ENVIRONMENTAL REPORT

OF PRINTING COMPANY *Ecoprint*

2012

Environmental labels and certificates

FSC
www.fsc.org
FSC® C092678
The mark of responsible forestry

PEFC
PEFC/19-31-04
Promoting Sustainable Forest Management
www.pefc.org

441 799
Ecoprint

green print
Printed by environmentally friendly printinghouse Ecoprint

ISO 9001
ISO 14001
BUREAU VERITAS
Certification

EMAS
Verified environmental management
REG.NO. EE- 000003

Dear reader,

The year 2012 was symbolic for Ecoprint – 10 years had passed from preparing the first environmental statement and launching Green Print.

During these 10 years, timeline has accommodated many events, including moving, merging companies, better and worse times. We have been credited recognition in both Estonia and Europe, and the company has been considered worthy of several international certificates and standards.

We are most pleased that numerous long-term partners of Ecoprint celebrated the 10th anniversary of Green Print with us last spring. Thanks to their generous contributions, the Palupõhja nature school was able to acquire outdoor learning materials. We hope that by doing this, we have brought the joy of discovery and action to many little and big nature friends.

This report shall present yet another insight to our environmental activities and results. This time, we must admit that some indicators show an increase in negative environmental impact due to the consistent growth of the company. Earlier investments in environmental technology cannot balance the increase in demand for resources, wherefore we must actively seek new opportunities to neutralise (hedge) the negative environmental impact caused by the growth trend. Our goal is that economic growth needs to outpace the growth of the ecological footprint.

We are pleased that we have been able to benefit to raising environmental awareness by participating in various workshops and training courses, and that our company has been a resource base for several researches. Once again, we hold the responsible business title, awarded by the Responsible Business Forum (http://www.csr.ee/).

What are our plans for 2013?

First and foremost, we find it important to keep the negative environmental impact caused by economic growth under control. We shall make in-house communication in the areas of demand for resources and generation of waste more effective, and seek solutions for optimising transportation.

We shall continue enhancing the working environment, sharing our experience and know-how, as well as receiving students and pupils.

We shall contribute to community development. We have started collaborating with the Tartu rural municipality, providing its nursery schools and schools with paper and cardboard left over from production for drawing and handicraft. Skilful appreciators of paper from Kõrveküla nursery school already prepared environmental projects this spring, and their works now decorate the lobby of Ecoprint.

In order to draw attention to environmental issues on a larger scale, we have joined the Baltic Ecoregion Action Plan of the Estonian Fund for Nature. We call on all our partners to contribute to the preservation of ecological balance and species of the Baltic Sea. Please find more information on the action plan on our website at http://www.ecoprint.ee/?id=2018&articleId=712&list_period=ALL#selArticle

I would like to thank all our partners who have helped us to develop environmentally friendly way of thinking through prefering Ecoprint as their printing partner and also all Ecoprint's devoted and nice team members.

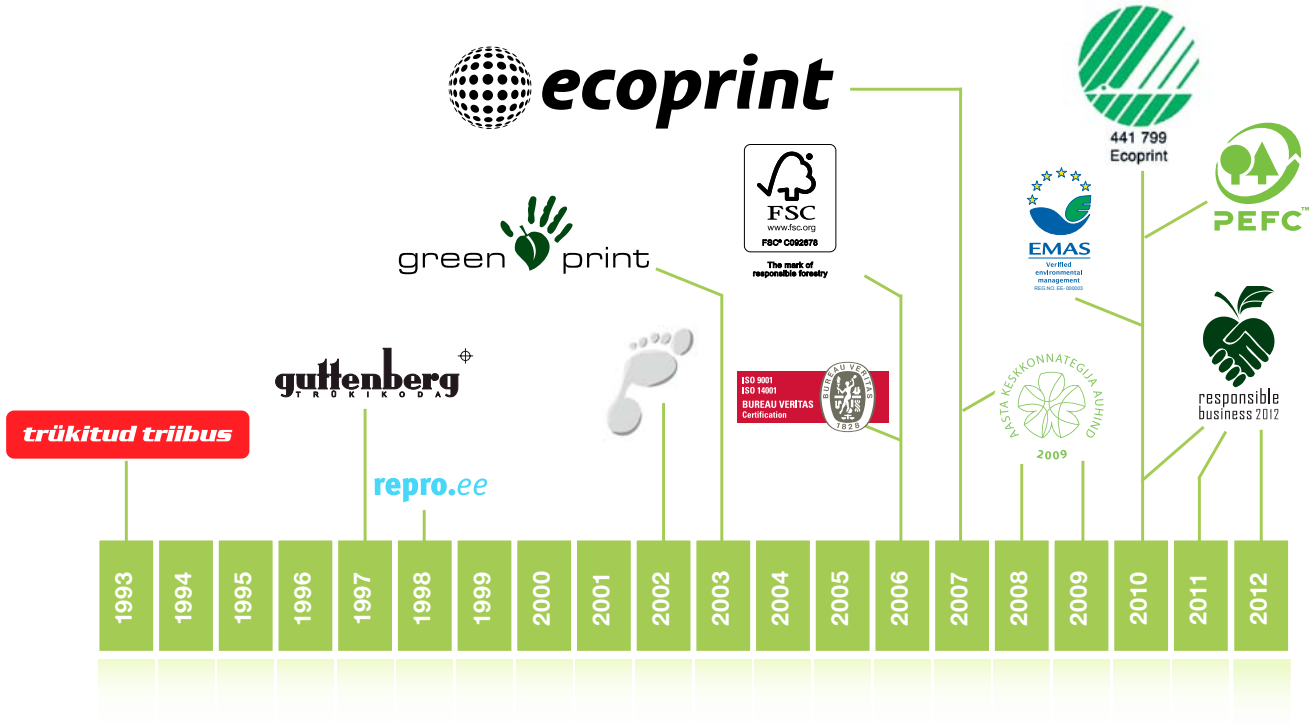
We can do more together! Wishing you an interesting read,

Erika Ilisson CEO of AS Ecoprint

Contents

Introduction of Ecoprint AS

AS Ecoprint is an environmentally friendly printing company established in 2007. The company is located on the Vahi Industrial Estate near Tartu. The merger of Ecoprint with three well-known Estonian printing companies AS Triip, AS Guttenberg and OÜ Repro took place in 2008. The new organisation continued offering all of the services of the three companies. They include sales of printing services, prepress (incl. design) and offset printing.



The company produces printed materials of different shapes and formats: printed materials for companies, packaging and labels, pamphlets and brochures, books and periodicals. Ecoprint's market is mainly in Estonia, but the company has strongly expanded its activities on its export markets in Scandinavia in the last years

The activity of Ecoprint is based on the principles of responsible business – to be a reliable partner to its employees, partners and owners, to care about the environment and about the community.In its activity the company and the Estonian Fund for Nature developed a printing service that is unique in Estonia and represented by the patented trademark Green Print. When a customer orders a Green Print from Ecoprint, they may be certain that the harmful environmental impact of the printing service is smaller, because:

» *the ink used for Green Prints is based on natural oils and resins instead of petrochemicals;*

» *environmentally certified or recycled raw materials are used for Green Prints;*

» *the production of Green Prints is supported by environmentally sustainable technology;*

» *all of the waste generated in the production of Green Prints is recycled*

This Environmental Report is the eleventh consecutive public document for Ecoprint and its predecessor AS Triip, which describes the environmental activities and impact of the company. Data of the company's resource-efficiency and waste generation are presented in the report to characterise the environmental impact and evaluate the efficiency of the company's environmental activities, and they are analysed using the methods for measuring the ecological footprint and CO_2 emissions.

The **MISSION OF ECOPRINT** is to offer business clients optimal printing solutions that improve their competitiveness and reputation, and to develop the first environmentally friendly Green Print service on the Estonian market.

The **COMPANY'S VISION** is to be the most environmentally friendly printing partner in Estonia and on neighbouring markets. The reliability and client loyalty of Ecoprint are based on quality, contemporary values and environmental protection.

Company name	**AS Ecoprint**
Established on	**03.08.2007**
Address	**Savimäe 13, 60534 Vahi küla**
Website	**www.ecoprint.ee**
E-mail	**ecoprint@ecoprint.ee**
Telephone number	**+372 733 1400**
Mobile number	**+372 5 272 642**
Fax	**+372 733 1401**
Area of activity	**printing industry**
NACE/EMTAK code	**1812**
Turnover in 2012	**€ 2,653 million**
Number of employees	**39**
Territory of activities	**1400 m²**
Area under buildings	**3190 m²**

Environmental recognition

Environmental Award Competition
Ecoprint has won the Environmental Award given by the Ministry of Environment to the most environmentally friendly company in 2007, 2008 and 2009 in the fields of environmental management, environmental management systems and environmentally friendly printing services, and environmentally friendly production processes.

