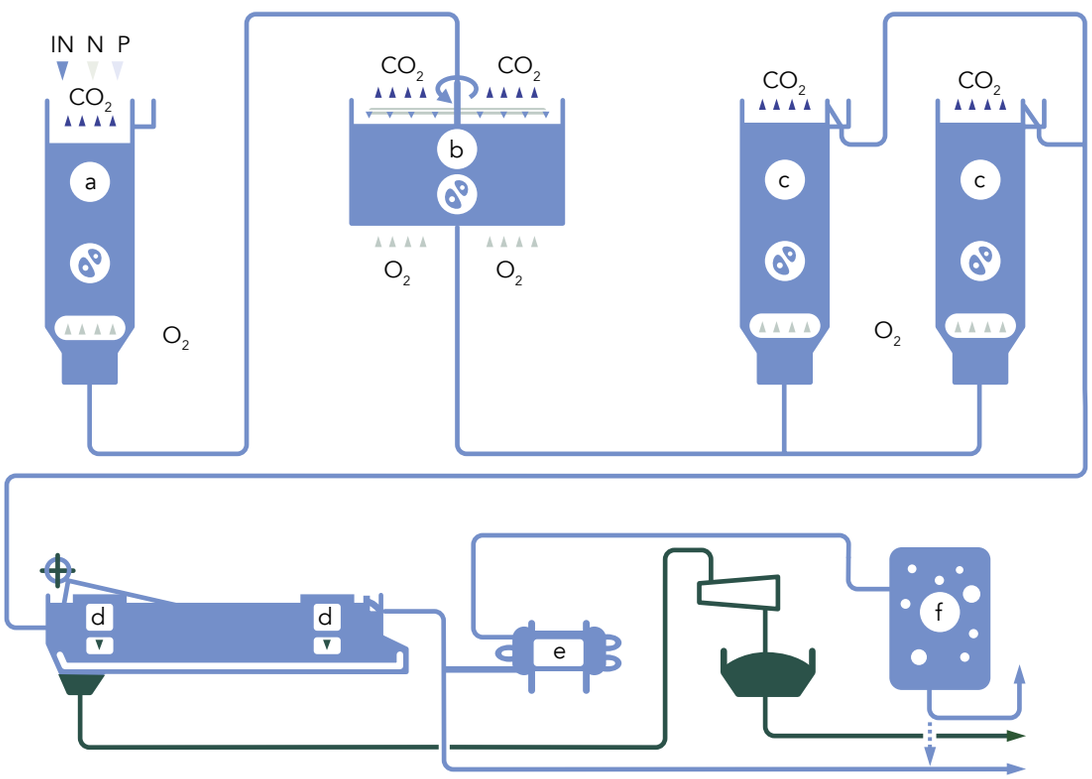
c) The water proceeds to towers with floating material, the surface of which is covered by bio-film. Air is added to make the material circulate in the towers.

The air also serves to ensure that the bacteria and the larger creatures have good access to oxygen, which is necessary for their survival and consequently for the biological decomposition of the surplus water.

d) The next stage comprises of two sedimentation tanks, where flocculants are added to separate particles from the aque ous phase. The separated particles go to a centrifuge, where they are thickened, so that they can then be processed for soil improvement.

e) The treated water proceeds to the ultra-filtration plant.

f) The final, treated water from ultra-filtration goes to our external ponds, before being discharged into the Munkedal River or recirculated to the mill.



Printed on Munken Lynx 150 g/m²

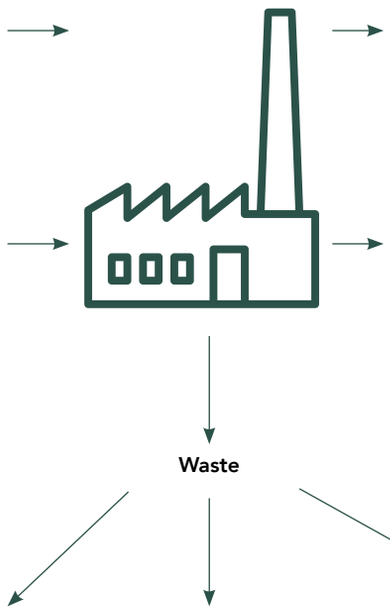
Environmental Data and Regulations

Below are the raw materials, chemicals, and energy required to produce one tonne of paper in 2025, with the corresponding values for 2024 shown in parentheses. In addition, emissions to air and water, as well as the amounts of waste generated by this production, are reported. At the end of this section, we also present how we complied with the conditions set by the authorities. The applicable environmental requirements are detailed in this year's environmental report to the authorities and can be requested from the EMAS environmental contact persons (see page 18).

Raw materials			
Pulp	798	(775)	kg
Chalk	320	(320)	kg
Starch	58.7	(58.1)	kg
Chemicals	33.0	(28.8)	kg

Biodiversity		
Covered land area	125,900	m^2
Nature-oriented area	58,922	m^2
Total land use	184,822	m^2

Energy			
Electricity – purchased	771	(687)	kWh
Electricity – own hydro-power	68	(186)	kWh
Oil	0	(0)	kWh
LNG	334	(263)	kWh
Diesel	0	(0)	kWh
LPG	0	(0)	kWh
Steam – purchased	1,301	(1,311)	kWh
Total energy use	2,474	(2,446)	kWh



Emissons to air			
Sulphur dioxide (SO_2)	0.02	(0.02)	kg
Nitrogeneoxide (NO_X)	0.265	(0.249)	kg
Carbondioxide (CO_2)	282	(251)	kg

Discharges to water				BAT*
AOX	2.07	(1.32)	g	
SS	0.226	(0.153)	kg	0.020-0.350
COD_{Cr}	0.569	(0.406)	kg	0.150-1.500
BOD_7	0.137	(0.076)	kg	0.150-0.250
Nitrogen (N)	0.0223	(0.0241)	kg	0.050-0.200
Phosporus (P)	0.0027	(0.0017)	kg	0.003-0.010
Process water to recipient	3.728	(3.643)	m^3	3,500-20,000

Energy extraction			
Combustible	1.68	(1.91)	kg
Wood	0.03	(0.04)	kg
Hazardous	0.39	(0.09)	kg

