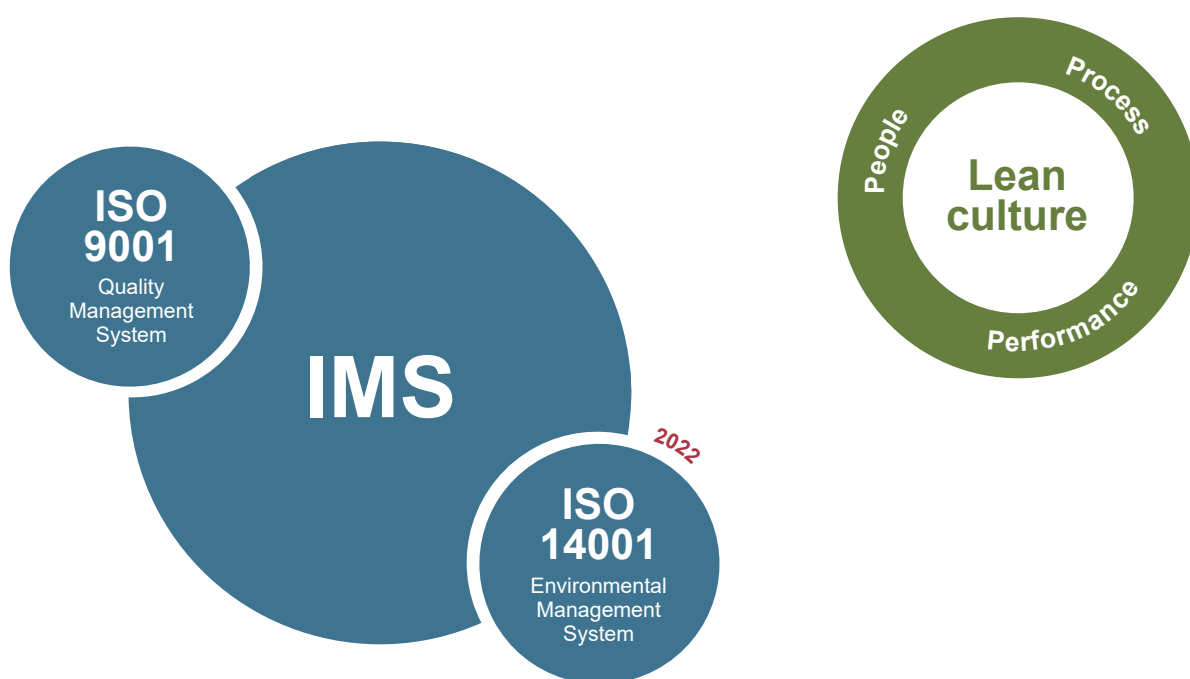




Livonia^{print}a

Environmental
Sustainability
Report 2022

Livonia Print in 2022



TOP



Is number 119
in the TOP 500
company list
in Latvia



We worked with
618 customers
from 23 countries



We processed
14324 orders

We produced
58,7 million
cps of books



Dear All,

As a company producing books, we understand that the printing and publishing industries have a significant impact on the environment. Therefore, we have made it our mission to integrate sustainability into every aspect of our business operations. Having worked for almost 3 years under the Covid-19 restrictions and lived through a year of full-scale war in Europe, it is time to look back and assess our performance to become more sustainable in all our activities.

2022 was an extremely challenging year for all European publishing and printing companies – disruptions in supply chains, long delivery times of materials, energy price increases in combination with volume orders from our clients. But even if we did not always have the option to choose the materials with the lowest CO₂ emissions, we continued sourcing paper from responsibly managed forests and working only with suppliers who share our commitment to sustainability.

Already in 2021 we got certified for ISO 9001: 2015 – quality management system and along with it we started working on implementation of Lean philosophy in the company. In 2022 it seemed like a logic step forward to integrate ISO 14001: 2015 as the basis to enhance our environmental performance and reach our environmental targets in a systematic manner. Thus, in June 2022 we got certified for ISO 14001. As this certification is a constant reminder of everyone's responsibility for the protection of the environment, our task was to try to combine the ISO standards with LEAN methods (such as 5S) engaging our employees to prevent pollution, reduce waste and improve resource consumption thus becoming more efficient in every process of our daily operations.

Our employees have not only accepted the introduced changes – they have supported the idea of continuous improvement – the foundation for LEAN thinking – and come up with their initiatives, e.g. – collecting FSC certified paper waste, asking for additional training sessions, reporting on non-compliances etc.

In this report you will see our targets and achievements but let me assure you we will continue exploring new ways to reduce our environmental impact and save resources. Only by working together with our employees, customers, and suppliers, we can build a more sustainable future for our planet.

