

Environmental Report 2017

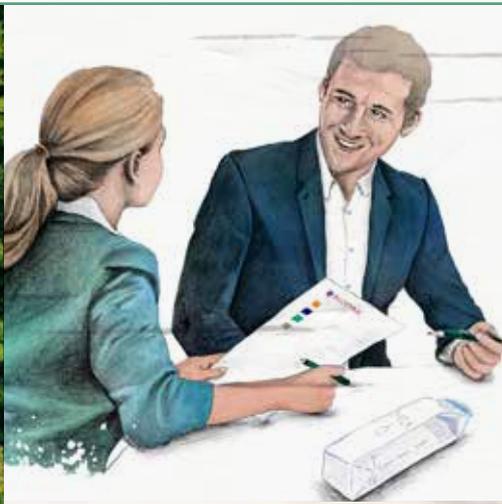




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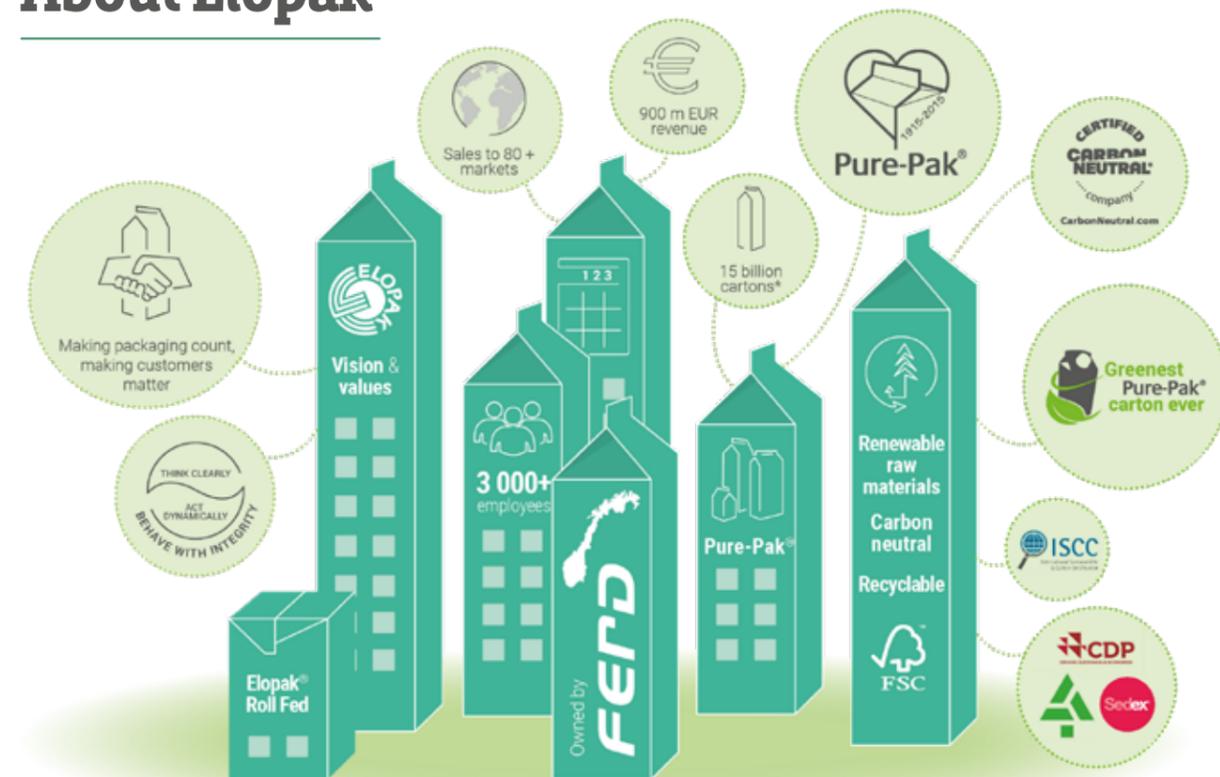
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Published by Elopak AS Group HQ
P.O.Box 418 Skøyen, 0213 Oslo
Norway

Published: March 2018
Editorial Board: Elopak
Text and layout: Elopak

Illustrations:
Lovedales.no/HanneLøvdal, Elopak
and Shutterstock

About Elopak



*inclusive joint ventures

Renewable Sourcing, Increased Efficiency and Recycling

For Elopak, the environmental strategy fundamentally has to do with management of the earth's resources. This is operationalized through the sourcing of renewable raw materials, through efficient production and distribution processes, and by recycling to take care of resources after use.

Renewability in sourcing means utilizing raw materials from sources that renew themselves over a reasonable time period. Paperboard, the main raw material for our cartons, is a good example. Wood sources are renewed over a few decades. Elopak is reinforcing the use of environmentally responsible wood fibers, and is expanding the sourcing of renewable polyethylene. Another prioritized area is the sourcing of renewable electricity. By using renewable resources, we are not contributing to the depletion of scarce resources, and we reduce the carbon footprint of our operations and our products. You can read more about our sourcing strategy in this report.

We continue our efforts to improve the efficiency of our production processes, reducing waste and thereby the amount of raw material used per carton produced, reducing energy consumption, optimizing logistical solutions and many other measures.

Finally, there is renewed focus on recycling and recovery of resources all over Europe. The carton industry must take its share of the responsibility for collecting used cartons and for recovering the components. New directives being introduced in the EU will over the next few years be reflected in national legislation across Europe, and will likely lead to a re-organization and strengthening of the recycling industry. Elopak will be an active contributor in this process to reduce the global waste challenge.

The 2017 Environmental Report will give a broad overview of the targets and activities in all of the main areas described above.

Bard Haugen,
CFO and Interim CEO, Elopak





**Your
responsible
choice**

www.elopak.com



Renewability

Renewable raw materials are fundamentally important to building a truly sustainable society.



The world is at the beginning of a bio-based economy, where fossil raw materials will gradually be replaced with renewable ones. Elopak is proud to be at the forefront of this development.



Why Is Renewability Important?

There are many environmental features and attributes, and it can sometimes be confusing to tell the difference. What is renewability, and why is it important?

Types of Renewable Resources

A renewable resource is one that will continue to replenish itself over time. A forest, for example, is a renewable resource, as the trees will continue to regrow and provide renewable raw materials, as long as the forest is managed sustainably.

Another example of a renewable resource is the raw material that comes from sustainable agriculture. Harvest of agricultural produce will always result in residues from

the plants, which can be used as renewable raw materials. The plant itself can also be used, however, it is important to ensure that there is no competition with food supply.

Elopak's Use of Renewables

At Elopak, we strive to utilize renewable raw materials where possible. The paperboard used in our cartons will always be renewable, as it comes from sustainably managed forests. These materials have been tracked and documented by the Forest Stewardship Council™ (FSC™)

to ensure they meet the standards for sustainable forestry and products.

Some plastics are used in our cartons to protect the filled product and to make sure the package does not leak. However, we continue to use an increasing amount of plastics that have been produced from renewable raw materials. There are many potential sources for the raw material for such plastics, and it is important to us that we select those which meet our strict sustainability criteria. At the moment, Elopak uses renewable plastic produced from two sources: sugarcane from Brazil, and residues from paper production from the Nordic forests.

The Importance of Renewables Today

Using renewable material is important for several reasons. First of all, the world simply cannot continue to rely on finite and fossil resources. These resources are limited, and will not be replenished with time. The shift to renewable resources must occur sooner rather than later.