Further information
www.envir.ee/1100745

European economy award in the field of environment (EBEA) In 2008 Ecoprint won a position among the final three at the EBEA competition organised by the European Commission for its efficient environmental and quality management.

Further information
ec.europa.eu/environment/awards/index.html

Eco-Management and Audit Scheme (EMAS) 2010
The European Commission gave this environmental aware to Ecoprint in 2010 for being the most resource-efficient company in the category of small organisations.

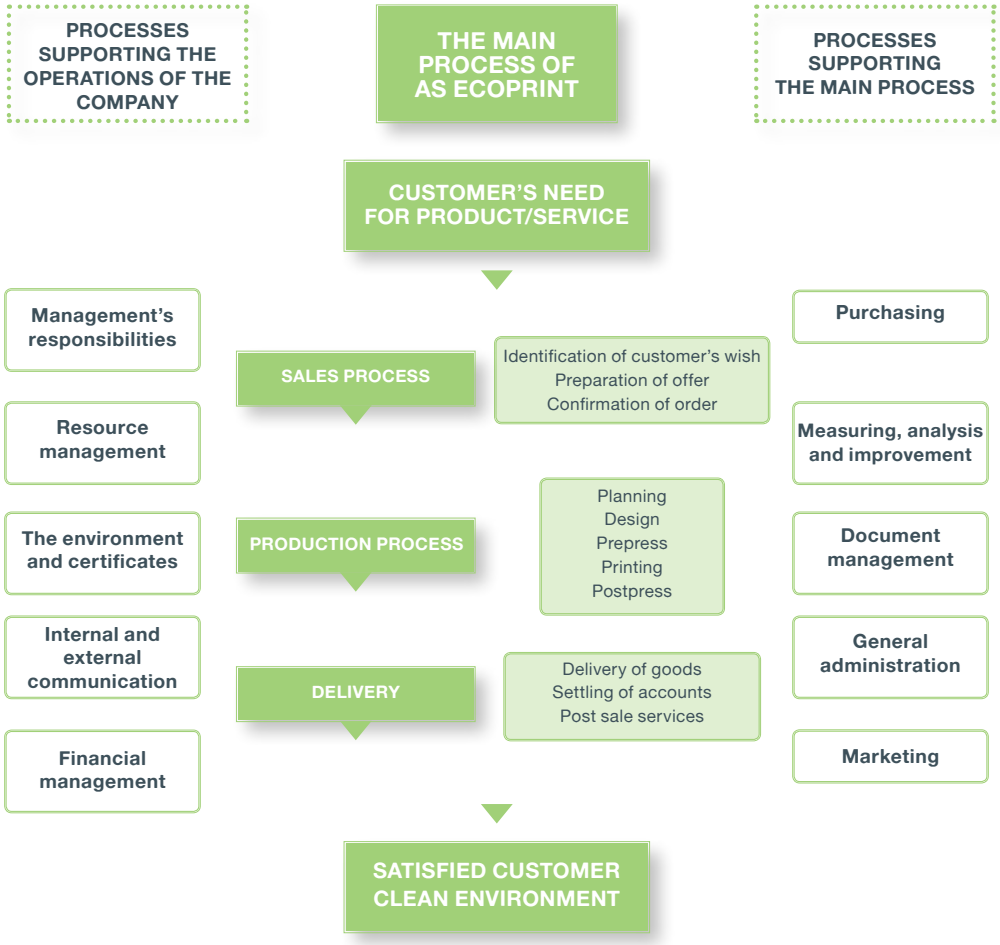
Further information
ec.europa.eu/environment/emas/emasawards/index.htm

In 2012, the third consecutive year, Ecoprint was awarded with the mark of the Responsible Business. This time Ecoprint took home the silver quality award.

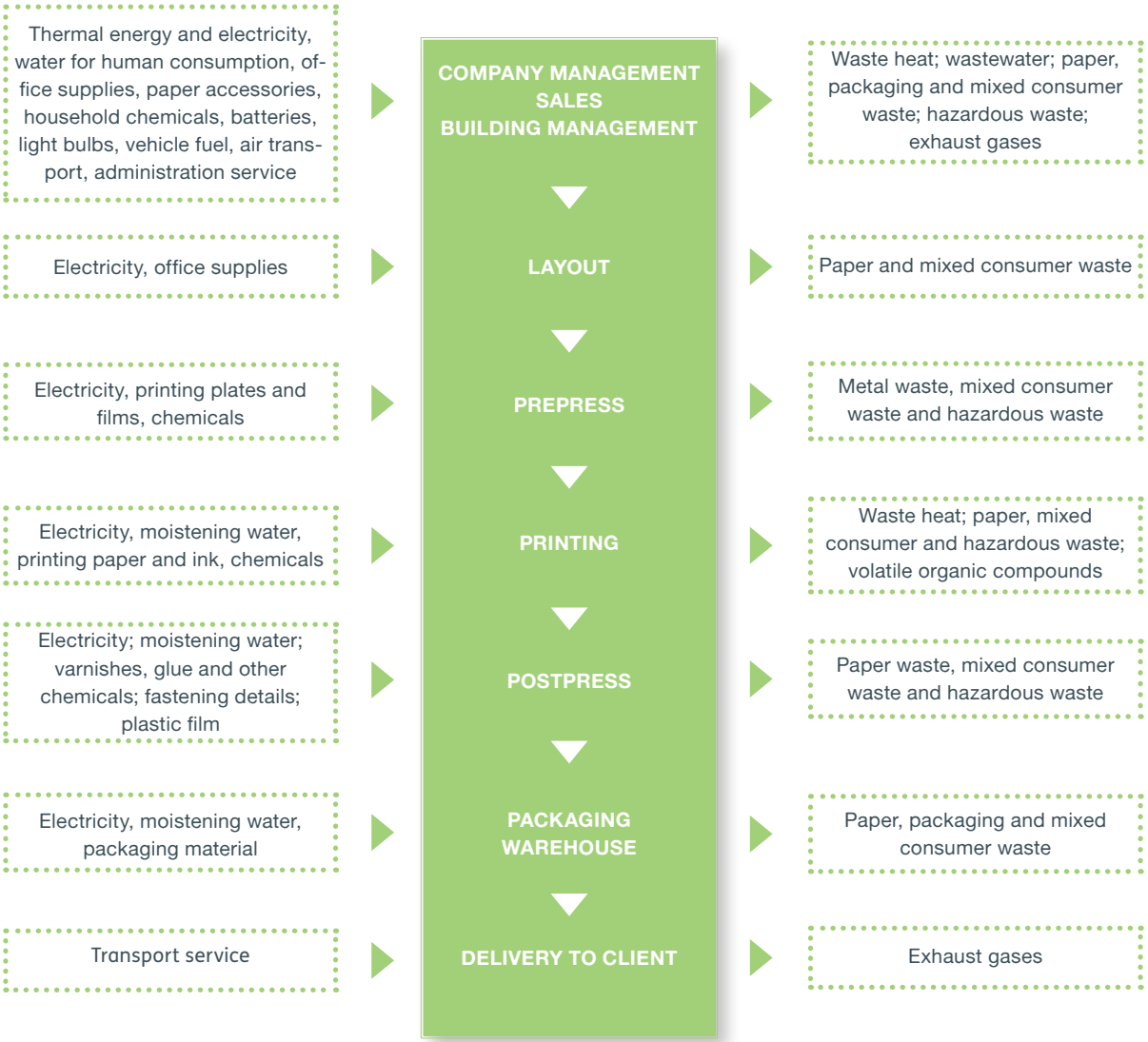
Further information
www.csr.ee

Structure and production process

Ecoprint operates in one location, which is the Vahi Industrial Estate. In 2012, the company employed 39 people. The company's main process covers the entire printing service from sales and layout to the delivery of printed matter to consumers. Different support activities such as managing the company, maintaining certificates, marketing and general administration support the main process.



The process diagram presented above and its inputs
and outputs constitute the core of the environmental management system.



Description of the environmental management system

The environmental management system (EMS) covers all of the activities and units of Ecoprint.