Yours sincerely
Janina Bluma
Deputy Managing Director

Environmental targets set forth for the year 2022

Implement Environmental
Management System
standard ISO 14001:
2015

Reduce electricity
consumption by
5% (kWh/ ton of
production)

Establish a process that
allows passing on the
FSC-certified waste paper
as secondary raw material

Integrated management system

An integrated management system is a tool for companies to consolidate various management systems into a single comprehensive framework and process.

One of our goals for 2022 was to implement the Environmental Management System ISO 14001: 2015 by integrating it into our already existing Quality Management System ISO 9001: 2015.

ISO 14001: 2015



In 2022 Livonia Print was audited and found to comply with ISO 9001 and ISO 14001 integrated management systems. To obtain the integrated certification, we demonstrated that we have implemented both quality and environmental management systems which meet the requirements of the standards and that we are continually improving our environmental performance while manufacturing products that meet our customers' demands.



During the certificate renewal process in 2022, we had an opportunity to get even more materials approved for use in EU Ecolabelled books. EU Ecolabel is a voluntary label that is awarded to products that meet strict environmental criteria taking into account the entire lifecycle of the product, from raw material extraction to disposal. Livonia Print is certified under a product group "Printed paper, stationery and paper carrier bags".

Environmental certificates are a way for Livonia Print to demonstrate our commitment to reducing its impact on the environment

	2021	2022
Total projects	14215	14324
Green book projects	11023	11732
%	77 %	82 %

You can find all our certificates on Livonia Print homepage

www.livoniaprint.lv



Use of electricity

To reach our sustainability goals, we closely follow our electricity consumption and sources of used energy.

Already in March 2021, we switched over to renewable sources. Despite electricity prices increasing throughout 2022, this crisis didn't stop us, and for the whole year, we continued using 100% green electricity.

In addition to renewable electricity use, Livonia Print constantly works on keeping energy consumption as low as possible. Due to our efficient machinery, in 2022 we consumed 0,5% less electricity than in 2021, although we produced over 10 million more books which resulted in decreasing energy consumption per ton of produced books:

	2021	2022
Consumed kWh	11 950 932	11 887 963
kWh/average book	0,252	0,203 19,5% ↓

Powering a sustainable future!