Secondly, renewable resources generally have a significantly lower carbon footprint than fossil resources. The reason is that plants absorb carbon dioxide (CO₂) from the atmosphere as they grow. When plants are used in products or materials, the carbon becomes locked in, until it is rereleased when the products are incinerated or rot in a landfill. Since the carbon originally came from the atmosphere, it will count as zero when emitted back into the atmosphere.

For fossil resources, it works differently. The carbon contained in the oil or gas originally came from plants that grew millions of years ago. Thus, the carbon in fossil resources has not been circulating in the atmosphere for a very long time. When oil and gas are converted to products or raw materials, which are then either burnt or landfilled, the carbon will be emitted back to the atmosphere, as "new" emissions.

When we calculate the carbon emissions from the use of renewable resources, we only count the direct emissions from the vehicles and factories used in the processing and transport; we do not count the carbon content of the material itself. In the case of fossil resources, we count both the emissions from production and transport, and the

emissions from the material itself. For this reason, emissions from fossil raw materials tend to be considerably higher.

The Renewable Value Chain

It is often more complex to produce products and materials from a renewable feedstock than from fossil resources. The reason is that the oil and gas are raw materials that can be used directly. Unless you are using the renewable resource in the form of wood, for instance, you will need to convert the renewable resource into another, more usable form.

Polyethylene provides a good example of this value chain, as it can be made from both renewable materials as well as fossil raw materials. When made from oil, the raw material (naphtha, which is a component of oil) is fed into a cracker, which splits the naphtha carbon chains into shorter molecules, called monomers. The monomers are then fed into a repolymerization plant, which recombines the shorter chains into the long carbon chains of polymers and, in this case, polyethylene.

To achieve the same from a tree, you first need to cut and transport the tree to a paper mill. The trees are mechanically ground into chips, and fed into a chemical digester. This process results in chemical pulp, which is used to make paper and paperboard. A residue from this process is a tree-based oil, called tall oil. This is a valuable material that is often sold to advanced chemical plants, which use the oil to make various products, such as makeup. Tall oil can also be sent for reprocessing at another facility, to convert it to naphtha (so called bio-naphtha). This bio-naphtha is chemically equivalent to the fossil-based naphtha, and can be used as an alternative, low-carbon, raw material for a cracker, as described above.

Thus, the value chain for renewable polymers is longer and more complex than that of fossil polymers. This means that additional investments need to be made. The technology employed in this process is also more advanced in the case of renewable raw materials. All of these factors drive cost.

A Renewable Future

The world is at the beginning of a bio-based economy, where fossil raw materials will gradually be replaced with renewable ones. Elopak is proud to be at the forefront of this development.



The Importance of Forests

On average, our cartons consist mainly of naturally renewable paperboard, sourced from sustainably managed forests.

Forests are naturally renewable since trees grow relatively quickly without human interference. During their growth, trees absorb carbon dioxide (CO₂) from the atmosphere and produce oxygen. For centuries, trees have been used for important products such as firewood, construction material and paper. Forests are a crucial part of our ecosystem, providing clean water as well as food and shelter for many insects and animals.

However, forests are only renewable as long as they are managed responsibly. Unfortunately, there are many examples of illegal logging occurring in rainforests and other natural forests. If trees are cut down without being replanted,

or the area is used for another purpose, such as palm oil plantations, all the benefits from the forest will be lost.

Between 1990 and 2015, the world lost 129 million hectares of forest. During this time, however, Nordic countries have maintained an annual net growth of forest land, meaning that the amount of wood harvested is less than the forest growth each year. This helps contribute to absorbing the increasing global greenhouse gas (GHG) emissions.

Elopak's packages consist mainly of paperboard (on average 75%), which is made from wood. For Elopak, it is important to participate in the fight against illegal logging

By "legal and acceptable", or "controlled sources", we mean wood fiber that is verified NOT to come from:

- Wood harvested in violation of traditional and/or civil rights
- Wood harvested in threatened high conservation value forests
- Wood harvested in forests being converted to plantations or for non-forest use
- Wood from forests in which genetically modified trees are planted
- Illegally harvested wood

This study proves to us the benefits of FSC certification and hence confirms the value of our commitment to the FSC system.



and to ensure that all forestry behind our cartons is not only legal, but also responsible. This is how we ensure that our main raw material is truly renewable, and will be available for future generations. This is done through standards set by the Forest Stewardship Council (FSC).

The Importance of FSC Certification

A recent study conducted by FSC evaluated the contribution of FSC certification to biodiversity in forests in Sweden, Finland and the Baltic countries. FSC standards are implemented individually in each country to complement local legislation, ownership structure and tradition. FSC certification supplements national legal requirements for forest management by setting additional prerequisites for sustainable forestry. This includes protecting certain species, old-growth forests and natural habitats, in addition to setting aside protected areas and supporting tree retention. The study shows that these requirements, in addition to leaving high stumps and performing controlled and strategic burning, have a documented effect in maintaining biodiversity in forests.

"This study proves to us the benefits of FSC certification and hence confirms the value of our commitment to the FSC system," says Uno Brinnen, Senior Vice President of

Forestry at BillerudKorsnäs, one of Elopak's key paperboard suppliers.

Facts and Numbers

FSC is a certification system that ensures forests are managed in a sustainable and responsible way. Through this system, the entire Elopak value chain has been certified: from forest yield, to paperboard production, to manufacturing of the final product. Elopak offers FSC-certified and labeled cartons to our customers. Sales of FSC-certified cartons have steadily increased year-over-year since Elopak secured certification in 2010. In 2017, Elopak reached a sales volume of 5,5 billion FSC-certified cartons (37% global, 58% Europe).



THE FOREST STEWARDSHIP COUNCIL™ (FSC™) is an independent, non-profit organization devoted to encouraging the responsible management of the world's forests. FSC sets high standards that ensure forestry is practiced in an environmentally responsible, socially beneficial and economically viable way.

Elopak's New and Improved Renewable PE Offering

Elopak aims to increase the share of renewable raw materials in our cartons.

In 2014, Elopak launched the first cartons based on 100% renewable raw materials. It has proven to be a success, with product launches from several large brand owners. Due to the use of a renewable (as opposed to fossil) feedstock, greenhouse gas (GHG)* emissions have been avoided at a level of 4 725 tonnes. Continuing to strive for improvement, in 2017 Elopak introduced new feedstocks for use in our renewable cartons. The development of plastics made from renewable raw materials is moving fast and new solutions are being introduced at a high pace. Elopak is pushing this work forward by engaging in research projects where new raw materials are investigated for the development of innovative packaging.

At the 2014 launch, Elopak used renewable polyethylene (PE) based on a feedstock from food production residues, such as used cooking oil. The use of residues is often referred to as "second generation", and is seen as a great contributor to the Circular Economy, which is at the top of EU Parliament priorities. During autumn of 2017, Elopak changed the supply of its renewable PE, and is now sourcing from two different sources. One is based on tall oil, a residue from pulp and paper production. The other is based on sugar cane.

By expanding our supplier base, Elopak has been able to widen our offerings. "In a rapidly developing industry, we find it important to engage with multiple suppliers and follow several possible routes toward fully renewable cartons," says Kristian Hall, Director Corporate Environment at Elopak.

Sourced from Nordic forests, the tall oil-based feedstock is a residue from pulp and paper production. This allows Elopak to offer a carton based entirely on wood. The wood is 100% sourced from responsibly managed forests and other controlled sources, in accordance with the FSC certification system. The standing timber stock in Nordic countries continues to increase, as annual harvest remains lower than annual growth. Increased utilization of the Nordic boreal forests is beneficial both to the environment as well as to the raw material supply of Europe, which is highly dependent on imports from outside of the continent.