Ecoprint manages the environmental impact of the activities not directly controlled by it, for instance delivery and subcontracting, through the selection of its business partners.

CEO Erika Ilisson is responsible for the environmental activity of the company. Since June 2012, the company also employs a quality, environment and occupational safety specialist who is responsible for the enhancement and functioning of our environmental activities. The EMS corresponds to the requirements of the ISO 14001 standard and the EMAS Regulation. The system covers the stages of planning, execution, control and perfection, and the preparation of a public environmental report. The EMS is harmonised with the company's quality management system.

Ecoprint evaluates adherence to its environmental policy and the efficiency of its management system in the course of regular internal audits and management reviews, and the company's environmental goals and duties or the management system as a whole are updated whenever necessary. Indicators of environmental activities are collected all the time and the efficiency of activities is evaluated once a year, which results in the preparation of the annual environmental report. Ecoprint's environmental policy, management system handbook and environmental report are public and available to everyone.

Environmental and quality policy

Ecoprint's quality and environmental policy is based on the conviction that quality production and an environmentally friendly way of thinking guarantee the company's durable and long-term success.

We have set ourselves the following goals:

» *our clients are satisfied:*

» *the quality of our products is high:*

» *the ecological footprint created by our activities is as small as possible;*

» *our employees are highly motivated;*

» *we are a reliable partner and good employer.*

We do the following to achieve our goals:

» *we always proceed from the requests and needs of our clients;*

» *we appreciate the feedback we receive from our clients and take it on board;*

» *we critically assess the quality of our products and the functionality of our processes;*

» *we train our employees and involve them in the development of the company;*

» *we invest in a better working environment;*

» *we invest in technology that is energy-efficient and harms the environment as little as possible;*

» *we prefer suppliers who stand out with their environmentally friendly activities;*

» *we constantly observe and improve our quality and environmental management systems and guarantee the resources they need to function efficiently;*

» *we adhere to the legislation and legal provisions of the Republic of Estonia that regulate the company's activities.*

Environmental aspects and impact

The company considers the size, extent and probability of the environmental impact and the compliance of its activities with legal requirements when it assesses the significance of environmental aspects. Assessing the significance of the environmental impact is based on the calculation of ecological and carbon footprint. The bigger the influence an aspect has on calculating the footprint the more important it is.

Ecoprint's important environmental aspects with a positive impact are the following:

» *avoidance of petrochemicals in printing ink*

» *use of environmentally friendly technology and renewable energy*

» *use of certified or recycled raw materials*

» *recycling all waste*

» *ownership of environmental certificates and labels and use of these on the company's products.*

Important environmental aspects which burden the environment are as follows:

» *use of raw material*

» *use of electricity and thermal energy*

» *generation of paper, metal and hazardous waste*

» *transportation.*

The negative environmental impact of the company is apparent during the entire life cycle of the printing service:

» *decrease in non-renewable natural resources;*

» *air, water and soil pollution;*

» *impact on climate change;*

» *decrease in the benefits of the ecosystem (food, water, timber, air cleaning, soil creation and pollination) in regions that are in human use and in areas influenced by them.*

Compliance of activities with legal requirements

The environmental legislation that regulates the activities of the printing company are the Waste Act, the Packaging Act, the Ambient Air Protection Act and, at the local level, the Waste Management Rules. Ecoprint does not need any environmental permits in its operations, as electricity, thermal energy and drinking water supply, wastewater treatment, transport of goods and waste handling are outsourced, and the activities and work volume of the printing facility do not require the company to apply for environmental permits.

Reducing waste generation, promoting the collection of generated waste separately and recycling waste have been the environmental priorities of the printing company for years. Ecoprint performs the requirements stipulated in waste handling legislation and all of the waste is being recycled. The main volatile organic compound emitted in the printing process is isopropanol, but the quantity of the used chemicals and emissions of volatile organics are considerably below the limits set forth in the Ambient Air Protection Act, which means that the company does not have to perform any additional obligations.

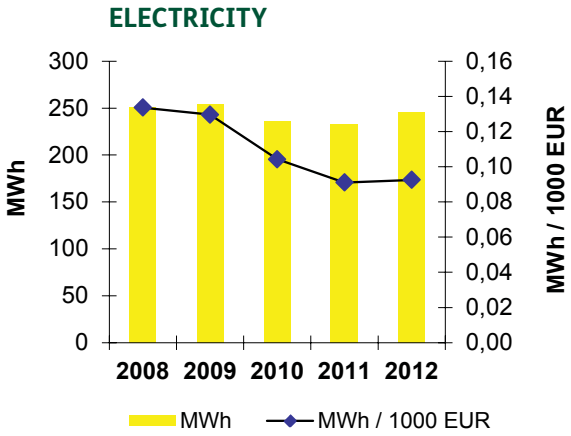
Fields

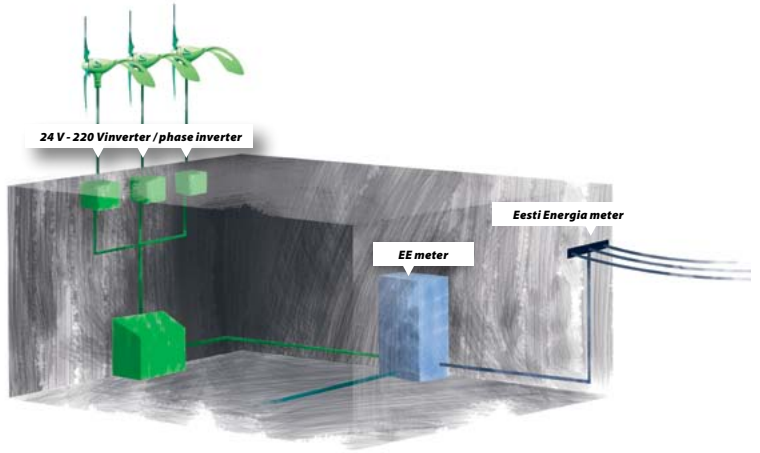
ELECTRICITY

In 2012 Ecoprint mainly used the electricity produced by Eesti Energia and a small amount of wind energy generated by the three Airdolphin wind turbines on the roof of the production building, which were designed for urban environment. The design of the blades of Airdolphin wind turbines was inspired by the wings of owls, which means they are as silent as possible.

The amount of electricity, thermal energy and water consumption is divided between all lessees in the production building by proportion and this means that the measured resource consumption depends to some extent also on other users. Overall, the consumption of a resource is still determined by the needs of Ecoprint and the awareness and conduct of its employees. The consumption of electricity is an important environmental aspect for Ecoprint and therefor reducing it is an annual goal. In 2012 though (after a few years of reduction) the consumption of electricity has increased 2 % per turnover unit. The reason for increase is that instead of two shifts as before the work in printing house was organized into three shifts.

{ The consumption of electricity has increased 5% in total and 2% per turnover unit in 2012. }





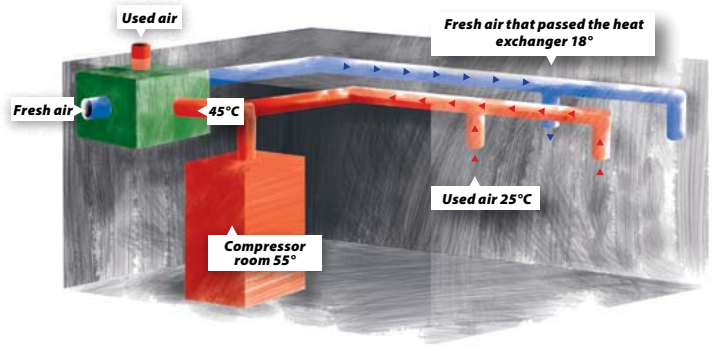
THERMAL ENERGY

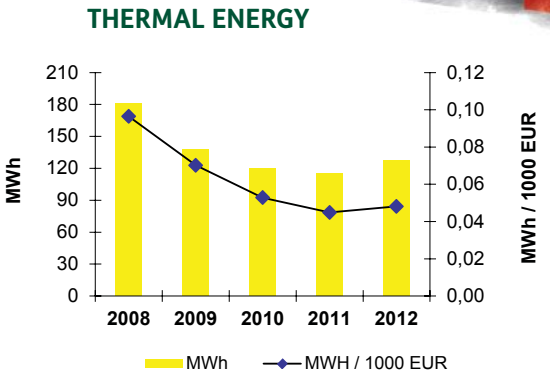
Natural gas, which is received from the boiler house of Vahi Industrial Estate and the waste heat created in the course of the printing process and in the server room are used to heat the production facility of Ecoprint. The production and office premises of the printing company has separate ventilation systems, which are equipped with heat exchangers – the incoming fresh air is pre-heated with the waste heat of outgoing air.