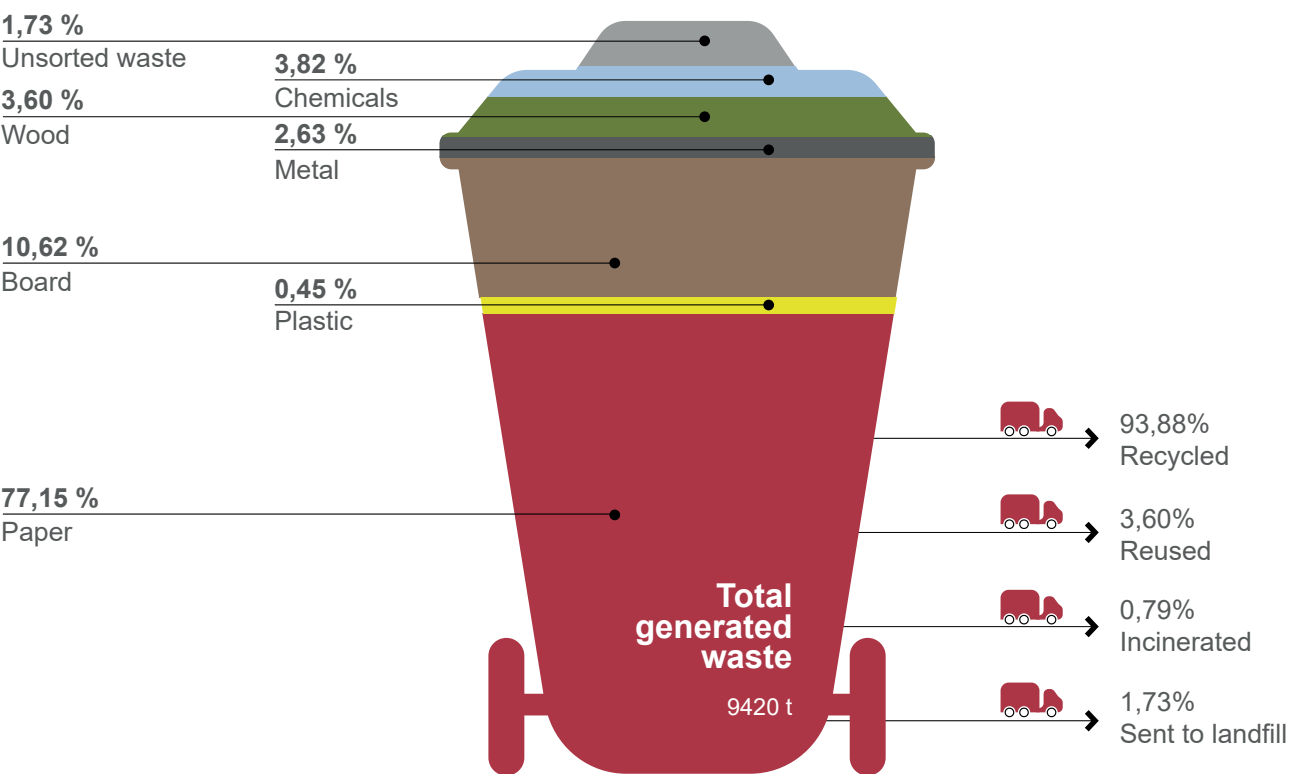
GREEN
ENERGY

Waste management

In Livonia Print, different kinds of waste are generated from various sources, including waste paper, chemical and household waste, which, if not managed properly, can cause environmental pollution, health risks, and resource depletion.

We strictly hold on to the principles of circular economy to keep resources in use for as long as possible, minimize waste, and reduce environmental impacts. An essential

element of the circular economy is resource recovery and recycling. This involves collecting and processing materials such as metals, plastics and paper into new products, thus extending their lifespan and minimizing waste that ends up in oceans and landfills.

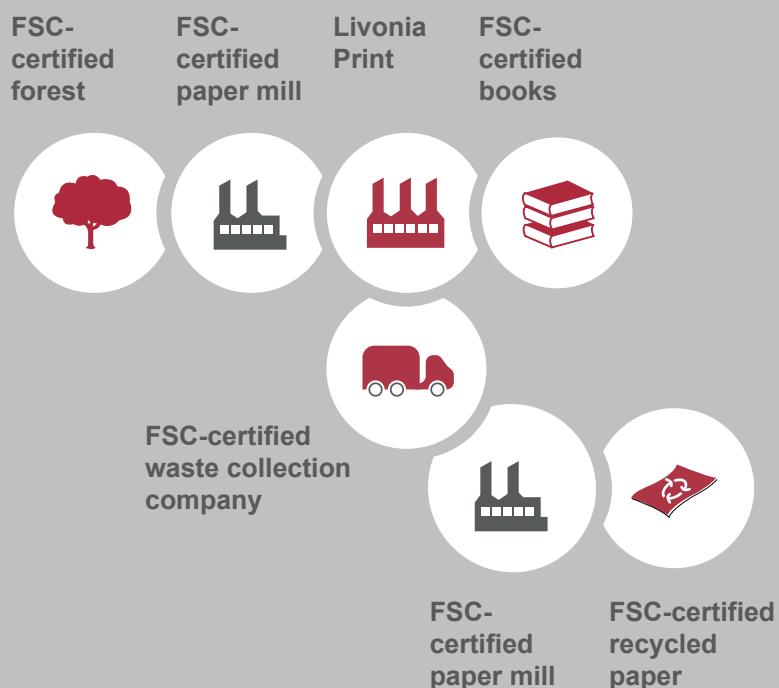


In 2022 we generated 9420 tons of waste, which is a 0,36% increase compared to 2021. However, 97,5% of the generated waste was recycled or reused and only 2,5% - incinerated or sent to the landfill. Compared to the results of 2021, we have increased the proportion of recycled and reused waste by 1,2%.

Waste management

	2021	2022	
Waste recycled from the total	93,65 %	93,88 %	Increase
Waste reused from the total	2,65 %	3,60%	Increase
Waste incinerated from the total	0,97 %	0,79 %	Decrease
Waste in the landfill from the total	2,73 %	1,73 %	Decrease

On the production site, every employee of Livonia Print diligently follows the waste management system, which was developed with every manufacturing process in mind. Such a high quality of waste sorting allows us to have more than 97% of generated waste recycled and reused and to achieve another target set for 2022 - have 100% of FSC-certified waste paper collected. This way, as an FSC-certified company, Livonia Print can ensure traceability within the supply chain and pass on the FSC-certified waste paper as a resource for other certified companies to manufacture goods such as printer and copy paper, tissues, paper towels, greyboard boxes, egg cartons and many more.



How do you save resources on a daily basis?

We asked our colleagues if and how their routines regarding saving resources changed in 2022. Here is the summary of what they had to say:



Switch to solar panels and replace all light bulbs with ergonomic ones. Keep up with the price of electricity in the stock and plan the work of powerful electrical appliances during the "cheap hours".



My routine has not changed much, because I was already paying attention to resource consumption before the crisis.



I started covering short distances on foot and slightly reducing the temperature indoors. I always turn off lights and electrical appliances, even if I leave the room for a short time.