Landfill / Destruction			
Building waste	0,47	(0.21)	kg
Hazardous	0,39	(0.04)	kg
Fiber waste	0,00	(0.00)	kg

Material recycling			
Biosediment	22.2	(21.9)	kg
Metal scrap	2.58	(2.60)	kg
Paper/board	15.91	(14.73)	kg
Plastic	0.08	(0.09)	kg
Inorganic material	0.35	–	kg
Hazardous waste	0.45	(0.54)	kg

Compliance with permit conditions	**Max permit**	**Result 2025**	**Result 2024**	
Production (level net)	200,000	116,090	112,097	tonnes/year
Discharges to water				
Suspended solids	150	107	73	kg/day
COD_{Cr}	450	270	193	kg/day
BOD_7	120	65	36	kg/day
Total Nitrogene (N)	20	10.6	11.5	kg/day
Total Phosphorus (P)	2	1.3	0.8	kg/day
Discharges to air				
Sulphur	90	2.48	2.48	tonnes/year
NO_X	70	**	**	mg/MJ of oil
Dust	1	**	**	g/kg oil
Other conditions				
Noice (night time)	45	45	45	dB(A)
Freshwater from river (process and cooling water)	7,500	4,270	4,241	l/minute

* BAT – Best Available Techniques/EU BREF 2015 (Unintegrated fine paper production) refers to production Net reel machine. Net reel machine shows a figure before deductions for rejects in our post-processing have been made.
** No emissions above the reporting threshold
*** Includes both internal and external emissions to air. Further explanation see page 14.

Biodiversity

GULLMARN
– one of Swedens most studied fjords

The water in Swedens largest genuine sill fjord is divided into several layers from Baltic sea, Kattgatt, Skagerrak, Northern sea and the Atlantic. The depth is home for Twohorn sculpin, Atlantic hookear sculpin and Northern stone crab.

The fjord Gullmarn is Swedens largest fjord. The length is almost 30 km, the width 1–4 km with depths down to 125 meter. Passing the island Bornö the hill Smörkullen rises 134 meter over the sea level. A sill fjord means that it is long, deep and narrow and has a sill at the mouth.

Gullmarn was formed by a fault hollowed out by watercourses and inland ice 560 million years ago. It is the natural border between the 920 million year old red granite in the north and the 1700 million year old area of gnejs in the south.

In 1830 scientists and interested parties were gathered on Kristineberg to discuss and to study the biodiversity of Gullmarn. One of these were the artist Wilhelm von Wright who painted – Fishes in Scandinavia, the zoologist Sven Lovén who is claimed to be the first to ever study the biodiversity of Gullmarn and the ornithologist and conservator Gustaf Kolthoff who publised the book – Nordic Birds.

Three large ocean streams affects the marine life of Gullmarn. This means that we find water from Baltic sea, Kattegatt/ Skagerrak och Northern/Atlantic sea. Due to differences in salinity (content of salt), these water finds their own depths.

With a sill at 40 meters in the mouth of the fjord it causes a unique biology and at the same time a greater vulnerability to pollutants. The depth of 125 meters in Gullmarn has a similar biology and habitat to that of a depth of 300-600 meters in the ocean outside the fjord.

In the depths it is almost complete darkness, cold (4-5 degrees celcius) with high salanity (35 per mille). Here we find creatures like the Twohorn sculpin, Atlantic hookear sculpin and Northern stone crab.

Printed on Munken Lynx 150 g/m²

Significant Environmental Aspects

Gathering Aspects

We have identified the most significant environmental aspects in our business. The environmental assessment is based on a holistic approach, where the entire chain from the production of materials used in our products to the shipment of our products is taken into consideration. The significant environmental aspects can then be a focus of environmental work and form the basis of improvement plans.

The significant environmental aspects are produced by drawing up a list of the various activities in the company together with a description of their environmental aspects and environmental impact. The aspects are reassessed as the business develops and the findings of new research become available.

Selecting Aspects

Our environmental assessment considers the following issues:

- Does the aspect cause a known, significant environmental impact, such as environmental threats identified by the Swedish Environmental Protection Agency, or does it counteract the national environmental targets adopted by the Swedish parliament?
- Does it involve high consumption of scarce raw materials, natural assets or energy?
- Does the environmental aspect involve a chemical that is harmful to the environment?
- Could the environmental aspect cause a serious environmental accident?
- Is the size/volume/content of the environmental aspect significant in terms of the environmental impact.

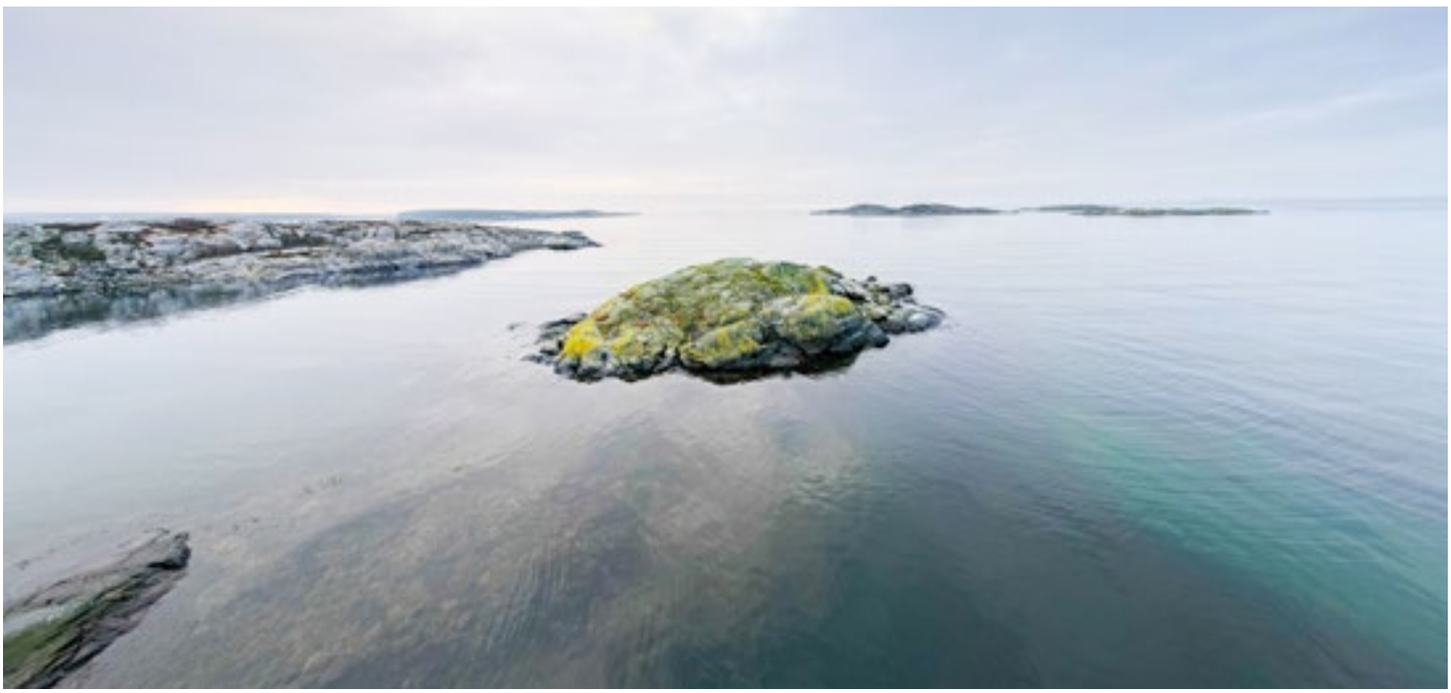
Using this approach, the following significant environmental aspects have been identified