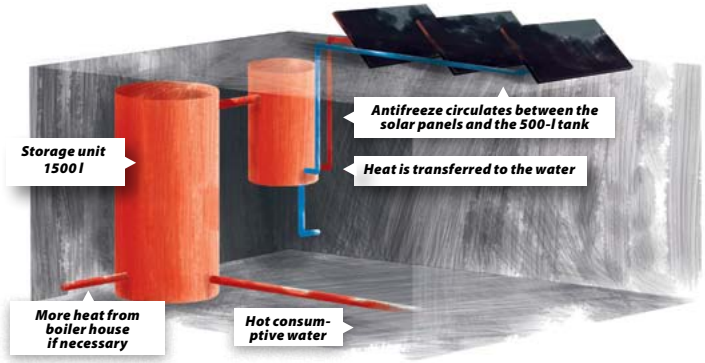
The separation of ventilation systems makes it possible to consider the different needs of production and office premises better – since 2012 work in the printing facility is done in three shifts, but in office premises, ventilation is automatically switched over to the saving regime outside working hours. In 2012, the residual heat from printing equipment almost sufficed for heating the production premises; additional heating with gas amounted to 0.4% of the company's total gas consumption that is mainly used for heating offices and common rooms. Although the company had set a goal to reduce the overall gas consumption per turnover unit, it still increased 7% because this winter was colder than the one before that.

On the roof of the Ecoprint building, there are sun collectors with an area of 7.7 m2 for heating consumptive water. Cold water first runs through a water tank connected to the collector, which pre-heats it, and it then runs into the 1500-litre boiler. In the summer of 2012, solar energy covered all of the company's water heating needs.

The amount of energy produced by the sun collectors is not measured, which means it is not possible to calculate the exact share of renewable energy in the total energy consumption (electricity, heat) used in Ecoprint. Based on the measured data of electricity and gas consumption, the share of renewable energy (wind energy) accounted for 0.1% of all energy consumption in 2012.







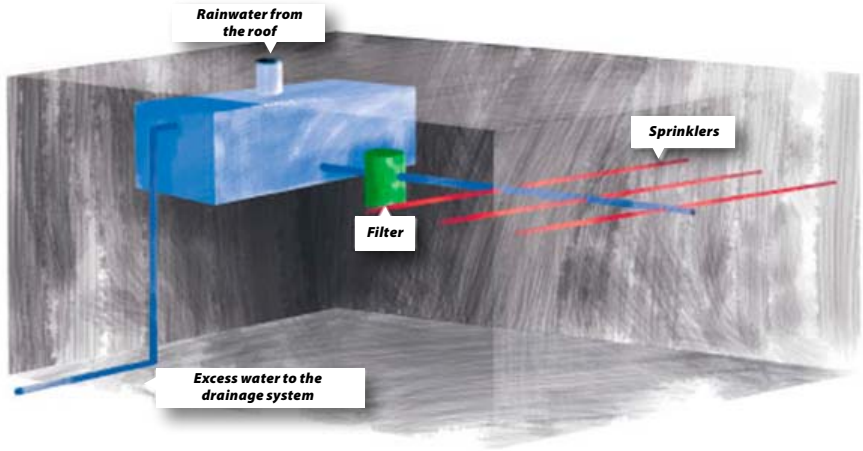
The consumptoin of thermal energy from natural gas has increased 11% in total and 7% per turnover unit in 2012.

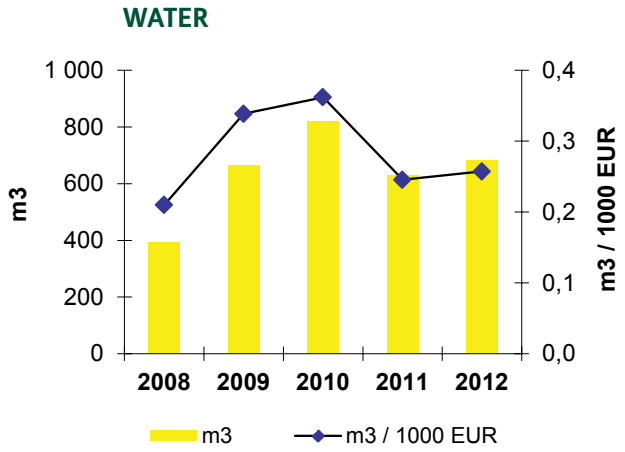
WATER

Ecoprint uses water from the public water supply of Tartu city as well as the rainwater collected from the roof of the production facility in its operations. The generated domestic wastewater is directed into the city's sewerage system and its quantity is not separately measured. The washing water of the aqueous varnish section of the printing press is collected separately and sent to the handler of hazardous waste.

The level of air humidity in the printing facility must be 50% (plus / minus 5%) to guarantee that printing paper is as moist as required and to decrease the possibility of having any quality problems. Rainwater is collected from the 850 m2 roof of the production facility and directed into a 5 m3 tank. The automatic humidification system constantly measures the level of air humidity and starts or stops the injectors in the ceiling of the production premises. According to calculations, one tank of rainwater covers the water requirement of 12 days when working at full capacity. In periods of draught, the humidification system switches itself over from the rainwater system to water from the public water supply. In rainy periods, excess rainwater is directed into the drainage system. Use of water from the public water supply therefore depends on the amount of rainfall and the season. Ecoprint's forecast indicates that the use of rainwater reduces the consumption of water from the public water supply by 60% on average.

In 2012 the consumption of water increased 5% per turnover unit. The problems with humidification system and its depreciation might be the reason for the increase of consumption of water.





The consumption of water has increased 9% in total and 5% per turnover unit in 2012.

MATERIAL CONSUMPTION AND WASTE PRODUCTION

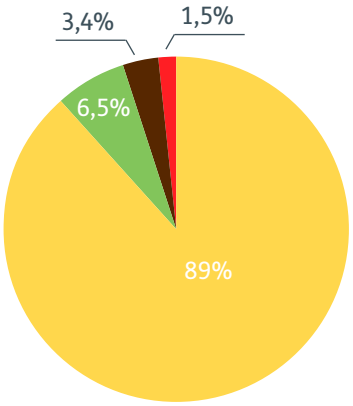
The main inputs of printing activities are printing paper, printing inks, various chemicals and printing plates. At Ecoprint we use printing inks containing natural oils and resins instead of petrochemical products. The selection and quality of ecological printing inks has improved over the years, which has helped making the printing process smoother and less resource consuming. Of the printing chemicals used in the production process of Ecoprint, including printing inks, but excluding prepress chemicals, 91% bear an eco-label. Based on environmental goals set at the beginning of 2012, the company started using eco-label household chemicals in last July. Whenever possible, Ecoprint also prefers using products with environmental certificates or eco-labels also in other product categories we purchase.

Due to an increase in the volume of orders, a somewhat bigger amount of input materials (printing paper, printing plates, and various chemicals) were used in production in 2012 compared to the previous years, while the use of printing inks and water-based varnishes decreased. Per unit of turnover, there was a decrease in the use of printing paper, printing plates, as well as inks and varnishes, which demonstrates a more efficient use of resources. Usage of raw materials of support activities mostly increased (office supplies, household chemicals, paper towels), the usage of office paper remained on the same level, and the usage of toilet paper decreased.

The calculation of the ecological footprint of material usage in both the main and support activities is based on the amount of waste production, excl. office supplies, toilet paper and household chemicals, in the case of which the footprint is calculated on the basis of input quantities.