When I temporarily stop working at the computer, I turn off the computer screen using the "sleep" or "lock" function. When heating the water in the kettle, I ask if anyone else needs water (for tea or coffee) so that the kettle is only heated once.



Lately I have been using more candles instead of switching on the light, especially in the evenings. I always unplug chargers and other devices that I don't use at that moment.



I stopped using the hairdryer and also the laundry dryer as often. I also put lights with motion sensors in the rooms that I don't stay in as frequently.

Packaging

We have improved our packaging to be more environmentally friendly



Individual product packaging

Shrink wrapping foil we use is made from **30 % recycled polymer material**



Books in boxes

On request FSC certified boxes are available



Books loose on pallets

More than 99,9 % of pallets used in the company are made of wood. All pallets are re-used or recycled in Latvia.

	2021	2022
Total number of pallets	55 308	57 952
Total netto weight	25 137 t	26 162 t

We have also implemented more sustainable solutions for pallet wrapping. In 2022 we decreased the amount of plastic wrap per one pallet from 1 kg to 0,75 kg of 30 % recycled polymer material.

In our pursuit of greater efficiency, we have increased the number of pallets delivered loaded onto a smaller number of trucks.

Transportation

We acknowledge the importance of transporting books to customers in an environmentally friendly way in order to reduce CO₂ emissions



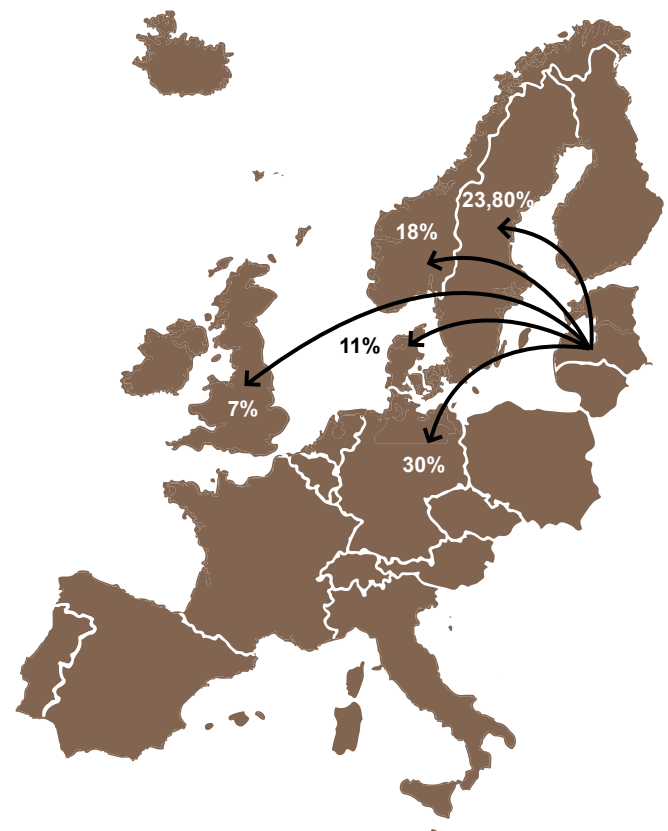
We organize full truck deliveries only



No low tonnage trucks

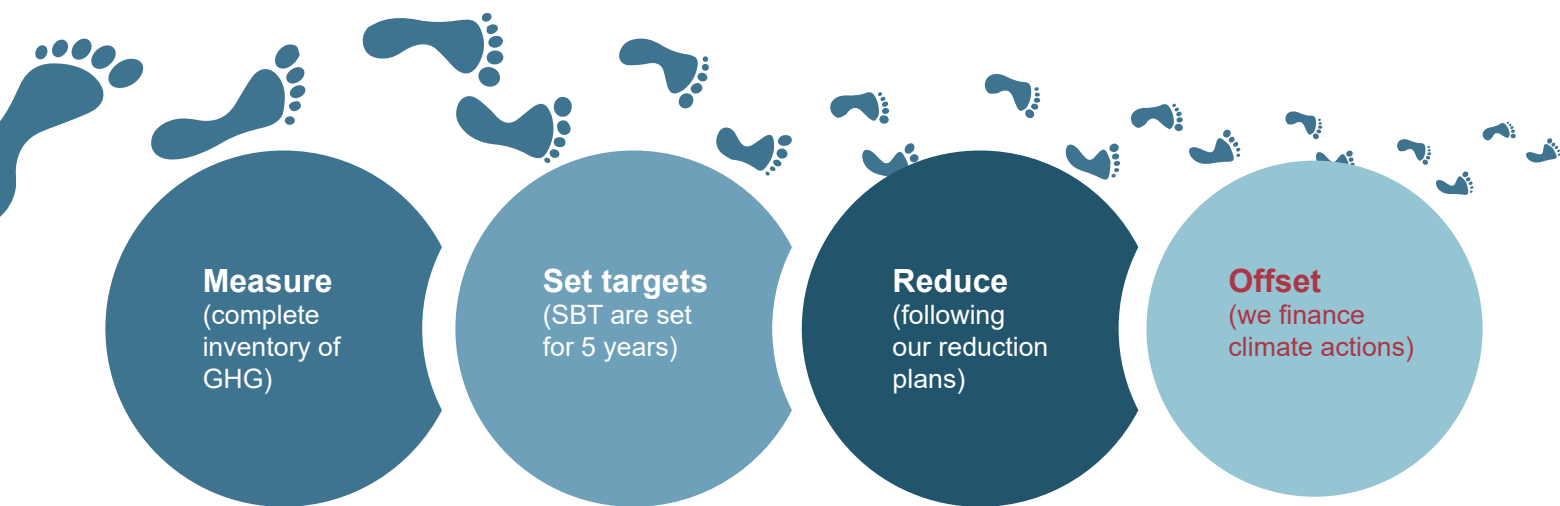
Livonia Print is committed to organizing full truck deliveries whenever possible and combining different customers' orders with deliveries to the same warehouse while avoiding air cargo deliveries.