*expressed as carbon dioxide equivalents (CO₂e)

Definitions

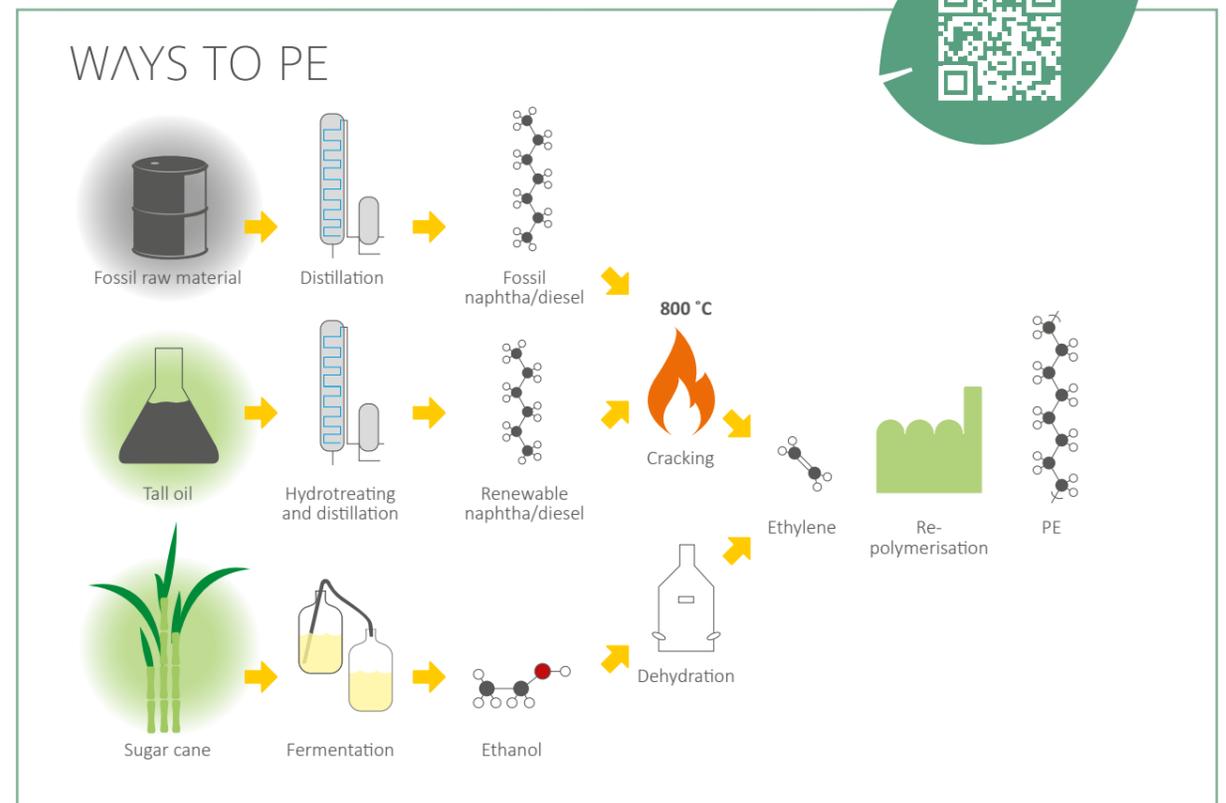
The term **feedstock** can refer to a raw material or, in this case, an intermediate product used to produce a finished product.

As an example, fossil oil is a raw material, and processed naphtha is a feedstock used to produce a wide range of products, for example polyethylene. Renewable naphtha is a feedstock made from renewable raw materials, such as plants or residues.

A **renewable resource** is a natural resource that can replenish over the passage of time, either through biological production or other naturally recurring processes. In contrast, non-renewable resources, such as petroleum and coal, are limited and therefore will be depleted. A change to renewable resources is necessary to ensure resources are available for future generations.



Check out the video on our renewable PE offering!



The second alternative feedstock is sourced from Brazil, where sugarcane can grow in areas that other crops cannot. Sugarcane also proves to be one of the most efficient plants in converting sunlight to energy and hence is a sustainable, fast-growing renewable resource. As little as 0,02% of the arable land in Brazil is used to produce ethanol. In comparison to fossil based raw materials, all renewable alternatives are better for the environment, both in terms of resource depletion and carbon footprint. With some exceptions, Elopak's customers can now choose which feedstock of renewable PE they would like to feature on their cartons. Both feedstocks are certified according to ISCC PLUS.

For agricultural practices, ISCC PLUS ensures:

- Biomass is not produced on land with high biodiversity and high carbon stock

- Good agricultural practices protecting soil, water and air are applied
- Human rights, labor and land rights are respected

In addition, ISCC PLUS ensures that the entire value chain is certified up to the finished product. Elopak uses a mass balance system, which is reviewed by third party auditors annually. For Elopak, transparency and credibility are key. This is why we ensure that all of our renewable materials, from paperboard to plastics, are sourced and verified through accredited certification systems. Almost all of Elopak's cartons can be offered with renewable PE, significantly lowering the carbon footprint of the cartons and helping our customers achieve their environmental goals.



ISCC stands for "International Sustainability and Carbon Certification" and is a world-wide applicable and acknowledged certification system for any kind of bio-based feedstocks and renewables. ISCC PLUS is specific for food and feed products as well as for technical/chemical applications (e.g. bioplastics) and applications in the bioenergy sector (e.g. solid biomass).



Naturally Pure-Pak®

The first gable top carton with natural brown paperboard. Naturally sustainable, naturally different, naturally authentic.



The new paperboard requires no bleaching chemicals and maintains the same physical and sensory properties as standard paperboard.



Developing the First Gable Top Carton with Natural Brown Paperboard

In 2017, in collaboration with Stora Enso, Elopak launched the Naturally Pure-Pak® carton. This was the first gable top carton to be made from natural unbleached paperboard, resulting in a highly unique, natural look and feel. The new paperboard, Natura Life™ by Stora Enso, retains the natural brown color of the wood fibers, and has a visible fiber structure and distinct texture. This creates a sustainable and authentic package that meets the demand of growing trends in ecological and organic products. Natural packaging materials are increasingly used to communicate the environmental values of regionally sourced and organic products. These materials also support the sustainable values of more eco-friendly products, and have outstanding shelf presence.

The new paperboard requires no bleaching chemicals and maintains the same physical and sensory properties as standard paperboard. The weight reduction is achieved as a result of the stronger, unbleached fibers,

which result in a highly resource efficient paperboard. The carton has a more organic appearance as it is brown on both the inside and the outside. Both the reduced need for chemicals and the reduced weight have a number of positive environmental effects and results in a lower carbon footprint.

Innovative Developments in Raw Materials

Stora Enso produces the new natural brown paperboard in Sweden, with the majority of fibers sourced from Swedish and Norwegian forests. This innovation is the result of Elopak's collaboration with Stora Enso, which brings together the best of both parties' expertise, competence and experience.



Naturally Sustainable

Reduced environmental footprint by

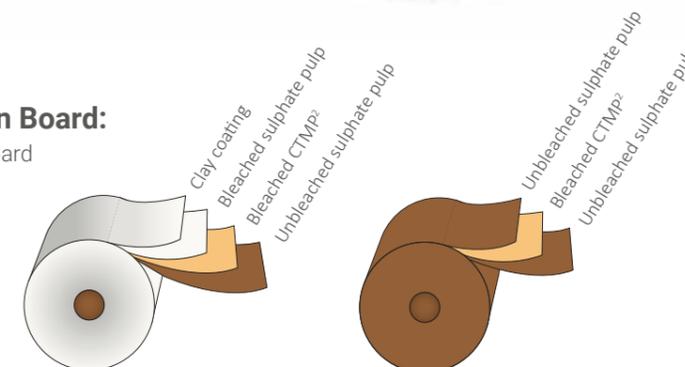
- 4,8% lighter packaging
- 17% lower GHG emissions¹
- Further GHG reductions possible in combination with renewable PE feature

¹Calculations based on Elopak's DEEP tool (v 7) verified by Anthesis. Comparison made for a typical 1-liter PE coated carton, without closure.