Raw material and ecological footprints	Waste and ecological
Printing paper 570 t	**Paper and cardboard** 190 t, 465 gha
Office paper 30 pk	**Metal waste** 13 580 kg, 8,8 gha
Printing plates 18,450 m^2	**Dangerous waste** 7 210 kg
Inks, varnishes and chemicals 14,190 kg	**Packaging waste** 380 kg, 0,8 gha
Office and other supplies 0.6 gha	**Mixed urban waste** 2,900 kg, 11,7 gha

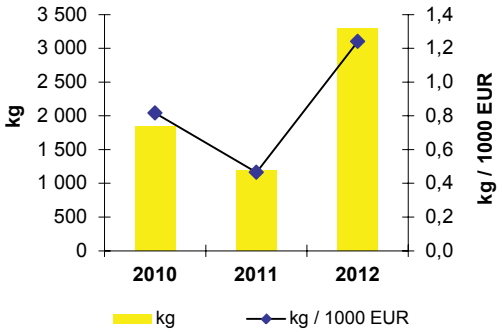
Ecoprint sends all waste produced by the main and support activities to waste recovery, while only the future handling of prepared meal packaging that are delivered and removed by the caterer does not depend on Ecoprint (these packages made up 1.5% of mixed urban waste produced in Ecoprint in 2012). The waste handler uses package, mixed urban and dangerous waste as waste fuel in order to produce heat energy, which is why package waste was not sorted separately in each process stage in earlier times. In March 2012, the waste handler changed the calculation method of delivered waste categories, whereby the quantities of packaging and soiled paper separated during post-sorting were no longer reported. Therefore, the weight of urban waste increased three times in 2012. Since October 2012, all packaging waste is sorted and calculated separately in Ecoprint. The values of mixed urban waste and packaging waste of earlier years are not shown in the diagram below due to the fact that before 2010, the waste calculation was based on quantity, not mass.



THE DISTRIBUTION OF WASTE (T)

- Paper and paper board 190
- Metal waste 14
- Hazardous waste 7,2
- Packaging and mixed municipal waste 3,3

MIXED MUNICIPAL WASTE



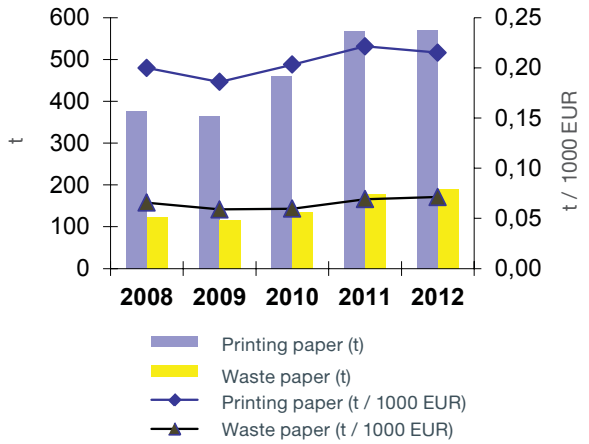
The generation of mixed municipal waste and packaging waste has increased 1.8 times in total and 1.7 times per turnover unit. The increase came mainly because the waste calculation has changed.

The percentage of FSC or PEFC certified paper with the Nordic Swan Label and/or recycled paper out of all printing paper used in Ecoprint reached 69% in 2012. Only FSC certified paper was used in the office. The use of printing paper has remained at about the same level in 2012 compared to 2011, and thus the quantity of paper used has decreased per unit of turnover.

In both production and office, produced paper waste is collected separately and delivered to the waste handler who directs the waste to waste recovery companies. One of the biggest sources of waste Ecoprint is related to paper usage – in order to ensure the quality of printed materials, test sheets must be printed and the printed materials cut in the correct size. The production of paper waste increased in 2012, constituting 33% of the quantity of purchased paper. Therefore, the company did not meet the target of reducing the proportion of scrap paper production to the level of 2010, when it was 29%. Production of paper waste is the cause of the biggest environmental impact in Ecoprint, and it is the largest component of the ecological footprint of the company. Production of paper waste must be decreased in future by more efficient planning and monitoring of paper usage.

Used printing plates are sold for scrap, where they make their way to metal recycling. The production of printing plates and metal waste is calculated on the basis of both size and weight. In connection with the usage of new plate sizes in 2012, the weights of all the other printing plates used in Ecoprint were also clarified and quantities of metal waste of previous years were adjusted. The quantity of metal waste mostly depends on the type of prints: e.g. fewer printing plates are required to print advertising materials than are needed to print books where a separate plate is needed for each page.

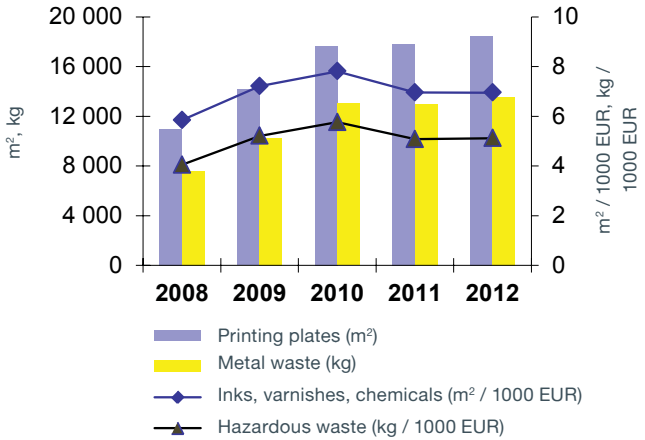
PRINTING AND WASTE PAPER



The use of printing paper has increased 1% in total and decreased 3% per turnover unit in 2012. At the same time the production of waste paper has increased 7% in total and 3% per turnover unit.

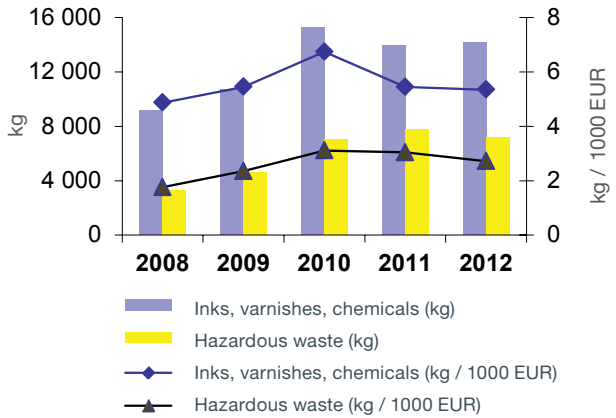
All hazardous waste, which also includes waste generated by natural printing ink, and packaging and cleaning rags polluted with hazardous waste, solvents used for cleaning the equipment, used developing solvents and the washing water of the aqueous varnish section of printing press are sent to a licensed waste handler for thermal energy production. The metal packaging left after burning is handed over to a metal waste handler. The ecological footprint of hazardous waste cannot be calculated, as there is no coefficient. The quantities of printing inks, varnishes and chemicals have been added up on the diagram below on the assumption that a litre of chemicals weighs 1 kg.

PRINTING PLATES AND METAL WASTE



The use of printing plates (m^2) has increased in 2012 by 4% in total, but has stayed the same as last year per turnover unit. The generation of metal waste (kg) has also increased by 4% in total and 1% per turnover unit.

INKS, VARNISHES, CHEMICALS AND HAZARDOUS WASTE

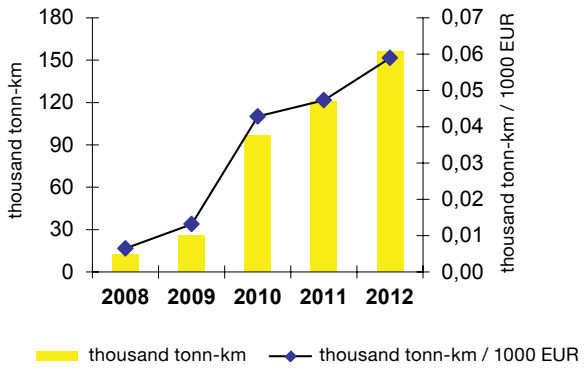


The use of inks, varnishes and chemicals has increased 2% in total, but decreased 2% per turnover unit. The generation of hazardous waste has decreased by a total of 5% and 8% per turnover unit.

TRANSPORT

Ecoprint's use of transport divides in three: carriage of goods, use of cars for work purposes and carriage by air for business trips abroad. All carriage of goods is ordered from partners and the company's vehicles are only used for the benefit of employees. Ecoprint keeps exact account of the amount of goods transported and the kilometres travelled. So far, only road transport has been employed for carriage of goods. Transportation volume has increased due to increase in the export volumes in 2012, whereas the number of parcels has decreased, and the average weight of parcels has significantly increased. Official usage of passenger cars decreased significantly in 2012 compared to the year before. The number of flight hours decreased in connection with the small volume of air transport usage. Since flight hours were not calculated before 2010, the respective data is also not shown in the diagram.