We are happy to announce that in 2022, all books transported from Livonia Print were loaded in trucks with a load weight category **bigger than 16 t**.

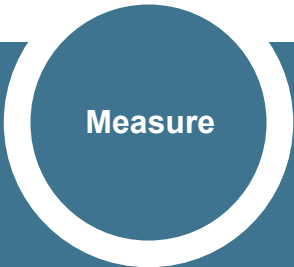


Top 5 countries to which we export our products

Our Climate journey

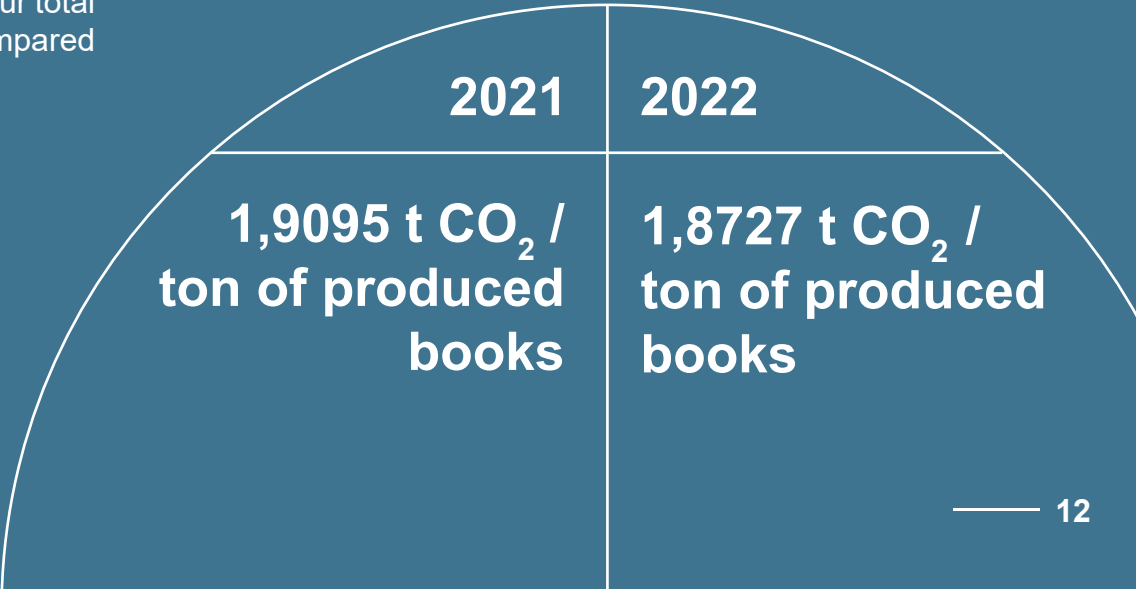


Livonia Print carbon account for 01.01.2022.-31.12.2022, calculated by ClimateCalc



Based on ClimateCalc emission calculation, in the accounting period 01.01.2022.-31.12.2022. our total CO₂ eq emissions from all activities were 48 695 t CO₂ eq. We have decreased our total emissions by 2,1 % compared with the previous year.

We also have managed to decrease our emissions per ton of produced books by 1,93 %



ClimateCalc is a tool based on the European graphic standard for carbon calculation defined by the European trade association Intergraf.

ClimateCalc is designed to provide exact information on the climate impact of the individual graphic product in a life cycle perspective.