Properties of Natural Brown Board:

- Same properties as standard board
- Brown inside and outside
- Unbleached
- Non clay-coated
- Matte-finish
- Visible fiber structure

²CTMP = Chemi-Thermo Mechanical Pulp



New Look for Organic EKO Brands

In 2017, the Naturally Pure-Pak® cartons launched in Latvia with Tukuma Piens' organic EKO Baltais product line. This customer had been looking to incorporate unbleached paperboard for some time, and had previously been printing brown coloring on white cartons to achieve a natural design look. Soon after, Arla Foods Sweden also launched the Naturally Pure-Pak® carton on their EKO organic branded products including milk, fermented milk and cream.

Consumer research by Arla shows that the new carton feels more genuine and authentic to consumers, as well as more Swedish and modern. From the research, the new carton rated highly at communicating eco-friendliness and sustainability, and was easy to spot on the shelf. "For Arla, the move to the new paperboard was a relatively quick change, with no necessary investments in equipment or modifications of existing machinery, and the Naturally Pure-Pak® cartons were implemented easily into the existing supply chain," says Johan Bergholm, Elopak's Key Account Manager in Sweden. The incorporation of Naturally Pure-Pak® cartons works toward Arla's goal of reducing its climate impact from packaging by 25% between 2005 and 2020. "The new Naturally Pure-Pak® carton delivers on key values for Arla. It is renewable, recyclable, reduces climate impact and provides standout for the EKO brand to organic consumers," says Anna-Karin Modin Edman, Sustainability Manager at Arla.

Teamwork Brings the Natural Paperboard to Life

The Natura Life™ paperboard is the result of a great collaboration between Elopak and Stora Enso. Talks with Stora Enso began in October 2015, and lasted nine months before the board met the required properties and enabled the project to move forward. It was decided to give the paperboard a matte coating to achieve a more natural look and feel. Elopak started to run reels for testing of the new material. "At this point we encountered some technical challenges including making sure that all colors on the register worked on the new board, with both offset and UV Flexo print," explains Håvard Grande Urhamar, Specialist Manager Board Development at Elopak. The challenges were resolved through great internal collaboration within Elopak, "Everyone worked together extremely tightly. We had close dialogue with development, purchasing, planning and sales," Urhamar adds, "there was a very straight line of collaboration from all the specialists which made us confident at each stage, and the result we now see on the shelf, is amazing."



Back l-t-r: Michael Olsson, Stora Enso, Franko Vrhovac, Elopak, Håvard G Urhamar, Elopak, Johan Bergholm, Elopak, Tom Helge Egenes, Elopak
Front l-t-r: Ola Tönnerberg, Stora Enso, Maria Adolfsson, Stora Enso, Erik Voet, Elopak

The Future of Plastic Packaging in the Circular Economy:

Elopak Joins Norwegian Research Team

In 2017, Green Dot Norway initiated a long-term research project called FuturePack. The project aims to develop plastic packaging materials for the future by identifying sustainable and economically viable solutions to today's technological, societal, political and environmental challenges.

The project will run from 2017 to 2021, and is supported by the Research Council of Norway. Norner Research coordinates the project and its 13 partners, including eight industry partners, and five from institutes/universities. Key objectives for FuturePack include evaluating raw material resources, such as biomass and plastic waste. The project aims to develop a new and sustainable technology for polymer production based on this research. Packaging design is another key focus, ensuring that new polymers can be recycled after use. Throughout the project, life cycle assessments will be done to confirm environmental benefits of the new product.



Environmental Highlights 2017

Our raw materials

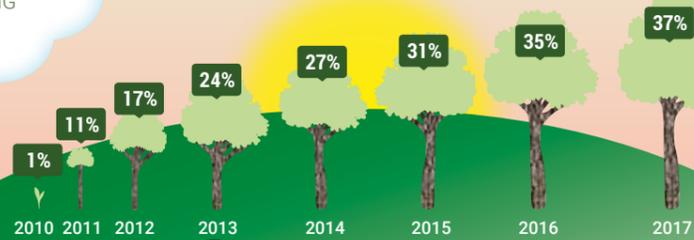
Since the launch of cartons featuring renewable PE, Elopak has saved

4 725

tonnes of GHG emissions.

Elopak Group global FSC™ sales¹

(percentage of sales)



100%

of Elopak's paperboard is sourced from verified legal and acceptable sources.

Our company

Elopak Group² GHG emissions

(tonnes CO₂e)



69%
reduction since 2008

Elopak Group GHG emissions per produced carton
1,32
g CO₂e

CERTIFIED CARBON NEUTRAL
company
CarbonNeutral.com

Elopak Group GHG emissions
14 935
tonnes CO₂e

RE 100



Elopak was the first packaging company to join the RE100 campaign and has been sourcing 100% renewable electricity since 2016.

Since Elopak became carbon neutral, we have offset more than

70 645

tonnes of GHG emissions (CO₂e). This is equivalent to removing 30 000 cars from the road for one year.

CO₂ =



~ 30 000 cars

Elopak Group² Energy Intensity from Production

(kWh/1 000 cartons produced)



Elopak's 2017 emissions related to third party transport is:

19 799 tonnes CO₂e

Our products



CERTIFIED CARBON NEUTRAL
packaging

CarbonNeutral.com

47%
average beverage carton recycling rate in Europe

99%
of Elopak's internal paperboard and carton waste recycled

An average of **36%** of Elopak cartons sold in Europe and North America were recycled



Carbon Footprint of an average Elopak PE carton with closure:

27,05
g CO₂e/carton³

¹The Forest Stewardship Council™ (FSC™). FSC™ C081801. Look for FSC certified products – the mark of responsible forestry. www.fsc.org

² 100% owned subsidiaries

³ Based on internal cradle-to-gate calculations in Elopak's DEEP tool. The numbers represent PE coated cartons with closures, for fresh dairy products.



Your responsible choice

The CarbonNeutral® Pure Pak® carton.

We compensate for the value chain emissions of producing this package by supporting verified emission reduction projects.

Rimba Raya rainforest protection project. Protects the local rainforest and the orangutan population in Borneo, Indonesia.