Transport
For delivery of raw materials and finished products. Monitored through environmental impact, transport (page 10). Controlled via routines.

Emissions to air
In connection to steam generation. Monitored through core indicators – emissions to air (page 13). Controlled via routines and targets.

Energy
To equipment in the production. Monitored through core indicators – energy distribution (page12). Controlled via routines and targets.

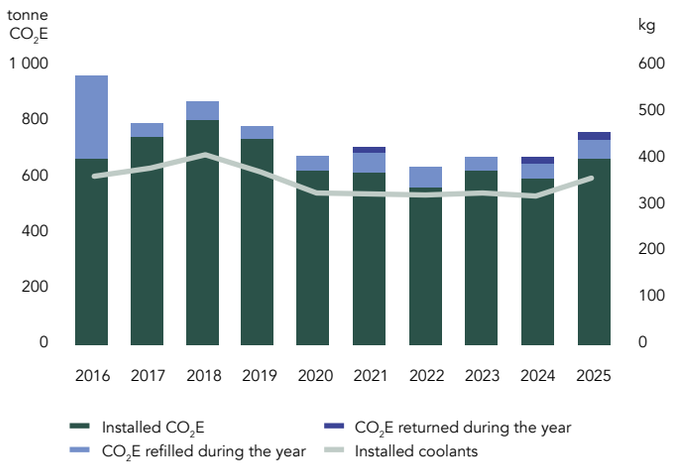
Chemical products
To create the special properties of the paper and keep it clean in the process. Monitored through the core indicator – material efficiency (page 11). Controlled via routines.



Environmental Impact

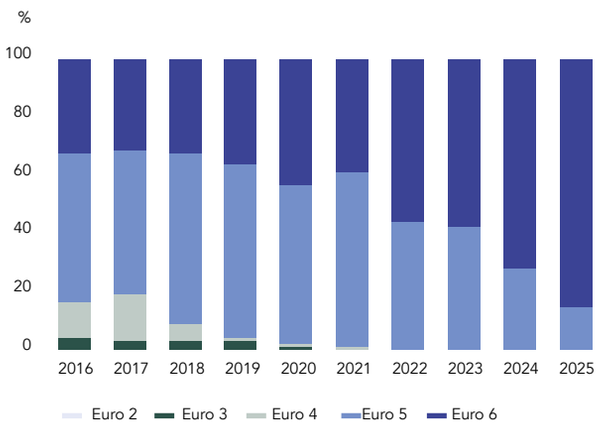
Refrigerant

At Munkedals we have one type of coolant "F gases". The HFCs (incompletely halogenated fluorocarbons) do not affect the ozone layer but have an impact on the greenhouse effect. Coolants are shown in the graph as Carbon Dioxide Equivalents (CO_2E), which are calculated using the Global Warming Potential (GWP) factor for greenhouse gases. The GWP factor indicates how much one kilogram of a greenhouse gas affects the climate compared to one kilogram of carbon dioxide. For comparison, the GWP factor for carbon dioxide is one (1), while the GWP factors of the F-gases vary. It is calculated by multiplying the emission (kg) of a greenhouse gas by the GWP factor of the gas.



Transport Operations

Transport operations cause noise, emissions to air and the consumption of fossil fuels. The environmental impact of transport operations is therefore one of the considerations when we decide which transport carrier to use.
Truck engines are divided into various EURO classes, in which a higher figure represents engines with lower emissions, especially of nitrogen oxides and carbon monoxide. Transport operations are based on transported tonnes.



Printed on Munken Lynx 150 g/m²

Core Indicators

Annual Comparisons

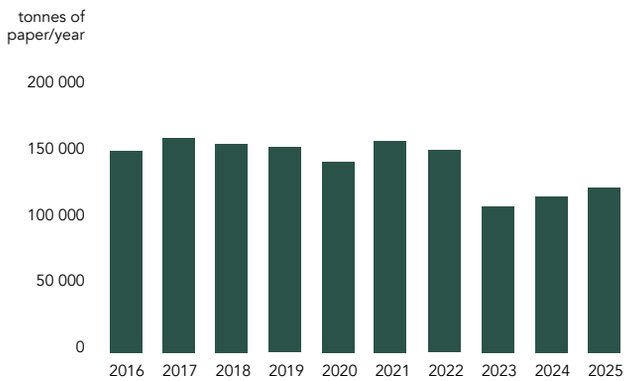
In 2025, paper production increased from 112,097 tonnes to 116,090 tonnes. Internal use of LPG and fuel oil has been completely phased out. In steam production, the energy mix consists of RDF (Refuse-Derived Fuel), LNG (Liquefied Natural Gas), and electricity. RDF is a fuel made from household and industrial waste; it contains a mix of both fossil and non-fossil materials.

In the diagrams for the core indicators Nitrogen Oxide and Carbon Dioxide, the emissions from the purchased steam are also reported as they are directly linked to paper production.