Livonia Print carbon account for 01.01.2022. - 31.12.2022, calculated by ClimateCalc

Actual results calculated
by SouthPole.

Company:	LIVONIA PRINT	Accounting period:	01-01-2022 - 31-12-2022
Address:	Jurkalnes iela 15/25	Basic year:	2018
City:	LV-1046 RIGA	Responsible for the account:	Ilze LIEPINA
Country:	LATVIA	Certificate number:	CC-000090/LV
The account includes:	Sheetfed/ Web heatset/ Digital Printing		

Total quantity of delivered printed matters:	27844 t	Waste paper:	23%
Total emissions of greenhouse gases (Scope 1+2+3):	48695 t CO₂ eq	Key figures:	1749 kg CO₂ eq/t
Total energy consumption (Scope 1+2):	68093 GJ	Key figures:	2446 MJ/t

Emissions from activities	Company related	Product related	Total emissions	
Burning of fuel in stationary burning units at the company	1363 t CO ₂ eq		1363 t CO ₂ eq	3%
Burning of fuel in own or leased vehicles	30 t CO ₂ eq	5	35 t CO ₂ eq	0%
Direct emissions (Scope 1)	1392 t CO₂ eq	5 t CO₂ eq	1398 t CO₂ eq	3%
Purchase of electricity	2123 t CO ₂ eq		2123 t CO ₂ eq	4%
Purchase of district heating	0 t CO ₂ eq		0 t CO ₂ eq	0%
Energy indirect emissions (Scope 2)	2123 t CO₂ eq		2123 t CO₂ eq	4%
Production of paper and other substrate		25812 t CO ₂ eq	25812 t CO ₂ eq	53%
Transportation of paper and other substrate (incl. upstream)		3553 t CO ₂ eq	3553 t CO ₂ eq	7%
Production of printing ink and varnish		1004 t CO ₂ eq	1004 t CO ₂ eq	2%
Production of PE- and cardboard packing		202 t CO ₂ eq	202 t CO ₂ eq	0%
Transportation of products to and from subsupplier		0 t CO ₂ eq	0 t CO ₂ eq	0%
Transportation of products to the customer		11098 t CO ₂ eq	11098 t CO ₂ eq	23%
Production of fountain solution and cleaning agents	62 t CO ₂ eq		62 t CO ₂ eq	0%
Production of plates and cylinders	2731 t CO ₂ eq		2731 t CO ₂ eq	6%
Employee's commuting to and from work (incl. upstream)	379 t CO ₂ eq		379 t CO ₂ eq	1%
Emissions from production of purchased fuel	333 t CO ₂ eq	1 t CO ₂ eq	334 t CO ₂ eq	1%
Other indirect emissions (Scope 3)	3504 t CO₂ eq	41671 t CO₂ eq	45175 t CO₂ eq	93%
Total (Scope 1+ 2+3)	7019 t CO₂ eq	41676 t CO₂ eq	48695 t CO₂ eq	100%

In 2022 we had more than 350 CO₂ calculation requests from our customers for their specific book projects and part of them have been compensated

Climate targets to be achieved by 2025



In 2020 Livonia Print has set ambitious climate targets in compliance with Science-Based-Targets (SBT):

Target 1: To reduce absolute Scope 1 and 2 GHG (greenhouse gas) emissions by **21 % by 2025** from a 2020 base year (ambitious 1,5°C scenario)

Target 2: To reduce Scope 3 GHG emissions by **30,4%** per ton of produced books **till 2025**, from a 2020 base year (7% year-on-year reduction of the physical intensity target in line with a "well below 2-degree" pathway)



In 2022 – we have already reached and overfilled the Target 1 set for 2025

A time plan and estimated reduction volume in tCO₂e for Target 1

	base year 2020	2021	2022	2023	2024	2025
Target 1: To reduce absolute Scope 1 and 2 GHG emissions by 21 % by 2025 from a 2020 base year	4518,2 tCO ₂ e	4328,4 tCO ₂ e	4138,7 tCO ₂ e	3948,9 tCO ₂ e	3759,1 tCO ₂ e	3569,4 tCO ₂ e
Actual Results	4518,2 tCO ₂ e	2178,5 tCO ₂ e	1681,2 tCO ₂ e			

Emission Reduction plans and actions



We are continuously working to reduce not only our direct GHG emissions (Scope 1) and indirect GHG emissions from purchased electricity, heating and cooling (Scope 2), but also other indirect GHG emissions (Scope 3) to fulfill our Target 2