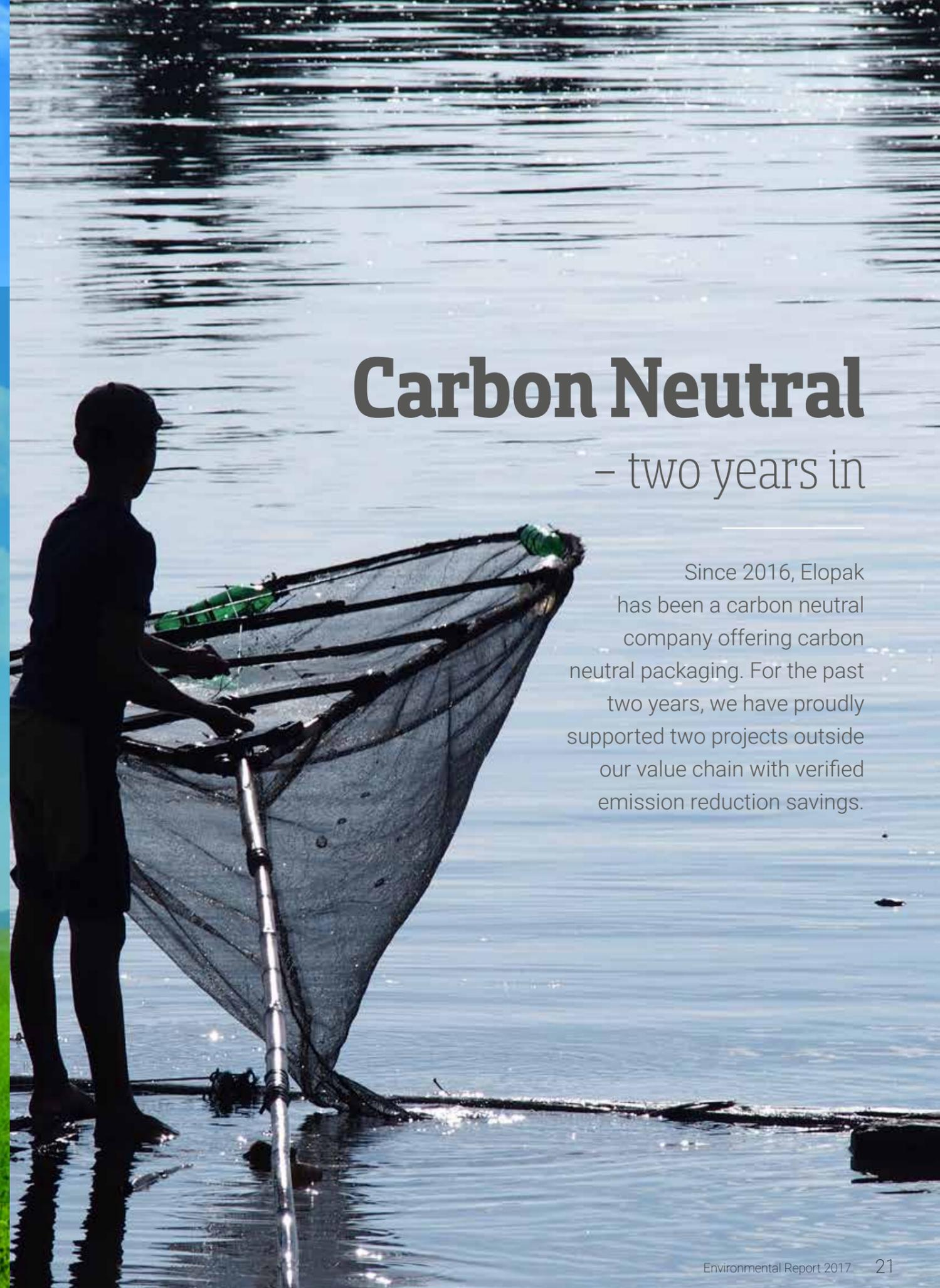
Uganda cookstoves project. Subsidizes the manufacture and sale of fuel-efficient cookstoves across Uganda.



Carbon Neutral

– two years in

Since 2016, Elopak has been a carbon neutral company offering carbon neutral packaging. For the past two years, we have proudly supported two projects outside our value chain with verified emission reduction savings.



Elopak's Pathway to Carbon Neutrality

Since Elopak became carbon neutral, we have offset more than 70 645 tonnes of GHG emissions. This is equivalent to removing 30 000 cars from the road for one year.

Elopak has been a carbon neutral company and offering carbon neutral cartons since 2016. So what does it take to become carbon neutral? There are certain criteria and standards that must be met.

First, a company must show that it is continuously working to reduce greenhouse gas emissions, partaking in regular measurement and monitoring practices. Elopak has been formally tracking its emissions since 2008, and publishes an annual company environmental report. However,

tracking alone is not enough; a company must also demonstrate that it is reducing its emissions. To do this, Elopak invests in energy efficiency and regularly looks for ways to reduce raw material use.

However, there will always be some residual emissions, even after they have been reduced as much as possible. To become carbon neutral, Elopak can offset these emissions by supporting projects outside of our value chain, which have been proven to reduce GHG emissions.

First Carbon Neutral Cartons in Spain

In November 2017, Cooperativas Lácteas Unidas (CLUN) became the first company in Spain to introduce certified carbon neutral packaging across both the Feiraco and Únicla ranges in the Pure-Pak® Sense Aseptic cartons. "Our collaboration with Elopak and the new innovative packaging has helped with our commitment to innovation, quality, efficiency and sustainability of the dairy sector, and our responsibility to the Galicia region, to support its environmental, economic and social fabric through our values and our working methods," says Adali Morales, CLUN's Head of Marketing.



Uganda Improved Cookstoves Project

The Uganda Improved Cookstoves project subsidizes the sale of fuel-efficient biomass and charcoal cookstoves across Uganda, which improves cooking conditions, creates local jobs and reduces indoor air pollution. 2017 is a hallmark year for the Uganda Improved Cookstoves project, as it celebrates ten years of carbon savings with rewarding local economic benefits. The project has Gold Standard certification.

Sustainable Development Benefits of the Project (2007–2017)

Stoves Sold: The revenue from carbon credit sales has allowed the Uganda Improved Cookstoves project's manufacturing partners to produce and sell over 510 000 stoves since the project started ten years ago. This is the largest project of its kind in East Africa and the world's first cookstove project to achieve Gold Standard certification.

People Benefiting: Since there are five people in the average Ugandan household, over 2,5 million people are benefiting from fuel cost savings and faster cooking times.

Money Saved: Collectively, Ugandans have saved over USD 185 million on fuel costs since the project's formation. This extra income has allowed households to spend on food, clothing, school fees, medical expenses and starting small businesses.

CO₂ Avoided: To date, over 3,9 million tonnes of carbon dioxide emissions have been avoided as a result of this project.

Trees Saved: These stoves have avoided the use of over 711 552 metric tonnes of charcoal. When converted, this amounts to over 10,8 million trees.

Since 2007, over 3,9 million tonnes of carbon dioxide emissions have been avoided as a result of this project.



Damalie is a mother of three. She owns a small business that sells tomatoes and maize in the evenings. Her neighbor introduced her to the benefits of improved cookstoves and she invested in one a year ago. She used to spend UGX 1 000 (USD 0,26) a day on charcoal and now uses the same quantity of charcoal over two to three days. This saves her up to 75%. She uses the savings to pay for her children's school fees and to invest in her business. Because the stove saves her on cooking time as well, she is able to spend more time attending to her business and family.

Rimba Raya Biodiversity Reserve Project

What Is the Rimba Raya Project?

Rimba Raya was the first validated REDD+ project under the Voluntary Carbon Standard (VCS) and helped define the criteria by which many such projects are measured. It is also the first REDD+ forest carbon project in the world to receive triple-gold validation under the Climate Community and Biodiversity Alliance Standard (CCBA). As a REDD+ project, Rimba Raya undertakes efforts to specifically **Reduce Emissions** caused by **D**eforestation and **D**egradation. Additionally, the project supports the local indigenous people of Central Kalimantan in Indonesian Borneo by improving quality of life and assisting with business opportunities that help them become financially independent, whilst preserving the forest. Rimba Raya has 14 villages within the concession area and covers 47 000 hectares of forest.