The ongoing collaborative project with the external energy company aims to secure the company's energy needs and, in the long term, reduce its fossil carbon footprint and ease the burden on the national power grid. Throughout most of 2025, our external energy partner's ability to produce steam using a solid-fuel boiler has been utilized to full capacity. Work on operational optimization and further progress regarding fuel for steam production is ongoing.

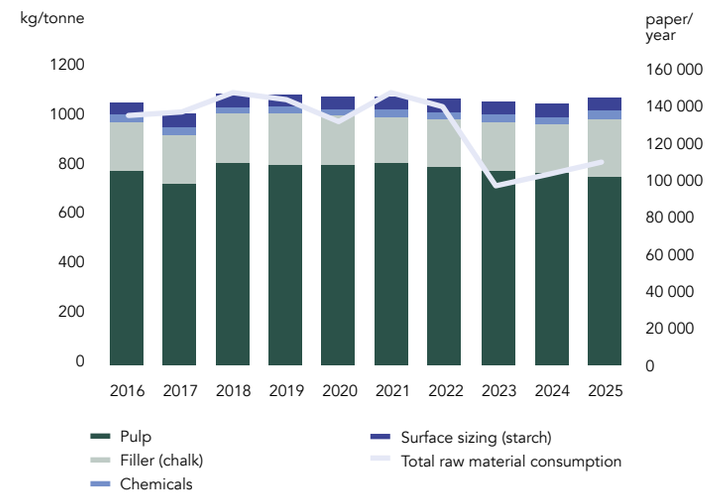
Net Production

The relation to net production of paper is an important aspect when describing the progress of the company's environmental performance. The net production shown in the trend diagram is used to calculate the efficiency of the operational activity with respect to the core indicators.



Material Efficiency

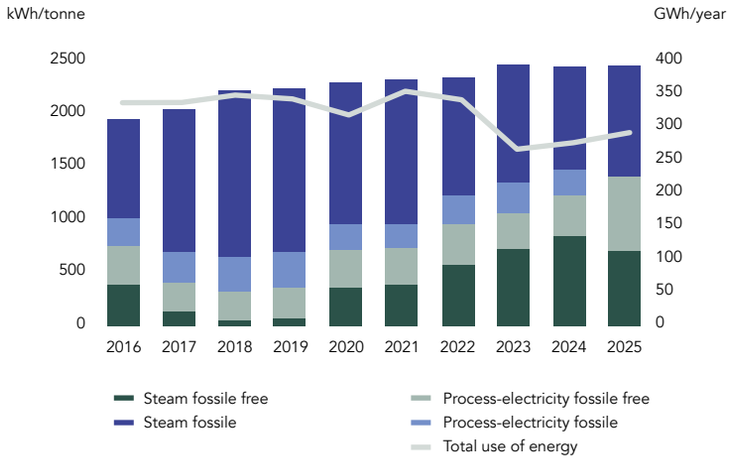
The main raw materials used in paper production are pulp, pigment, starch and auxiliary chemicals. The diagram on the right shows the material balance between raw material and finished product, excluding water.
Raw materials are transported to the mill by sea, road and rail.
For key figures for Raw materials, see page 7.



Core Indicators

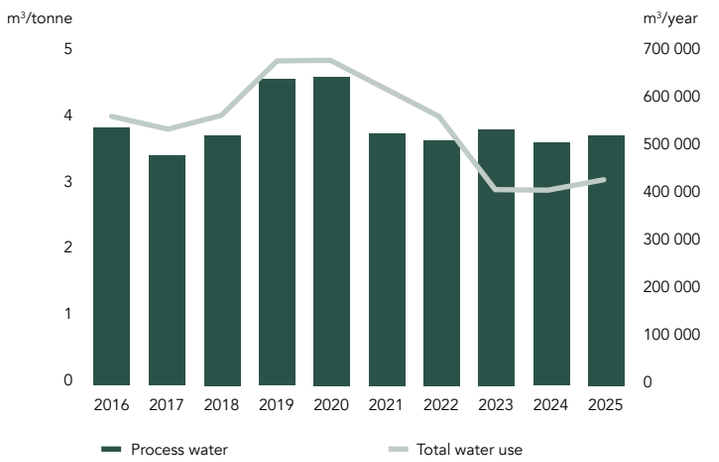
Energy Efficiency

The most energy-intensive processes in the production of paper are the production of steam and the operation of the paper machine's engines, grinders and pumps. The steam is distributed from internal steam boiler (based on LNG or Electricity) or from external solid fuel boiler (purchased steam) to sealed cylinders where the paper is dried. The diagram shows the total energy consumption and the distribution between different types of energy carriers.
From 2025 onwards, nuclear power will be listed as fossil-free.
For key figures for Energy consumption, see page 7.



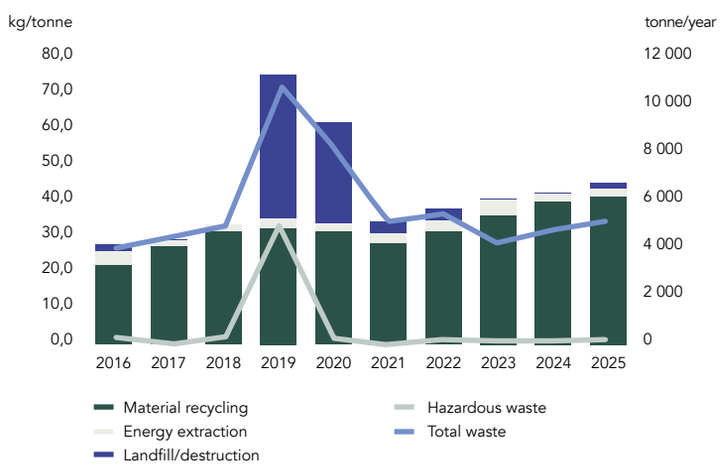
Water Use

When manufacturing paper, water is used to slush the pulp into fibre stock and to transport the fibres to the paper machine's headbox. In the paper machine, the stock is dewatered when the paper is formed. Most of the water is utilised and recirculated in the mill. Water that is not recirculated goes to the mill's water purification plant.The amount of water used is measured as the water leaving the mill after having passed through the water purification plant. In 2019, construction of new hydropower began and the capacity of recirculated water decreased during construction.



