

# Invercote & Inverform Carbon Footprint & Environmental Declaration 2024

HOLMEN

# Carbon Footprint

Company	Holmen
Site	Iggesunds Bruk
Product	Invercote & Inverform family
Period	2023-01-01 – 2023-12-31

## Carbon Footprint Framework

The Carbon Footprint is calculated according to the guidelines given in the CEPI (Confederation of European Paper Industry) publication “Framework for the development of carbon footprints for paper and board products”. The framework is aligned with the GHG Protocol standard and is available at [www.cepi.org](http://www.cepi.org). The carbon footprint is updated annually and based on figures from the previous year.

## Fossil Carbon emissions

	CO <sub>2</sub> e (kg/tonne board)	Percentage of total
Greenhouse emission from paperboard manufacturing facilities	24	10%
Greenhouse emission associated with purchased electricity	2	1%
Greenhouse emission from producing the wood fibres	23	10%
Greenhouse emission from producing other raw materials	152	66%
Greenhouse emission associated with transportation	31	13%
<b>Carbon Footprint SUM</b>	<b>232</b>	<b>100%</b>

## Biogenic Carbon uptake and storage

Annual carbon storage in Holmen forest	1070 kg CO <sub>2</sub> /tonne board
Carbon stored in paperboard	1494 kg CO <sub>2</sub> /tonne board

INVERCOTE® INVERFORM®

## Explanations and comments to Carbon Footprint calculations

**Greenhouse gas emission from paperboard manufacturing facilities**  
Fossil CO<sub>2</sub>e emissions from combustion of fossil fuels during pulp and paperboard production.

**Greenhouse gas emission associated with purchased electricity**  
Fossil CO<sub>2</sub>e emissions associated with purchased electricity.

**Greenhouse gas emission from producing the wood fibres**  
Emissions from forest management and harvesting.

**Greenhouse gas emission from producing other raw materials**  
Fossil CO<sub>2</sub>e emissions from production of non-wood based raw materials and fuels.

**Greenhouse gas emission - general**  
Emissions outside of own operations consist of a mix of primary data and industry average data and are therefore subject to a degree of uncertainty. We strive to use as much primary data in our calculations as possible and continuously work with our suppliers to secure robust and accurate data. As such, emissions from the value chain will change over time as primary data replaces industry average data.

## Explanations and comments to Biogenic Carbon uptake and storage

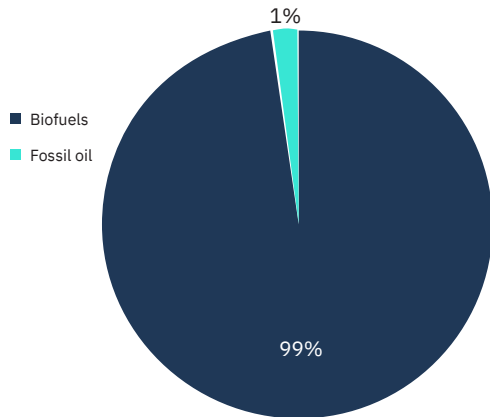
**Annual carbon storage in Holmen forest**  
Growing forests capture carbon. The quoted figure is calculated by dividing the net CO<sub>2</sub> capture in Holmen's own forests by the yearly tonnage produced of all Holmen products.

**Carbon stored in paperboard**  
Biogenic carbon stored in the products.



# Energy

Sources for energy production at Iggesund Mill



# GHG Protocol Reporting

## GHG Protocol reporting – site emissions

	CO <sub>2</sub> e '000 tonne	Percentage of total
Scope 1: Direct GHG emissions	17	19%
Scope 2: Indirect GHG emissions from electricity	1	1%
Scope 3: Other indirect GHG emissions from value chain	75	80%
<b>Greenhouse Gas emissions</b>	<b>93</b>	<b>100%</b>

Sustainability information is reported in accordance with the Global Reporting Directive's GRI Standards 2021 in Holmen's annual report. Iggesund site emissions are a part of the Holmen sustainability information that is audited by PwC.