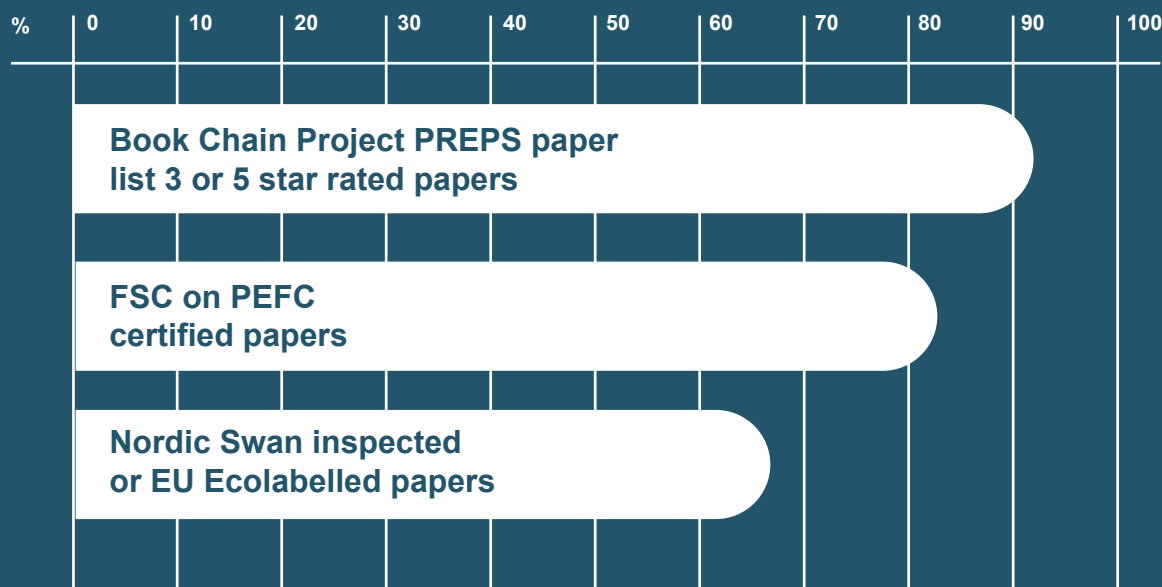
Since Scope 3 emissions make up **93 %** of our total emissions, and more than half of it is from paper (production and transport), one of our main goals is to decrease emissions from paper related activities. Here are a few actions we are taking to approach our goals:

Evaluate each new supplier to ensure we use not only materials compliant with legislation, Nordic Swan, EU Ecolabel, FCS and PEFC requirements, but also papers with lower GHG emission intensity and chemicals for printing and binding processes that are less harmful to the environment

We offer our clients paper alternatives with lower CO₂ emissions and encourage our customers to choose environmentally friendly papers

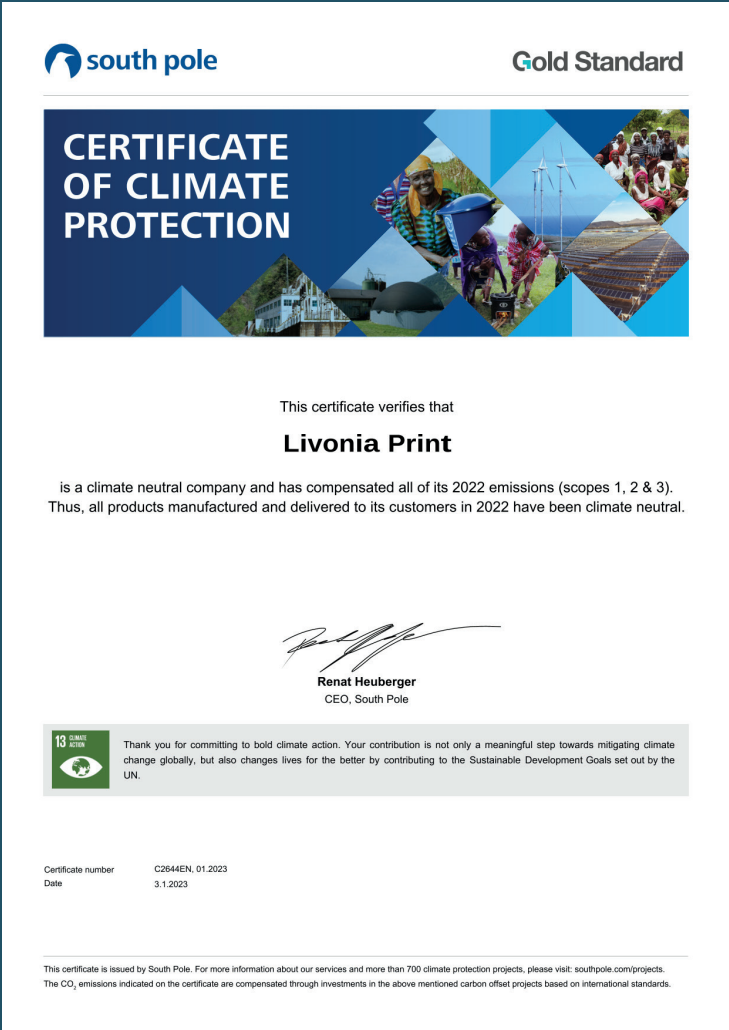
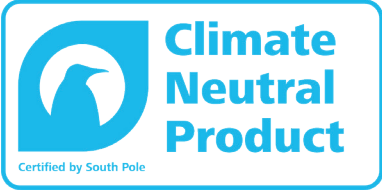
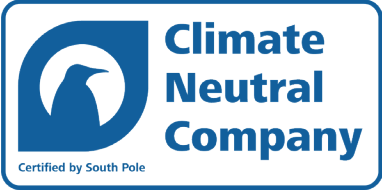
When purchasing papers, we make informed buying decisions, choosing FSC-certified and PEFC-certified papers, papers that are rated with 3 or 5 stars in the Book Chain Project list and papers that are EU Ecolabeled or Nordic Swan inspected