Waste

The diagram shows the company's amount of waste in relation to production. Whenever possible, the waste is recycled. Waste that is not suitable for recycling is used for energy recovery or landfill/sent to a treatment plant for destruction. In 2019, land preparation began for the construction of new hydro power plant, the work continued in 2020.
For key figures for Waste, see page 7.

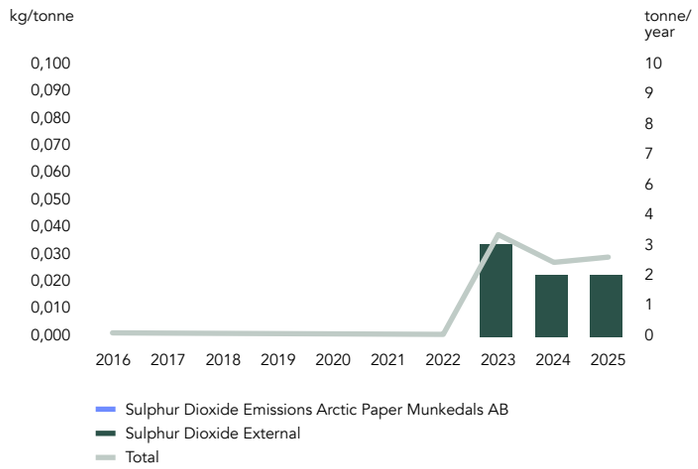


Printed on Munken Lynx 150 g/m²

Core Indicators – Emission to Air

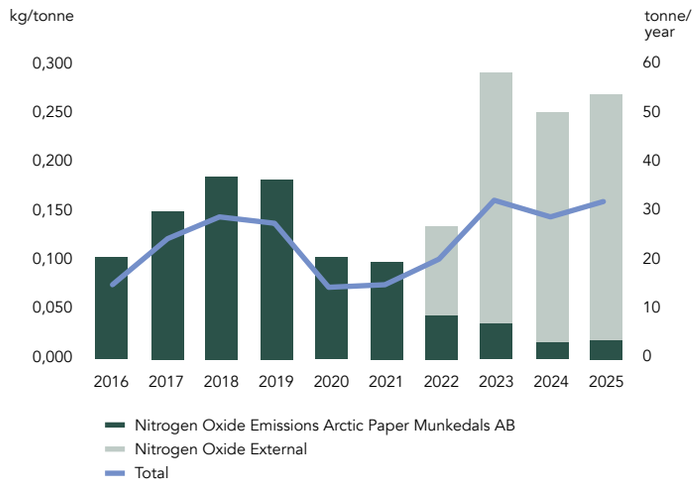
Sulphur Dioxide (SO_2)

Sulphur dioxide is formed during the burning of fuels containing sulphur, such as fossil-based materials like oil or coal. Sulphur dioxide contributes to the acidification of soil and water. The sulphur dioxide figure in the graph is derived from the burning of LNG in an internal boiler (blue) and from the external burning of RDF fuel in an external solid fuel boiler (green). Sulphur dioxide emissions from internal burning of LNG are close to zero.



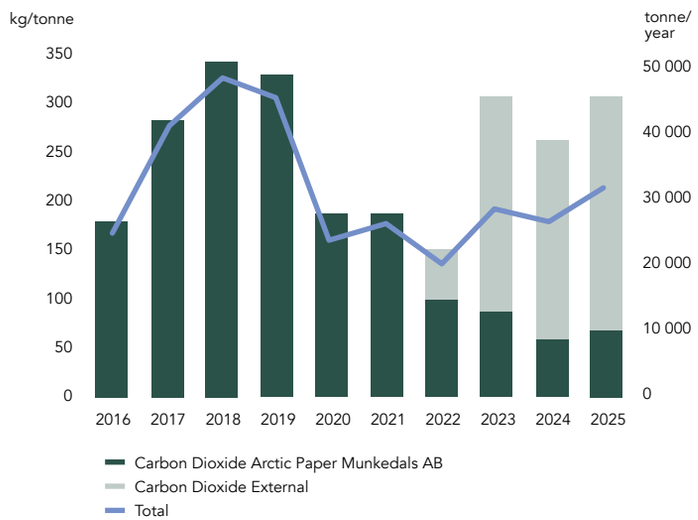
Nitrogen oxides ($NO)_x$

Nitrogen Oxides is a collective term for the nitrogen oxides formed during combustion that can contribute to acidification of soil and water. The nitrogen oxides figure in the graph is derived from the combustion of LNG in the internal boiler (dark green) and from the external combustion of RDF fuel in the external solid fuel boiler (light green). External partner reports external nitrogen oxide emissions and is the owner of it, however, the emissions are linked to paper production and therefore these emissions are also reported in the attached trend graph.



Carbon Dioxide (CO_2) from Fossil fuels

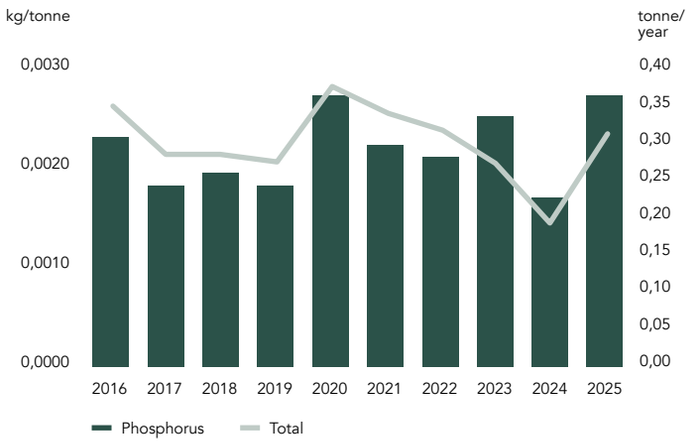
Carbon dioxide is formed by the complete combustion of carbon compounds in oxygen. Fossil fuels are formed by exposing organic compounds such as plants and animals to high pressure, high temperature for a very long time. Burning fossil fuels increases the amount of carbon dioxide in the atmosphere. This is because the carbon that is then added to the atmosphere was previously outside the cycle due to its encapsulation in the Earth's crust. The increase in atmospheric carbon dioxide is one of the causes of global warming.
The carbon dioxide figure in the graph is derived from the combustion of LNG in the internal boiler (dark green) and from external combustion of RDF fuel in external solid fuel boiler (light green). The external partner reports external carbon dioxide emissions and is the owner of it, however, the emissions are linked to paper production and therefore these emissions are also reported in the attached trend graph.