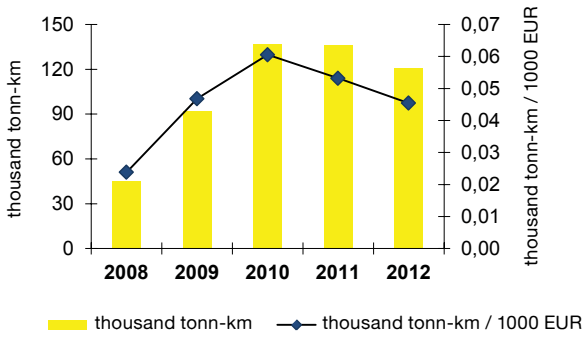
CARRIAGE OF GOODS



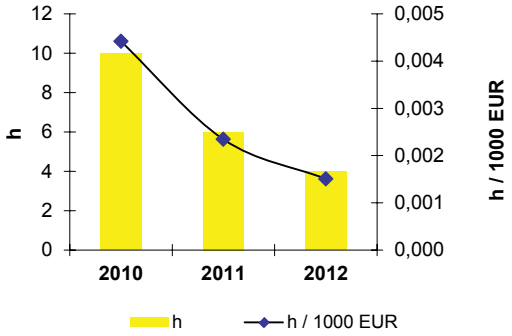
The volume of carriage of goods has increased 29% in total and 15% per turnover unit in 2012.

The volume of work-related use of passenger cars has decreased 12% in total and 15% per turnover unit in 2012.

CAR USAGE BY EMPLOYEES FOR WORK PURPOSES



AIR TRANSPORT



The amount of flight hours in connection with business trips abroad has decreased 33% in total and 36% per turnover unit in 2012.

LAND USE

Ecoprint rents premises at Vahi Industrial Estate and shares the production building with other companies. According to the division of premises, the area of the site used by Ecoprint, which is 3 190 m^2. direct land use causes an ecological footprint of 0.8 gha.

GOALS CONNECTED WITH SIGNIFICANT ENVIRONMENTAL ASPECTS

ENVIRONMENTAL GOALS OF 2012	RESULT
Decrease in electricity consumption per unit of turnover	Electricity consumption increased by 5% in total and by 2% per unit of turnover
Decrease in gas consumption per unit of turnover	Gas consumption increased by 11% in total and by 7% per unit of turnover
The percentage of eco-label chemicals and inks out of all chemical and ink supply is at least 90%, while eco-label chemicals make up 100% in the segment of household chemicals by the end of the year	91% of printing chemicals, incl. printing inks and excl. prepress chemicals bore an eco-label. In July, the company started using eco-label household chemicals.
The percentage of paper waste out of paper consumption reaches the volume of 2010 or 29% (incl. paper waste produced in the office)	The percentage of paper waste out of paper consumption was 33%
Control over waste production is intensified	Transparency of waste production decreased due to changes made by the waste handler in calculating waste categories. In the autumn, the collection system of packaging was changed in the company. Monitoring of raw material and waste flow in production has been intensified.
15% of main contractual partners have proven results in environmental activity (supply chain certificates, application of environmental management systems, etc.)	15% of main contractual partners have the FSC and/or PEFC supply chain certificate, the Nordic Swan Label, ISO 14001 environmental management system certificate or some other certificate proving environmental activity

Main indicators of environmental activities

INPUTS AND OUTPUTS			AMOUNT CONSUMED					AMOUNT CONSUMED PER €1,000 OF TURNOVER				
Category		unit	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
ELECTRICITY												
	Total	kWh	249360	254260	236 000	233 050	245 400	132,6	129,6	104,2	91,0	92,5
	Electricity produced from oil shale	kWh	249040	253880	235 620	232 570	245 040	132,4	129,4	104,1	90,8	92,3
	Energy produced with Ecoprint's wind turbines	kWh	320	380	380	480	360	0,17	0,19	0,17	0,19	0,14
THERMAL ENERGY												
	Total	kWh	148800	137710	119 570	114 780	127 680	79,1	70,2	52,8	44,8	48,1
	Energy produced from natural gas	kWh	148800	137710	119 570	114 780	127 680	79,1	70,2	52,8	44,8	48,1
	Solar energy	kWh	no calculation									
SHARE OF RENEWABLE ENERGY ON THE BASIS OF EXISTING MEASUREMENT DATA			0,1%	0,1%	0,1%	0,1%	0,1%					
WATER												
	Water from public water supply	m^3	400	660	820	630	680	0,21	0,34	0,36	0,25	0,26
	Rainwater collected from roof	m^3	no calculation									
TRANSPORT												
	Carriage of goods	tonne-km	12 260	25 830	96 970	121 110	156 340	6,5	13,2	42,8	47,3	58,9
	Car use for work-related purposes	car-km	44 820	91 830	137 040	136 220	120 540	23,8	46,8	60,5	53,2	45,4
	Air transport	h	no calculation		10	6	4			0,00	0,00	0,00
RAW MATERIAL												
	Printing paper	t	380	370	460	570	570	0,20	0,19	0,20	0,22	0,22
	Office paper	pack	110	60	31	30	30	0,06	0,03	0,01	0,01	0,01
	Printing plates	m^2	10 990	14 150	17 680	17 810	18 450	5,84	7,21	7,81	6,95	6,95
	Print film	m	1 650	610	670	0	0	0,88	0,31	0,30	0,00	0,00
	Ink	kg	2 150	2 700	3 620	3 990	3 950	1,14	1,37	1,60	1,56	1,49
	Dispersion varnish	kg	1 500	2 580	3 910	3 960	3 460	0,80	1,31	1,73	1,54	1,30
	Chemicals	l	5 510	5 420	7 720	6 000	6 780	2,93	2,76	3,41	2,34	2,56
WASTE (ALL RECYCLED)												
	Paper waste	t	123,6	115,74	135	177	190	0,07	0,06	0,06	0,07	0,07
	Packaging waste	kg	no calculation		1 070	500	380			0,47	0,20	0,14
	Metal waste	kg	7 610	10 220	13 040	12 990	13 580	4,04	5,21	5,76	5,07	5,12
	Hazardous waste	kg	3 310	4 620	7 050	7 790	7 210	1,76	2,35	3,11	3,04	2,72
	Mixed consumer waste	kg	17 820	13 860	1850	1190	3290	9,47	7,06	0,82	0,46	1,24
LAND USE												
	Size of site used by Ecoprint	m^2	3 190	3 190	3 190	3 190	3 190	1,70	1,63	1,41	1,25	1,20
TURNOVER		mln eurot	1,881	1,962	2,264	2,560	2,653					

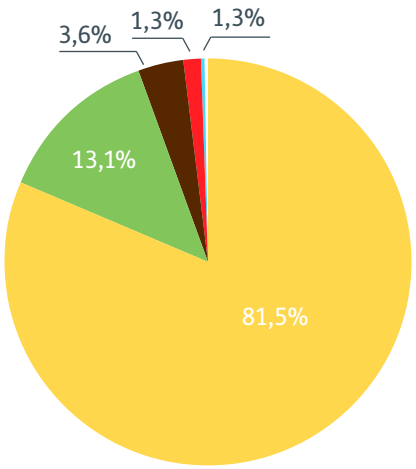
Ecological footprint

The amount of land and sea area the human population needs to consume the various benefits of the ecosystem are evaluated to find the ecological footprint. These benefits are, for example, production of food and renewable raw materials, land under buildings and structures, but also the ability of natural biotic communities to remove the carbon dioxide that people emit in the course of energy consumption from ambient air.

The environmental footprint of a company is calculated by measuring the ecological load of its inputs and outputs during one year. The principle of shared responsibility must also be considered, as various companies and their clients use the same resources in the course of material circulation. The inputs and outputs the company needs in order to function, but which do not directly cover the use of material in the product that reaches the client, are included in the calculation of Ecoprint's ecological footprint. This means that the calculation of the footprint includes energy consumption, water usage, waste generation, transport and direct land use in the amounts for which we have the necessary ecological footprint coefficients. The list of sources used to find the coefficient is given in the end of the reportIn the report for 2012, the electric energy coefficients for the three last years have been adjusted based on the utilisation rate of renewable energy by Eesti Energia. The weights of printing plates have been clarified and re-measured, as a result of which the quantities of metal waste from earlier years have also increased. The water footprint coefficient has been changed.