2017 – Selected Project Updates:

Economic Growth from Salted Fish Enterprise

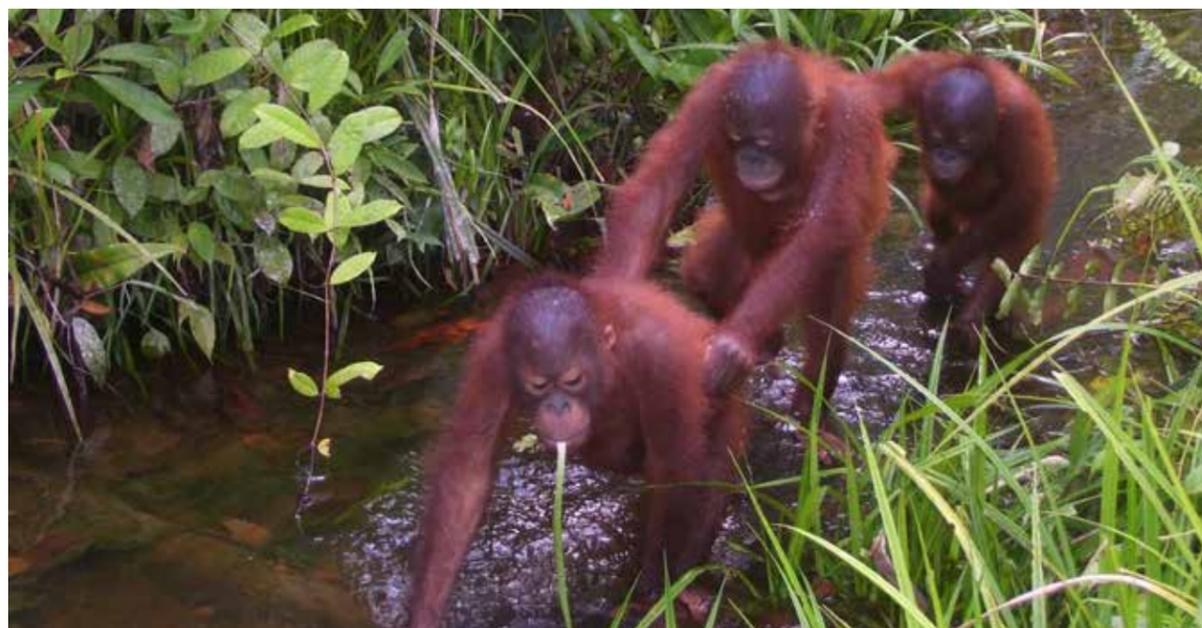
The Salted Fish microenterprise was developed in late 2016 and has been effective in bringing income to both the women and men of the Muara Dua and Tanjung villages. On average, this microenterprise provides a supplemental annual income of approximately USD 500 per person. This is a substantial amount when one considers that it is a third of the average annual income. The fish are dried in the

sun and are not treated with any chemicals, making them an organic, high-quality product.

Orangutans Released Back into Natural Habitat

2017 saw a major orangutan release into the Rimba Raya Biodiversity Reserve of Indonesian Borneo. The forest, nearly the size of Singapore, is an ideal orangutan habitat and provides perfect conditions to ensure that the recent release of ten orangutans has long-term success. The ten, wild-born, previously captive orangutans were released on the 22nd and 24th of February, 2017. This was made possible thanks to a field conservation partnership with the Orangutan Foundation International (OFI), led by Dr. Biruté Mary Galdikas who works tirelessly to save these endangered animals.

The orangutans were transferred first by truck from Pankalan Bun to Buang village in the Seruyan Regency, followed by a boat transfer to the release site, Tatah Selamat in the Baung village. Traversing the rugged terrain proved to be quite challenging, given the requirement for the site be remote enough to ensure the orangutans have every opportunity to adapt to their new home with as little interference as possible. However, it was worth all of the effort just to see the delighted orangutans as they exited the transport cages, with most of them showing little interest in the fruit on the platform, and immediately climbing up into the forest canopy.



Recycling

All of Elopak's cartons are 100% recyclable.

However, our work does not stop there.

Elopak partners with local authorities, industry peers and other stakeholders to increase the beverage carton recycling rate within the markets we operate.

In the following section, you can learn more about beverage carton recycling today, and some of the latest innovative developments.

47%

average beverage carton recycling rate in Europe

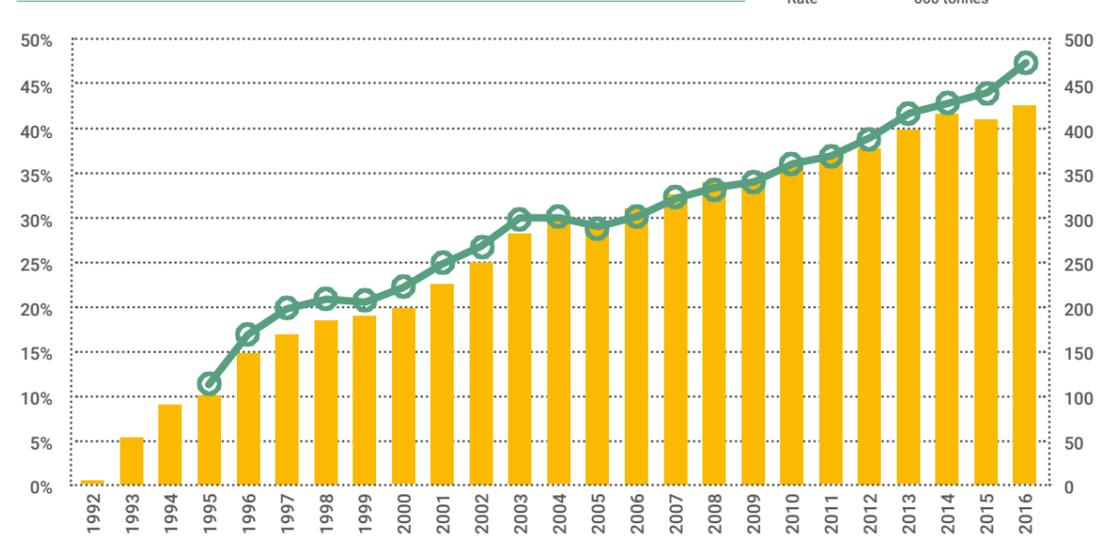
60%

In the U.S., of households have access to carton recycling.

36%

An average of of Elopak cartons sold in Europe and North America were recycled.

EU beverage carton recycling rates until 2016



Source: ACE

New Recycling Initiative in Ukraine

Ukraine's recycling association, UkrPEEC, was founded in 1999 by several international companies. The organization consists of Elopak and industry peers, who have come together with the common goal of increasing the nation's recycling rates of packaging material in the most efficient way.

The association recently kicked off a pilot project in the central town of Vyshgorod, where they, in cooperation with the city council, have engaged the public and set up yellow containers to collect general packaging waste.

There is only a small amount of packaging in Ukraine, that is currently recycled. However, Elopak was inspired to reverse this trend along with its industry partners (PepsiCo, Coca Cola, CanPak and Tetra Pak). Together, these companies have initiated the introduction of a European model of waste management. Given that a sorting facility had already been constructed in Ukraine, waste management will be possible as soon as the collection phase is effectively addressed.

The results of the pilot program have yet to be seen. "We are quite optimistic about

this pilot and the results so far," says Konstantin Gavriluyk, plant manager at Elopak's factory in Fastiv. "Ukraine has accepted the EU regulations on recycling, and hence some action is needed. We have now suggested a new local law and are negotiating for this in Parliament. Hopefully Ukraine will soon follow the European standards when it comes to recycling."



Industry cooperation to promote beverage carton

Cartons are the renewable, low-carbon and recyclable packaging solution. Beverage carton manufacturers and board suppliers work together to demonstrate that beverage carton packaging is the smart green choice today and for the future.