Core Indicators – Emission to Water

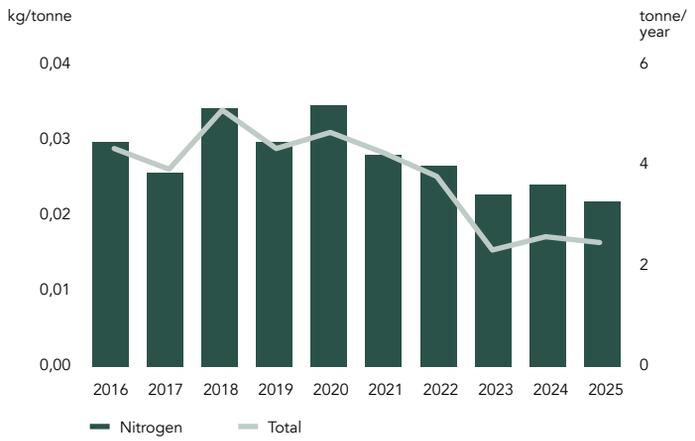
Phosphorus (P)

Phosphorus is an element. High levels of phosphorus compounds can, together with nitrogen compounds and organic substances, result in heightened organic activity in water, which, in turn, can result in watercourses becoming overgrown.



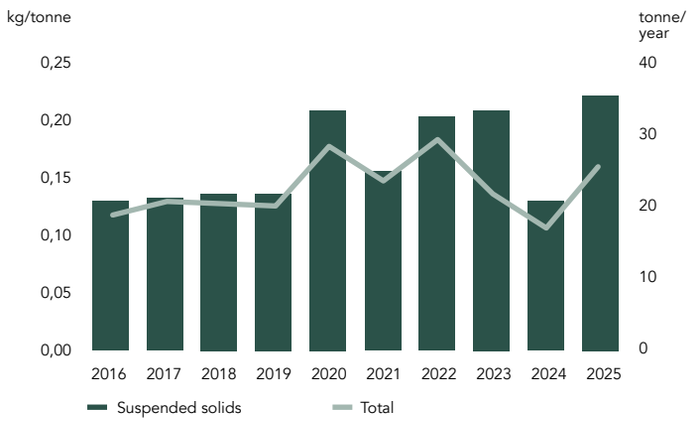
Nitrogen (N)

An element that exists in large amounts as gas in the atmosphere. High levels of nitrogen compounds can, together with phosphorus compounds and organic substances, result in heightened organic activity in water, which, in turn, can result in watercourses becoming overgrown.



Suspended Solids (SS)

Fiber fragments and other solid substances (e.g. chalk) in wastewater are called suspended solids and cause oxygen consumption and shallowing where the discharge takes place.

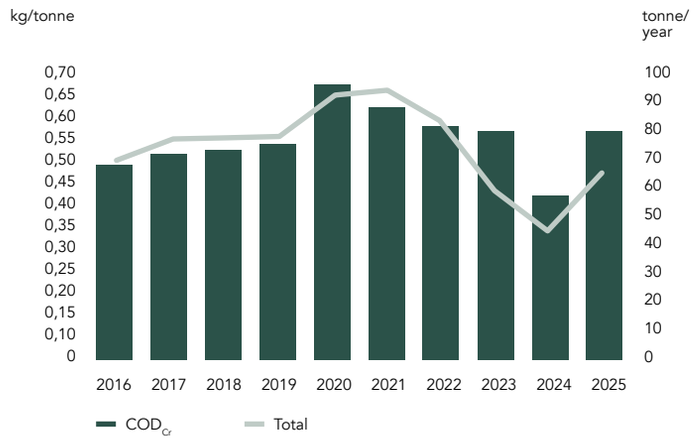


Printed on Munken Lynx 150 g/m²

Core Indicators – Emission to Water

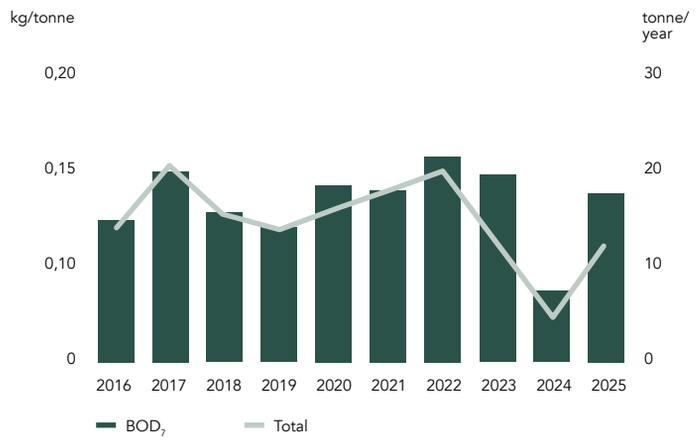
COD_{Cr}

Chemical Oxygen Demand – a measure of the amount of chemically oxygen-consuming substances in water. It is mainly the organic content that consumes oxygen during decomposition.



BOD_7

Biological Oxygen Demand – a measure of the amount of oxygen consumed by microorganisms during the decomposition of organic matter in water over seven days.