Scope 3 emissions consist of a mix of primary data and industry average data, and are therefore subject to a greater degree of uncertainty. We strive to use as much primary data in our calculations as possible and continuously work with our suppliers to secure robust and accurate data. As such, Scope 3 emissions will change over time as primary data replaces industry average data.

## Explanations and comments to Energy reporting

The energy produced at the mill is to 99% renewable from biogenic sources. The additional energy in form of electricity is fossil free and comes from renewable sources like hydro power and fossil free sources in form of Nuclear.

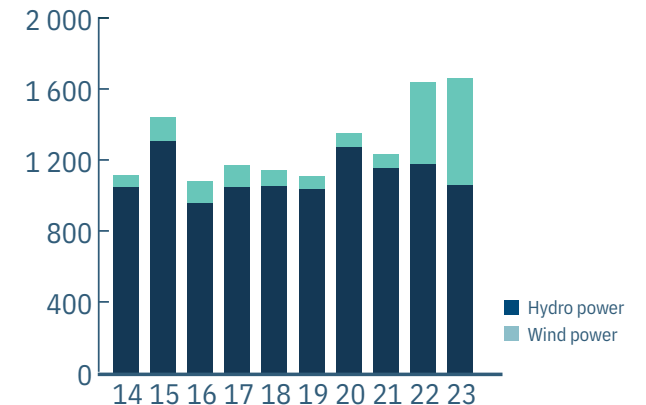
## Explanations and comments to GHG Protocol reporting

Scope 1: Calculated in accordance with the GHG Protocol Corporate Standard and includes the six greenhouse gases covered by the Kyoto Protocol. Our Scope 1 emissions are reported into Swedish authorities.

Scope 2: Calculated in line with market-based methodology, with EPDs (Environmental Product Declaration) from Electricity supplier, Vattenfall, Sweden.

Scope 3: Calculated using primary data when available and industry averages when needed from data bases like Sphera/GaBi and EcoInvent.

## Holmen Group deliveries of hydro and wind power, GWh



Holmens deliveries of energy from own hydro power and wind power contributes to a great extent with renewable electricity to the Swedish Grid.



# Environmental Declaration

Product	Invercote and Inverform, 180-770 gm <sup>2</sup>
Site and company	Iggesunds Bruk, Holmen
Paper type	Invercote and Inverform
Period	2023-01-01 – 2023-12-31

## Product composition

Wood fibre pulp	75%-100% of which 100% produced at site
Coating	0%-25%

## Environmental management

Certified environmental management system	SS-EN ISO 14001 SP-2778 M since 2001 COC for FSC and PEFC since 2007
Certified energy management system	SS 62 77 50 since 2005 and upgraded to ISO 50001 in 2011
Food Safety System Certification	FSSC 22000 since 2021

## Handling after use of the product and its packaging

All our products are intrinsically recyclable and biodegradable. Products can be recoverable as a material or energy resource. For quantification regarding composting tests, should be made on the final packaging after the converting process (EN 13432:2000). The packaging of the product can be recoverable as a material or energy resources.

## Environmental load

Production site process waste water discharges, atmospheric emissions and solid waste per tonne board (total environmental load of the production of board produced at the Site divided by the total production of board).

### Emissions to water

COD	11 kg/t
AOX	0,09 kg/t
Nitrogen	0,18 kg/t
Phosphorus	0,02 kg/t
Water use	60 m <sup>3</sup> /t

### Emissions to air

S (total)	0,10 kg/t
NO <sub>x</sub>	1,49 kg/t
CO <sub>2</sub> e (from fossil sources)	23,9 kg/t

### Waste to landfill

0,14 kg/t
-----------

**Emissions to water** Iggesund Mill is situated on the shores of the Baltic Sea, which is classified as a highly sensitive marine ecosystem. The mill complies with the emissions levels set for it by the Swedish environmental authorities by continually measuring discharged water at several test points. Iggesund constantly monitors the conditions of the marine ecosystems around the mill to ensure that their balance is not disturbed.