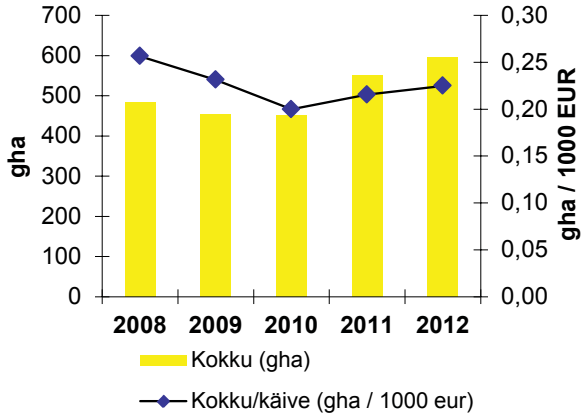
ECOLOGICAL FOOTPRINT (GHA)

- Waste 486
- Electricity 78
- Transportation 22
- Thermal energy 7,8
- Water consumtion 1,5
- Area of the site 0,8
- Office supplies and services 0,1



The ecological footprint of Ecoprint in 2012 was 597 global hectares. The share of waste generation is the largest.

ECOLOGICAL FOOTPRINT



The ecological footprint of Ecoprint has grown 8% in total and 4% per turnover unit in 2012.

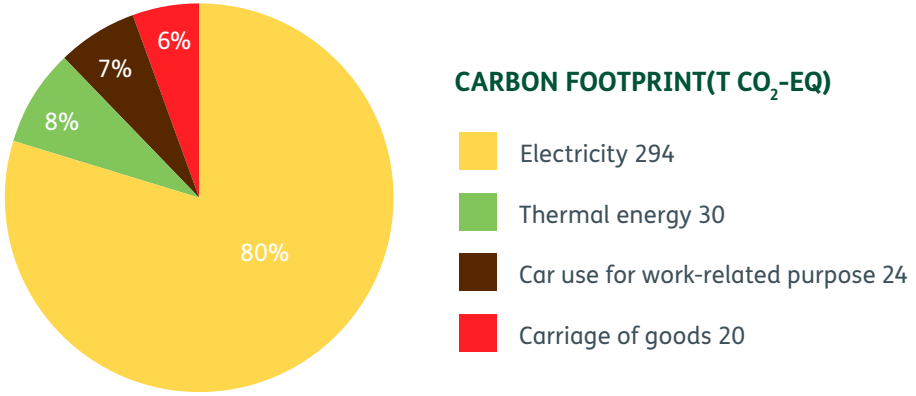
Category	2008		2009		2010		2011		2012	
	gha	%	gha	%	gha	%	gha	%	gha	%
Electricity	85	17,6%	86	19,0%	77	17,1%	76	13,7%	78	13,1%
Thermal energy	12	2,5%	8	1,9%	7,3	1,6%	7,0	1,3%	7,8	1,3%
Water	0,0	0,0%	0,1	0,0%	0,1	0,0%	0,1	0,0%	0,1	0,0%
Car use for work-related purposes	4,5	0,9%	10	2,2%	13	2,8%	12	2,2%	11	1,8%
Carriage of goods	0,9	0,2%	1,8	0,4%	6,8	1,5%	8,5	1,5%	11	1,8%
Air transport	-		-		0,6	0,1%	0,3	0,1%	0,2	0,0%
Office supplies	-		-		0,7	0,1%	0,8	0,1%	0,6	0,1%
Services	-		-		1,1	0,2%	1,1	0,2%	1,0	0,2%
Waste	380	78,7%	346	76,3%	345	76,3%	446	80,8%	486	81,5%
Land under buildings	0,8	0,2%	0,8	0,2%	0,8	0,2%	0,8	0,1%	0,8	0,1%
Total	**483**	**100%**	**454**	**100%**	**452**	**100%**	**552**	**100%**	**597**	**100%**
Total/turnover (gha/€1,000)	0,257		0,231		0,200		0,216		0,225	

CO_2-footprint

The CO2-footprint indicates the volume of CO2 concurrent with the company's activity and its equivalent emission to air in tonnes per year (t CO2-eq). The CO2 footprint of Ecoprint is calculated on the basis of the usage of electricity, heat energy and transport (delivery of goods, official usage of passenger cars, air transport). The sources used for finding the coefficients have been presented at the end of this report.

The activity of Ecoprint in 2012 generated a CO2-footprint of a size of 369 t CO2-eq, which exceeds the indicator for 2011 by 4%, while the increase amounts to 1% in terms of turnover. Over the year, the CO2 footprint for electricity, heating and delivery of goods increased, while the footprint of business travels decreased.

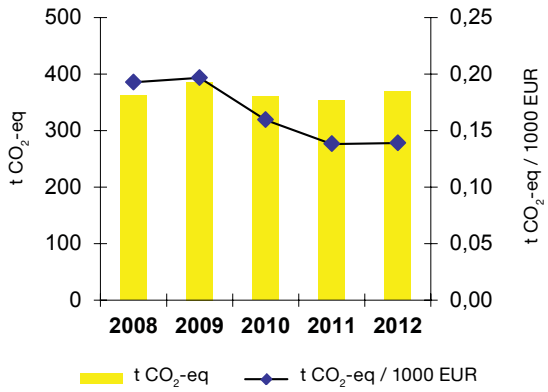
In order to capture the total amount of carbon dioxide generated by Ecoprint in 2012, Ecoprint should plant 104 ha of forest. On the forest planting day on 10 May 2012, the staff of Ecoprint along with family members and partners planted 2000 trees or a bit under one hectare of forest. Traditionally, the forest planting day is organised in collaboration with the State Forest Management Centre (RMK).



The carbon footprint of Ecoprint was 369 t CO_2 eq in 2012. Consumption of electricity accounted for the majority of it.

CATEGORY	2008		2009		2010		2011		2012	
	tCO_2-eq	%	tCO_2-eq	%	tCO_2-eq	%	tCO_2-eq	%	tCO_2-eq	%
Electricity	320	88%	326	84%	292	81%	285	80%	294	80%
Thermal energy	30	8%	32	8%	28	8%	27	8%	30	8%
Car use for work-related purposes	11	3%	25	6%	29	8%	27	8%	24	7%
Carriage of goods	2	0%	3	1%	13	3%	16	4%	20	6%
Total	**363**	**100%**	**386**	**100%**	**361**	**100%**	**354**	**100%**	**369**	**100%**
Total/turnover (gha/€1,000)	0,193		0,197		0,159		0,138		0,139	

CARBON FOOTPRINT



The carbon footprint of Ecoprint has increased 4% in total and 0.5% per turnover unit in 2012.

Social responsibility and sustainable development

The activity of Ecoprint is based on the principles of responsible business, paying attention to both the natural environment and social responsibility in the society, while also following the principles of sustainable management.

In contributing to the **natural environment**, the company follows the principle that the environmental impact generated by the company's activity should be as small as possible. In order to cover the energy requirements within the company, green technologies and renewable resources are employed. Every spring, the staff of Ecoprint and its partners have the tradition of planting trees with the help of RMK. In 2012, ca. 2000 plants or about 1 ha of forest was planted in Vara-Matjama on the forest planting day. In its choice of suppliers, Ecoprint prefers partners whose environmental activity has been proven efficient, in order to keep the company's indirect environmental impact under control.

Our main goal in the **social aspect** is to be a reliable partner to our customers and suppliers; be a good employer to our employees; contribute to the development of the community; and to support raising the awareness of environmental issues in the society. Ecoprint has introduced its policies and opportunities of responsible business on workshops and conferences for years. In 2012, Ecoprint delivered four presentations in total (Sampo Leaders Forum, the eco-label seminar at the Ministry of the Environment, the lecture series "Shopping fever versus conscious consumption" at the Estonian National Museum, and for printing students at the Tallinn Polytechnic School), sharing experiences in employing green principles and applying for environmental certificates. The company has also introduced its environmental activity policy on numerous tours at the company's production units. In 2012, eight tour groups of about 160 people in total visited the company. In addition, the company has served as a research base for several scientific studies conducted at the University of Tartu, Tallinn University of Technology, and the Estonian University of Life Sciences. Ecoprint participated in research for four Master's theses in 2012. Over the years, the company has supported the activity of several environmental organisations – Estonian Fund for Nature, Palupõhja Nature School, and Ecomedia, thereby helping them to achieve their environmental targets. In 2012, the company supported the Palupõhja Nature School in acquiring outdoor learning materials.

From the **economic perspective**, the company values its sustainable development and increasing its business value in a sustainable way. The company employs the ISO 9001 quality management system, which enables it to measure, analyse and enhance its performance consistently. Risk assessments are carried out when making decisions and taking unreasonable risks is avoided. When investing in technology and machinery, the company always tries to find the optimal solution, taking both the price and resource consumption indications into consideration.