Some examples of industry cooperation of which Elopak is an active member in North America and Europe include:



Growing End Markets for Recycled Beverage Cartons

In September 2017, ReWall, an Iowa, USA-based company that converts food and beverage cartons into healthy, high-performance green building materials, announced that it was doubling its manufacturing capacity of roofing products and other construction materials made from recycled food and beverage cartons. This increases its need for recycled cartons from about 200 metric tonnes a month to about 600 metric tonnes, and potentially even higher. Founded in 2008, ReWall has worked closely with the Carton Council to expand end markets for cartons used for many common food and beverage products. The Carton Council provided financial and technical support, and

shares ReWall's commitment to growing this innovative end market for recycled cartons.

The unique properties of food and beverage cartons, such as strength, durability and resistance to moisture and mold, make them an ideal material for creating high-quality building materials. Through innovative technology developed specifically for ReWall's needs, the process uses no water, formaldehyde glues or hazardous chemicals. Furthermore, no waste is generated, and every part of the carton is incorporated into the finished products, which include roof cover board, exterior sheathing, wallboard and floor underlayment. The life cycle of the cartons will continue as the building materials can also be recycled.

ReWall's products have gained the attention of various companies and institutions in Canada and the USA seeking strong, reliable products that are also good for the environment. The Resource Productivity and Recovery Authority (RPRA) recently installed ReWall's interior wallboard in its new Toronto office. Additionally, ReWall's EssentialBoard sheathing is being used in the Zero House green building project, a joint effort of the Endeavour Centre and Ryerson University's Department of Architectural Science. The house was designed to use zero net energy, have a zero carbon footprint and contain zero toxins. Zero House was displayed in Toronto, at the inaugural edition of EDIT: Expo for Design, Innovation & Technology, which ran from September 28 to October 8, 2017.



About Carton Council of Canada

Carton Council of Canada provides a platform for carton manufacturers in Canada to benchmark and profile cartons as renewable, recyclable and low-carbon packaging solutions. Engaging with stakeholders and partners seeking high environmental stewardship, it contributes expertise to environmental policy and legislation. Carton Council of Canada members (including Elopak) work together to demonstrate that carton packaging is the smart green choice today and in the future.

The unique properties of food and beverage cartons, such as strength, durability and resistance to moisture and mold, make them an ideal material for creating high-quality building materials.





The Journey of a Used Beverage Carton

What happens to a beverage carton once its product contents have been enjoyed and it is sent for recycling? Here is an overview of a beverage carton's recycling journey, as explained from a recycler's perspective.



A beverage carton is made of the strongest, high quality fibers available: cellulose fibers.



Seen from a recycler's point of view, the beverage carton is the ultimate packaging. It combines excellent protective properties for the product it contains and is strong enough to withstand the rigors of the recycling process.

A beverage carton is made of the strongest, high quality fibers available: cellulose fibers. Nothing else would be able to withstand the arduous process of converting and filling the packaging, maintaining shelf life, transport, consumer consumption and finally, the recycling process. Still, even when processed and distributed by a material recycling company, every single cellulose string remains fully protected. Sturdy plastic barriers, which safeguard the product from contamination, also provide structural reinforcement and protect the packaging content from its surroundings.

Fiskeby Board paper mill includes recycled beverage carton material as a raw material in the production of new packaging board. With a recycling utilization rate often exceeding 93% of the carton's cellulose part, the process is tailored to release the delicate fibers from their plastic shield. Each year Fiskeby buys 180 000 metric tonnes of post-consumer packaging material, of which beverage cartons are a substantial amount.

The process begins with the choice of material to recycle. To control this, Fiskeby works with reliable and competent suppliers who can meet the company's demands. Products are purchased and consumed at a fast pace and the recycling turnover rate is high. Thus, within days or at maximum a few weeks after collection, the packaging is already recycled.

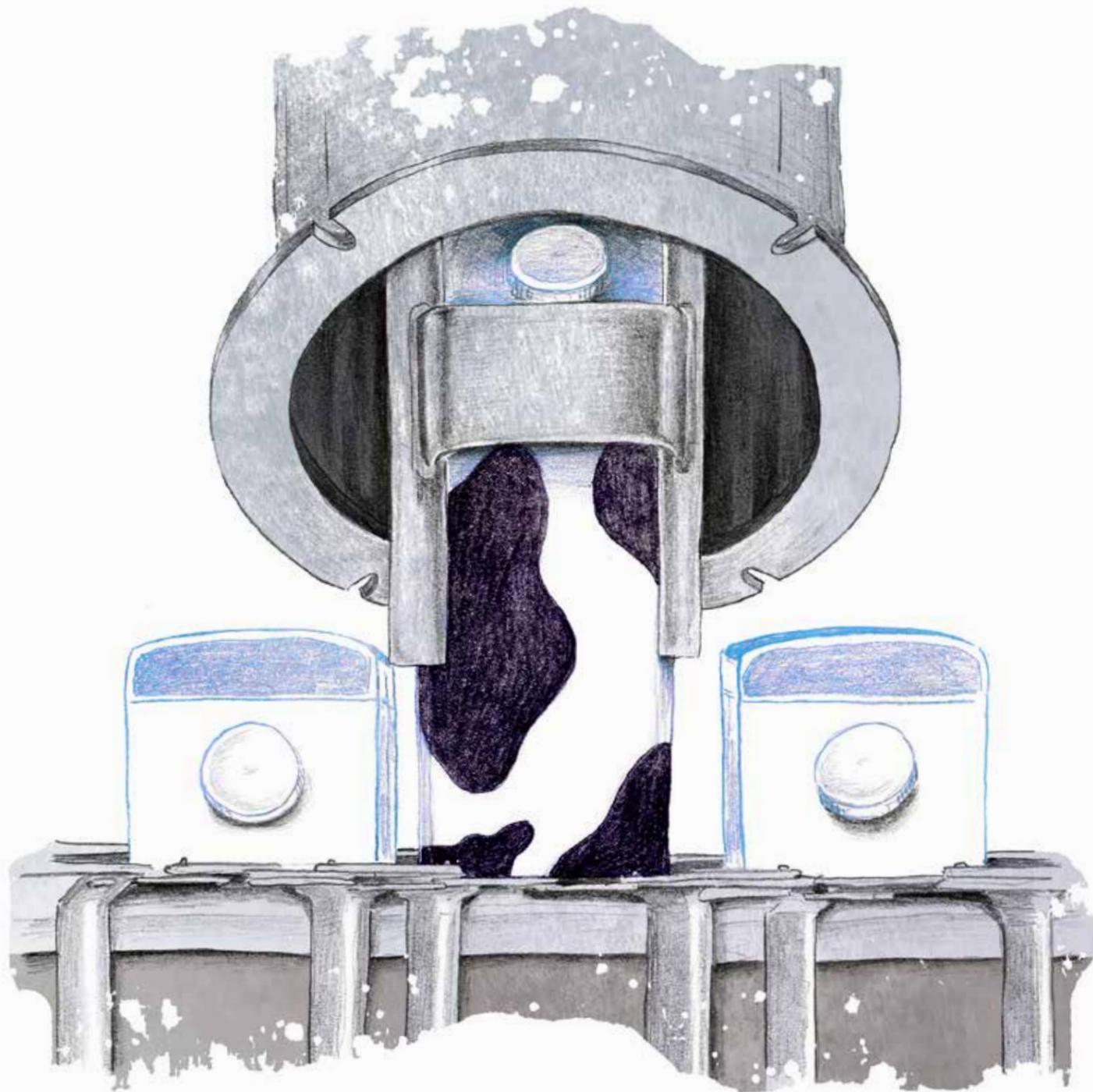
Once at Fiskeby, the packaging is first roughly disintegrated into "hand-size" parts that are then fed into the continuously running mechanical process. This results in the raw fiber pulp being separated from the plastic and other barriers, and takes place in a giant drum washer. The washer's rotation, together with recycled hot water, brings energy into the mixing process, and helps loosen the fibers from the plastic barriers. There are several subsequent steps that help refine and prepare the complex fibers, in turn increasing the quality of the pulp.