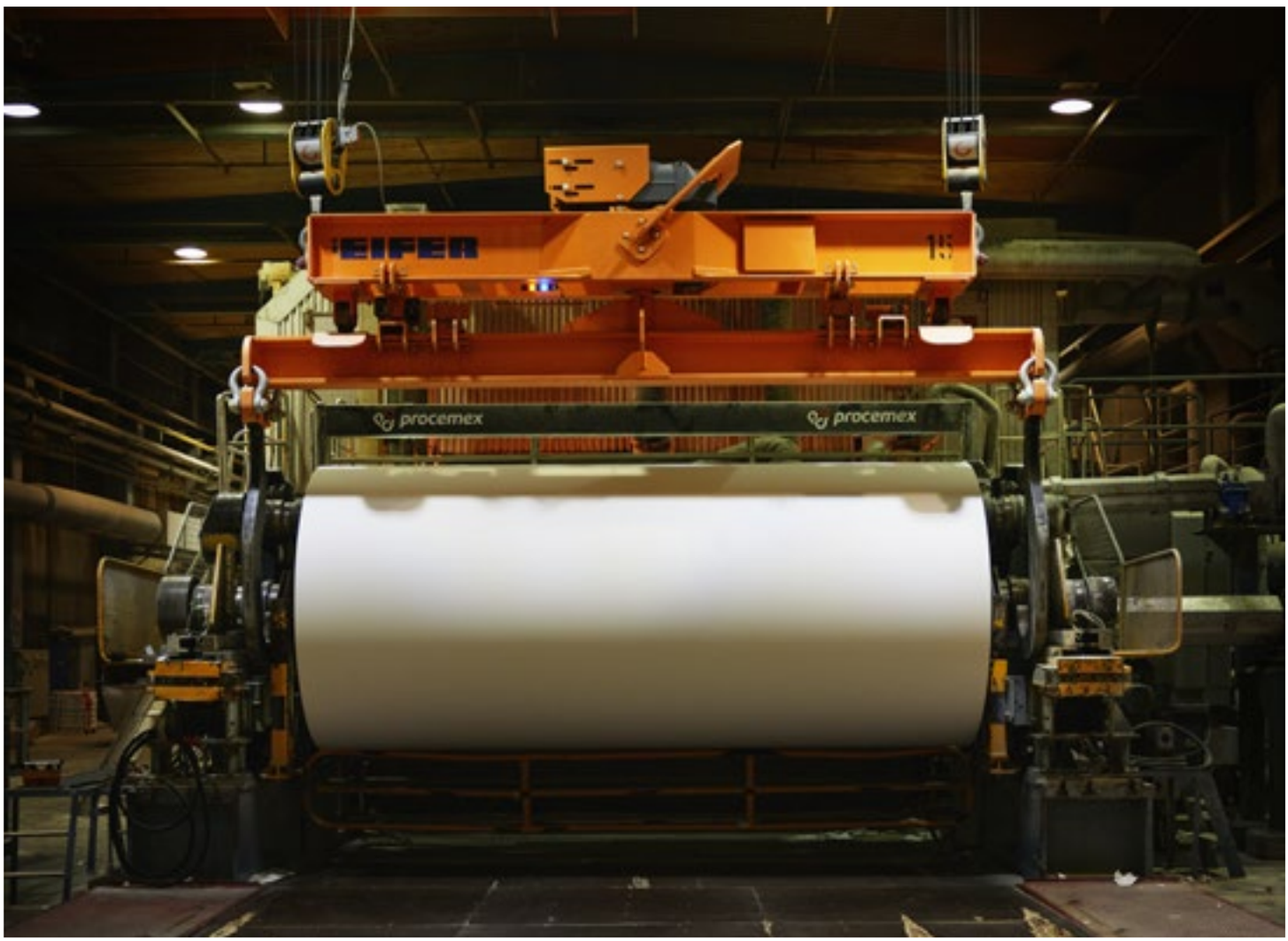


Environmental Targets 2025

Reduce emission to water	
Detailed target:	Smoother raw water treatment and reject to the river.
Action plan:	Installation of new raw water treatment equipment – automatic filter in water treatment.
Result/Status:	Quote received, work in progress and target extended to 2026.

Reduce energy use	
Detailed target:	Reduce energy use through specific measures.
Action plan:	Speed control at least 5 drives, low load stop pulses, optimise hot water use, limit heat dumping, replace fluorescent lamps with LED.
Result/Status:	Work in progress according to plan.

Reduce amount of unsorted waste	
Detailed target:	Reduce the share of combustible waste.
Action plan:	Systematically prevent interruptions and operational errors, implement the concept of visual management boards and improvement actions, and introduce waste sorting for food, packaging, and textiles.
Result/Status:	Goal achieved



Printed on Munken Lynx 150 g/m²

Environmental Targets 2026

Reduce emission to water	
Detailed target:	Smoother raw water treatment and reject to the river.
Action plan:	Installation of new raw water treatment equipment – automatic filter in water treatment.
Result/Status:	Detailed projecting – land investigations, agreements and building permits are in progress.

Reduce energy use	
Detailed target:	Reduce energy use through specific measures.
Action plan:	Speed control at least 5 drives, low load stop pulses, optimise hot water use, limit heat dumping, replace fluorescent lamps with LED.
Result/Status:	Work in progress according to plan.

Reduce noise from operations	
Detailed target:	Reduce noise from the steam system.
Action plan:	Identify and reduce noise on floor 1 and safety valves.
Result/Status:	New target for 2026.

Reduce fossil carbon dioxide emission	
Detailed target:	Increase biogenic mixture by at least 20%.
Action plan:	Gradually switch to more biogenic fuels in the solid fuel boiler.
Result/Status:	New target for 2026.

Reduce fossil carbon dioxide emission	
Detailed target:	Establish basis for technical changes.
Action plan:	Inventory combustion engines powered by fossil fuels.
Result/Status:	New target for 2026.

Environmental Auditor

EMAS
VERIFIED ENVIRONMENTAL MANAGEMENT
S-000248

Bureau Veritas Certification Sverige AB is an environmental verifier accredited by SWEDAC, accreditation number 1236. They have audited Arctic Paper Munkedals AB and confirmed that the company has an environmental management system that meets the requirements of the EMAS Regulation 1221/2009.

Bureau Veritas Certification AB has also reviewed the environmental statement and found it to be accurate and sufficiently detailed to meet the requirements of EMAS.

Angelica Persson
Munkedal, 2026-05-06

Environmental Verifier's Summary
The company is a relatively large facility (320 employees) whose significant environmental aspects are transport, emissions to air, energy and chemical products.

The environmental performance has developed positively in the past year. Examples of this are the ongoing work on more smoother raw water treatment and its reject to the river, which will provide a more stable flow from the mill, as well as the work on reducing the proportion of combustible waste from production through the implementation of systematic prevention and improvement measures.

Results of the 2025 environmental target:
- The target to reduce emissions to water through more even raw water treatment and reject to the river has been partially achieved. The target has been extended to 2026 for completion.
- The target to reduce energy use by 2.5% compared to 2019, the activities for 2025 have been carried out according to the action plan. New activities are planned for 2026.
- The target for reduced amount of combustible waste was achieved in 2025.