**Process water discharge** The Iggesund Mill is geographically located in an area of abundant water supply and there is no shortage of availability. Process water is re-circulated and re-used within the production process a number of times before final discharge to the receiving water, process water is treated in three steps which includes mechanical, biological and chemical treatment, a combination of treatment technologies considered as Best Available Technology.

**COD** Chemical oxygen demand is a measurement of the amount of oxygen consumed in the decomposition of organic compounds. The presence of organic by-products such as bark and wood chips gives rise to a COD value. The Swedish environmental authorities set emission levels based on COD deemed acceptable acceptable to the local conditions and the marine environment adjacent to the mill.

**AOX** Adsorbable organic halogen is formed in the pulp making process. High levels of AOX negatively affect marine organisms. Here, too, limits are set to be acceptable to local conditions and the marine environmental adjacent to the mill.

**Nitrogen and phosphorus** Nitrogen and phosphorus are elements that when present in large amounts contribute to the overfertilisation (eutrophication) of marine environments.

**Emissions to air – S and NO<sub>x</sub>** These normally arise from combustion processes used in the production of energy. They contribute to eutrophication, acidification and the creation of ground-level ozone. All emissions are regulated and monitored by the Swedish licensing authorities.

**CO<sub>2</sub>e (from fossil sources)** Carbon dioxide is an invisible gas that occurs naturally but its increased emissions from fossil fuel use are contributing to global climate change. This figure indicates the emission of fossil CO<sub>2</sub> from the production of Invercote. The figure should not be confused with the far broader concept of carbon footprint, which encompasses much of the product's lifecycle.

# Wood supply and certifications

## Certifications

Mill's environmental certificates:	FSC® TUEV-COC-000232 (Logo license: FSC-C110018) PEFC™ TUEV-PEFC-COC-117551 (Logo license: PEFC/05-33-105)
------------------------------------	---

## Methods

Certification scheme	Method
FSC® Volume credit system	All FSC® certified deliveries contain 100 % certified fibre
PEFC™ Volume credit method	All PEFC™ certified deliveries contain 100 % certified fibre

## Wood supply

All wood used at Iggesund Mill is either certified in accordance with FSC or PEFC or meets FSC requirements for controlled wood. Invercote and Inverform can be supplied certified in accordance with FSC or PEFC. All wood raw material used in the production of Invercote and Inverform is sourced from forests that are replanted with new trees after harvest ensuring that the land remains forested. The production of Invercote and Inverform is to no extent contributing to deforestation.

## Wood sourcing compliance

All fibre sourcing, including Due Diligence requirements, complies with the current UK Timber Regulations and the (Regulation EU No 995/2010). The EUTR will be replaced by EU Deforestation regulation (Regulation EU No 2023/1115) which entered into force on June 29 2023 and will enter into application on December 30 2024.

## Wood sourcing information, Iggesunds bruk

Country of origin	%	Procurement region	Species	Forest owners	Certificates
Sweden	93,5	Central Sweden Region Mitt	Pinus Sylvestris Pinus contorta, Picea abies Betula spp, Populus tremula	Forest companies and private owners	DNV-COC-000004 DNV-FM/COC-000043 2003-SKM-PEFC-006 2015-SKM-PEFC-062
Estonia	2,4	South West region North East region	Pinus Sylvestris Picea abies Betula spp, Populus tremula	State forests and private owners	DNV-CW-000004 SA-COC-007273 DNVSE-PEFC-COC-006
Latvia	3,8	North region North West region	Pinus Sylvestris, Picea abies Betula spp, Populus tremula	State forests and private owners	DNV-CW-000004 SA-COC-007273 DNVSE-PEFC-COC-006
Finland	0,3	East region Österbotten	Pinus Sylvestris, Picea abies	Forest companies and private owners	DNV-COC-000004 DNVSE-PEFC-COC-006

All pulp for the production is produced internally within the Iggesund Mill. All wood procurement for the production of Invercote is handled by Holmen Skog, a sister company in the Holmen Group. The certificates given in the table above belong to Holmen Skog.