The main and voluntary activity of Ecoprint has also been recognized by the Responsible Business Forum that awarded Ecoprint with the quality label of a responsible business for the third consecutive year.

Environmental targets of 2013

The production space used by Ecoprint will increase in 2013, along with the volume of production. As a result, the usage of resources required to manage the building (heat and electric energy, water, household chemicals) and raw materials for the printing process (paper consumption, printing inks and plates, printing chemicals) shall also increase. The goal for Ecoprint is to maintain the volume of resource consumption of support processes per unit of surface, and to prevent the increase in the quantities of raw materials for printing and quantities of waste per unit of turnover. Based on the assumption that the overall production process will remain the same, the indicators of 2012, the activity plans of 2013, and the increased use of space, Ecoprint shall set the following goals in the following categories:

1. USAGE OF RESOURCES:

» *electricity consumption per 1000 euros of turnover shall not exceed 106 kWh; consumption of electric energy in office spaces shall not increase;*

» *gas consumption per 1000 euros of turnover shall not exceed 60 kWh*

» *the percentage of recycled paper with a verified supply chain shall increase;*

» *the percentage of eco-label chemicals and inks is at least 92%;*

2. WASTE PRODUCTION:

» *the percentage of paper waste in paper consumption shall decrease and not exceed 29%; paper waste shall be sent directly to recovery;*

» *control over waste production shall be intensified;*

3. PROMOTION OF ENVIRONMENTAL ACTIVITY:

» *new environmental technology solutions shall be looked for and applied in the production process;*

» *the environmental activity and responsible business opportunities of the company shall be introduced on tours at the company's production units; at seminars and conferences, as well as in media publications.*

References

Allen J., Browne M.2010. Road freight transport and sustainability in Britain 1984–2007. Transport Studies Department, University of Westminster, London, 108 pp.

Chambers N., Simmons C., Wackernagel M. 2004. Sharing nature's interest: Ecological footprints as an indicator of sustainability. Earthscan, 199 pp.

CORINE 2006. CORINE Land Cover. Estonian Land Cover Database.

EPA 2005. Emission Facts. Average carbon dioxide emissions resulting from gasoline and diesel fuel. United States Environmental Protection Agency, Office of Transportation and Air Quality, 3 pp.

GEMIS 4.6. Global Emission Model for Integrated Systems. Institute for Applied Ecology (software, HYPERLINK "http://www.oeko.de" www.oeko.de).

GFN 2008. National Footprint Accounts 2008 edition: Estonia 2005. Global Footprint Network (HYPERLINK "http://www.footprintnetwork.org" www.footprintnetwork.org), MS Excel worksheet.

GFN 2010. Calculation Methodology for the National Footprint Accounts, 2010 Edition. Global Footprint Network, 17 pp.(HYPERLINK "http://www.footprintnetwork.org" www.footprintnetwork.org).

Larsen H.F., Hansen M.S., Hauschild M. 2009. Life cycle assessment of offset printed material with EDIP97: how important are emissions of chemicals? Journal of Cleaner Production 17:115–128.

Nilsson K. 2004. The carbon dioxide emission factor for combustion of Swedish peat. IVL Swedish Environmental Research Institute, 24 pp.

Nordic Ecolabel 2012. Portal for paper, pulp, and printing HYPERLINK "http:///(www.nordic-ecolabel.org/portals/paper/printing-houses/" (www.nordic-ecolabel.org/portals/paper/printing-houses).

Statistics Estonia 2010. The symmetrical table of inputs and outputs of national economy based on 2005

(HYPERLINK "http://www.stat.ee" www.stat.ee).

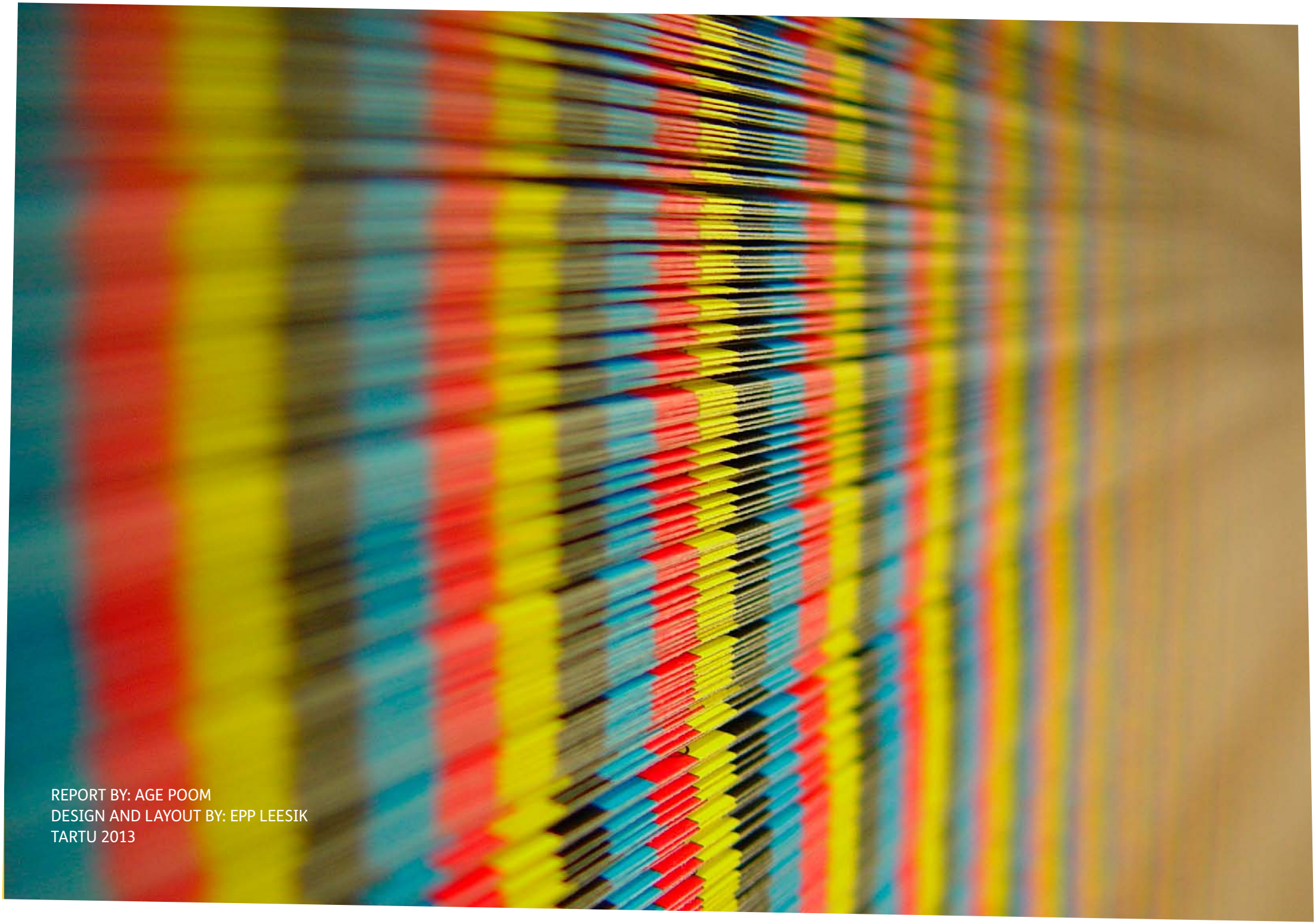
Statistics Estonia 2012. Sectoral databases (HYPERLINK "http://www.stat.ee" www.stat.ee).

Register of Roads 2008. The Road Administration (HYPERLINK "http://teeregister.riik.ee" teeregister.riik.ee).

Tallinn University of Technology 2010. The mileage of vehicle fleet in Estonia in 2009. Interim report. Tallinn University of Technology, Road Institute, 108 pp. (HYPERLINK "http://www.mnt.ee" www.mnt.ee).

The Estonian Road Administration 2010. The 2009 Yearbook. The Road Administration, 70 pp. (www.mnt.ee).

Thomas C., Tennant T., Rolls J. 2000. The GHG Indicator: UNEP guidelines for calculating greenhouse gas emissions for businesses and non-commercial organisations. United Nations Environment Programme, 61 pp.



REPORT BY: AGE POOM
DESIGN AND LAYOUT BY: EPP LEESIK
TARTU 2013