New targets for 2026 are:
- To achieve more even raw water treatment and reject to the river.
- To reduce energy use through specific measures.
- Reduce noise from operations.
- Reduce fossil carbon dioxide emissions through the sub-targets "Increase biogenic mixture by at least 20%" and "establish a basis for technical replacements of combustion engines".

Contact at the Mill

For further information and request of environmental statements
Arctic Paper Munkedals AB, SE-455 81 Munkedal
Tel: +46 10 45 180 00
info.munkedals@arcticpaper.com
arcticpaper.com

Arctic Paper Munkedal's Environmental Report is available in Swedish and English as well as in printed and digital form. The next environmental report is expected to be published in spring 2027.

Product Manager
Eva-Lena Petersson
Product Manager, Munken
Tel. +46 10 45 170 10
eva-lena.petersson@arcticpaper.com

Contact persons for environmental issues

Marielle Lissledal
CSR Specialist
Tel. +46 10 45 171 21
marielle.lissledal@arcticpaper.com

Anders Fransson
Environmental Manager
Tel. +46 10 45 171 15
anders.fransson@arcticpaper.com

Mathias Schewenius
Safety & Security Manager
Tel. +46 10 45 172 61
mathias.schewenius@arcticpaper.com

Printed on Munken Lynx 150 g/m²

Glossary

ACCREDITED COMPANY
A company that has been approved by a supervisory authority for example to conduct special analyses and checks on industrial processes.

AOX
Adsorbable Organic Halogens is a measure of the total presence of persistent – organically bound halogens.

BAT
Best Available Techniques is a term used in environmental legislation and is the best available techniques available for operating industrial operations while minimizing environmental impact.

BIOLOGICAL TREATMENT
Decomposition of pollutants in water with the aid of microorganisms.

BLEACHING
A method of increasing for example the pulp's brightness. Bleaching is undertaken using chemical compounds without elementally bound chlorine, ECF, or without any chlorine compounds, TCF.

BOD_7
Biological Oxygen Demand. The amount of oxygen required for natural decomposition of wastewater. BOD is low in relation to COD if remaining substances are hard to decompose and the biological treatments functioning well.

COD_{Cr}
Chemical Oxygen Demand. The amount of oxygen required for chemical decomposition of remaining pollutants in for example wastewater. Cr means that chromate has been used as oxidation agent for the analysis. High values may involve an increased risk of a lack of oxygen in the recipient.

dB(A)
Decibel A, a measure of the amount of sound measured with a filter that takes account of the human ear's sensitivity to various sound frequencies.

EMAS
Eco-Management and Audit Scheme. A voluntary EU decree and requirement document for an environmental management system. EMAS requires, in addition to the fact that ISO 14001 or equivalent is fulfilled, that an official environmental report is compiled. The environmental report is examined and approved by an accredited environmental audit company.

Glossary

HAZARDOUS WASTE
Waste containing pollutants that are directly hazardous to the environment, such as certain chemicals, waste oils, batteries, fluorescent tubes, mercury lamps and electronic scrap.

FINE PAPER
A generic term for graphic paper, writing paper and printing paper, and certain special types of paper.

FSC® CERTIFIED RAW MATERIAL
Raw material with guaranteed origin (Forest Stewardship Council®) which exclude wood produced in conflict with FSC´s 5 paragraphs (illegal lumbering, key biotopes, serious social conflicts, genetically modified wood or nonsustainable forestry).

PEFC CERTIFIED RAW MATERIAL
A certification of forest raw material that utilises the great growth potential of forests while protecting biodiversity.

ISO 14001
An international standard containing specific requirements for an environmental management system. A certificate remains valid for three years on the condition that there is compliance with the certification requirements and the annual audits are conducted and produce a successful result.

CHEMICAL PRECIPITATION
Chemical bonding of pollutants which makes it possible to separate the pollutants from the waste water through sedimentation.

CHEMICAL PULP
A joint term for SULPHATE PULP and SULPHITE PULP, which are manufactured by chemically detaching the wood's fibres from one another.

CARBON DIOXIDE CO_2
A naturally occurring gas formed during the biological decomposition and combustion of organic material. A change in the concentration of carbon dioxide in the atmosphere is likely to lead to temperature variations. The gas is present, along with water, in the exhaled air of mammals and is absorbed by plants, where it is stored as biomass.

CARBON DIOXIDE EQUIVALENTS
Carbon dioxide equivalents (CO_2e) are a way to express the climate impact of a greenhouse gas emission in comparison to the same amount of carbon dioxide (CO_2). By expressing greenhouse gas emissions in carbon dioxide equivalents, it becomes easier to compare the individual contribution of different gases to the greenhouse effect.

NITROGEN OXIDES, NO_x
Gas formed when the nitrogen in combustion air is oxidised at a high combustion temperature. Contributes to acidification and eutrophication.

MECHANICAL PULP
A joint term for pulp which is manufactured by mechanically detaching the wood's fibres from one another.

UNCOATED PAPER
Paper which has been coated with a thin layer of starch, in contrast to coated paper which is coated with a layer consisting of elements including among others clay, chalk, starch and synthetic binding agents.

RECIPIENT
A receiving entity for discharges, such as the sea, a lake, a watercourse or the atmosphere.

GUIDELINE VALUE
A guideline value is a value that, if exceeded, places an obligation on the permit holder to take action to ensure that the value can be met.

SUSPENDED SOLIDS, SS
The volume of solid matter in water that remains in a filter with a mesh of a defined size.

SULPHUR DIOXIDE, SO_2
Formed by the combustion of sulphurous fuels such as gas, coal, oil and oil products. Discharges contribute to the acidification of land and lakes.

EUTROPHICATION
PHOSPHORUS, P, and NITROGEN, N, are elements included in nutrient salts that increase the growth of plankton in water. If the content of the nutrient salts is too high, such growth can be so strong that the oxygen is used up and a shortage of oxygen arises.

LIMIT
A value for discharges from industrial operations that has been set by the environmental authorities and that may not be exceeded.

Printed on Munken Lynx 150 g/m²

ARCTIC PAPER

arcticpaper.com