## Sustainable forestry

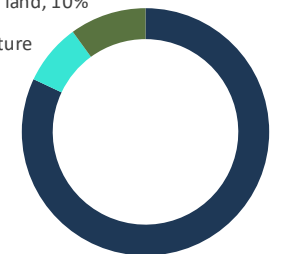
Holmen's forest management practices must be run with the aim of achieving high-volume and sustainable production of forest raw material. The forests are managed responsibly in a way that ensures the long-term survival of native plants and animals in the forest landscape and the protection of biodiversity. All wood are traceable back to its origin.

## Holmen's forests 2023

Total land acreage	13 050 km <sup>2</sup>
Total forest land acreage*	11 610 km <sup>2</sup>
of which nature conservation areas	2 070 km <sup>2</sup>
Productive forest land**	10 460 km <sup>2</sup>

Forested non-productive forest land, 10%

Areas set aside for nature conservation, 8%



Active forestry, 82%

## Contact information:

Jonas Bergström, Sustainability Manager, Sweden.  
jonas.bergstrom@holmen.com

# Certificates and Endorsements



**THE GLOBAL GOALS**  
For Sustainable Development

## CDP

Holmen has reported to the CDP Climate Program since 2007 and to the CDP Forest Program since 2013. The results show that we have a good strategy and management to mitigate negative impacts of climate change.

In the 2023 assessment, Holmen was rated A in the CDP Climate Program and was one of 30 companies to be rated A in the CDP Forest Program.

## EcoVadis

All Holmen's paperboard and paper mills have once more been awarded a Platinum rating by the international analysis company EcoVadis. EcoVadis assesses participating companies' performance with respect to the environment, sustainable purchasing, ethics, workers' rights and human rights. The Platinum rating confirms that Holmen is among the top 1% of companies examined.

## MSCI

ESG Ratings from MSCI ESG Research are designed to measure a company's resilience to financially material environmental, societal and governance (ESG) risks. MSCI's ESG Ratings provide a window into one facet of risk to financial performance. Holmen is ranked as a leader in the paper and forest products industry.

## SBTI

In 2021, Holmen's Group management set the target of reducing greenhouse gas emissions. Figures are compared with 2019 levels and the emissions targets are in line with the UN's climate goals under the Paris Agreement, as confirmed by the UN-backed organisation the Science Based Targets initiative (SBTI).

## The UN's Sustainable Development Goals

We have been building our experience for 400 years and we constantly work to find long-term solutions to current challenges. Thanks to the sustainable use of our forests' ecosystems, today we are able to operate a circular, renewable and bio-based business that benefits our customers, shareholders, employees and local communities. Our production, business and organisation contribute to the UN's Sustainable Development Goals and thus also to the 2030 Agenda.

## UN Global Compact

As members in UN Global Compact, Holmen annually reports on a "Communication on Progress" (COP) that describes how the work with Global Compact's principles for responsible business practice is progressing.

## GRI - Global Reporting Initiative

Holmen has opted to base its sustainability reporting on the reporting option Core in the guidelines for sustainability reporting issued by the Global Reporting Initiative (GRI). Holmen has appointed PwC to conduct a general review of the content in the Group's GRI reporting. The sustainability report is presented in Holmen's Annual report. A complete GRI register and auditors' report can be found on Holmen.com.

## Nasdaq ESG Transparency Partner

Holmen has been certified as a Nasdaq ESG Transparency Partner 2023. The certification is used by Nasdaq to signal engagement in market transparency and in raising environmental standards. The Nasdaq ESG Matrix includes data points from Environmental, Social, Corporate Governance as well as Future Sustainability Goals all of which Holmen considers in its operation.







**HOLMEN**

[iggesund.com](http://iggesund.com)