Percentage of paper purchased in 2022:



By Book Chain project star rating and environmental certification

Climate Neutral Company and Climate Neutral product



Book life cycle from cradle-to-grave considers impacts at each stage of a book's life-cycle – from the forest, paper production in mill through each stage of manufacturing, transportation, product use, till disposal.

In 2022 Livonia Print took a big step and became a Climate Neutral Company in line with the standard PAS 2060 offsetting emissions from all three Scopes as well as transport emissions to the retailer and end-of-life treatment emissions of sold products. We have compensated all the emissions from cradle-to-grave that were generated producing all books in 2022.

Projects for emission offsetting



Offsetting all our emissions, we review offsetting projects once a year and select those projects that meet our requirements. We invest in certified and third-party verified emission reduction projects in cooperation with South Pole.

Srepok 1 solar power project combats the use of fossil fuels by installing a solar energy plant in Vietnam. With the help of 151,500 solar panels, the plant generates over 75,000 MWh of clean energy which is directly sent to the national grid. This project reduces Vietnam's reliance on carbon-intensive energy sources, displacing fossil fuels and reducing harmful greenhouse gas emissions.

Nam Nga 2 hydropower project is located on main stream of Nam Nga River, Lao PDR. The installed capacity of the project is 14,5 MW, with the annually 62,59 GWh power supplied to the power grid.

The electricity supply in Lao PDR's falls in short compared to the increased electricity demand. The project is expected to reduction of CO2 emissions by an estimated 35,019 tCO2e per year during the first crediting period.

The two projects we have chosen to invest in 2023:

	Srepok 1 Solar Power project in Vietnam <small>Verified Carbon Standard</small>	Nam Nga 2 Hydropower project in Laos <small>Gold Standard</small>
Crediting Period	2019 - 2029	2016 - 2023
Project Operation	2019 - 2044	2014 - 2039
Total reduced tonnes of CO2 over crediting period	642 000	245 000
Livonia's Print part of CO2 emission reduction in 2023	25 050	37 950



Books for children

NEW

In the year 2022, Livonia Print launched a new production line for board books for children aged 0-36 month.



When it comes to books intended for young children below the age of three – such book production is subject to the same requirements as toy production and is covered by the Toy Safety Directive. These books are marked with the CE mark.



While developing this new product line, we paid particular attention to used materials to ensure that the end product is not only environmentally friendly and sustainable, but also age-appropriate and easy to use for children. We will continue testing the books and monitoring and improving our production process to ensure that we meet and exceed safety standards.

When a book
becomes a toy...

Our sustainability goals for 2023

Cooperation with suppliers that provide certified, environmentally friendly materials with lower CO ₂ emissions	Promotion of employees' understanding of the importance of environmental protection and increase of employees' knowledge of the impact of environmental factors at the workplace	
Reduction of total electricity consumption by 5% compared to 2022	Reduction of the company's emissions by 8% (tCO ₂ e per ton of production) and offset the remaining emissions so that the company continues to be climate neutral	Realization of the heat recovery project

Livonia Print sustainability goals to be achieved by 2025, 2020 taken as base year

Waste	Unsorted waste amount reduction 20% ↓
Recycling	Recyclable waste amount 10% ↑
Water	Water consumption 25% ↓
GHG's	Absolute Scope 1 and 2 GHG emissions 21% ↓ Scope 3 GHG emissions per ton of produced books 30,4% ↓
Energy	Energy consumption per ton of produced books 10% ↓

April 28, 2023. Report made by: SIA "Livonia Print"
Environmental Managers
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www.livoniaprint.lv