The properties brought to Fiskeby's four-layer packaging board, known as Multiboard®, made from recycled beverage cartons, make it the world's strongest board of its kind.

The overall efficiency of the process is boosted by the supporting systems. Any combustible reject material (also known as PolyAl) is internally transferred to the mill's energy plant. Here, steam is produced along with some electricity, which fully covers the thermal needs of this recycling process. The mill operates 350 days per year, and maintains a constant focus on energy efficiency. To cope with any remnants in the outgoing water phase, Fiskeby applies Best Available Technology (BAT) and turns a portion into biogas.

About Fiskeby

Located in Norrköping, Sweden, Fiskeby is a paper manufacturing and post-consumer packaging recycling plant. Each year Fiskeby buys 180 000 tonnes of post-consumer packaging material, of which beverage cartons are a substantial amount.



Methodology

Elopak's Key Environmental Data Series
(Years 2008, 2012, 2015, 2016, 2017)

Materiality and What We Measure

For transparency and comparability, we have published our key environmental data since our environmental reporting began, and our baseline was established, in 2008. The data originates from Elopak's internal reporting system, collated from production, administration and sales units worldwide. Our environmental data shows the development of Elopak's environmental impact each year, as prescribed in the Greenhouse Gas (GHG) Protocol, including the updated revisions of the GHG Protocol Scope 2 Guidance (2015). Our data has been audited and verified by SGS in 2018. For our reporting, we abide by the Greenhouse Gas Protocol, a widely used standard for corporate environmental reporting. Elopak reports according to the 'operational control' consolidation approach, which covers all of Elopak's market units; and converting, roll fed, coating and filling machine plants worldwide. Joint ventures are excluded. Elopak calculates its greenhouse gas data in CO₂ equivalents (CO₂e) and not in separate GHG gases. According to the GHG Protocol, a company shall divide its emissions into the three scopes, described below.

We define our global key performance indicators (KPIs) as:

- Core GHG emissions from energy consumption and business travel (excluding third party transport)
- Core Elopak Group Carbon Emission Intensity – CEI (g CO₂e per carton produced, excluding third party transport)
- Energy intensity from production facilities

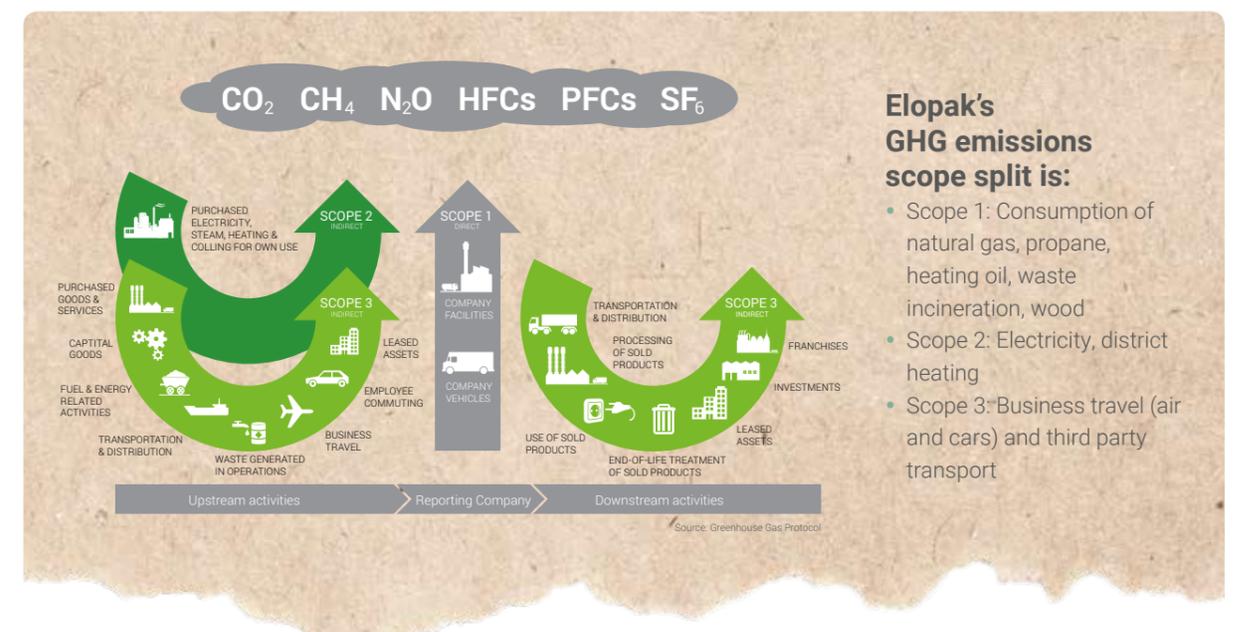
(kWh consumed per 1 000 cartons produced and per m² cartons produced)

Renewable Electricity

Elopak utilizes the market-based allocation method for its Scope 2 accounting. In 2017, Elopak utilized Guarantees of Origin (GOs) to cover electricity consumption of our production and administrative facilities in Europe. For North America (Canada and USA), Elopak utilized a similar system, Green-e® certified Renewable Energy Certificates (RECs), originating from North American-based wind farms. GOs and RECs are systems to trace the source of electricity produced. The purchase is based on actual electricity consumption of various Elopak units within Europe and North America in 2016. The emission factor used for European GOs is 0,0027 (kg CO₂e) and the RECs have an emission factor of zero.

Emission Factor Updates

For 2017 reporting, all electricity emission factors were updated according to the latest 2017 International Energy Agency's (IEA) database, known as "CO₂ Emissions from Fuel Combustion." All site fuels (Scope 1), district heating (Scope 2) and business travel and transportation (Scope 3) emission factors were also updated according to the latest 2017 DEFRA (UK Department for Environment, Food & Rural Affairs) emission factors. By updating all emission factors, we are more in line with market realities and emission factor developments that have occurred since we first began reporting in 2008.



Elopak's GHG emissions scope split is:

- Scope 1: Consumption of natural gas, propane, heating oil, waste incineration, wood
- Scope 2: Electricity, district heating
- Scope 3: Business travel (air and cars) and third party transport

Transport

In order to have consistency and comparability between years, our total emissions and carbon emission intensity (CEI) are calculated excluding transport data. The numbers reported cover third party transport (Scope 3 in the GHG Protocol), as Elopak does not run its own transport operations. The reporting includes transportation services purchased by Elopak, which cover the transport of goods from the supplier's gate to the customer's gate. In addition, Elopak has attained an estimate of all associated transport, including what is purchased and handled by suppliers and customers. This is only for internal evaluation purposes. Transport is split into inbound, internal and outbound transport. Inbound and internal transport includes transport of raw materials and semi-finished products. Outbound transport includes shipment of manufactured and sold products. In estimating transport emissions, we have used the tonne-kilometer approach, as it is a straightforward and consistent method. Furthermore, the input required for this approach is more easily available than the input required for the vehicle-kilometer approach. With the former, we do not need to have full control over the loading of goods. This approach will most likely give us an overestimate of transport emissions, and thus is a valid conservative approach.

Carbon Footprint

To calculate carbon footprint throughout the report, we are using internal calculations, which have been verified by a third party. We use an internal tool called "DEEP – Dynamic Elopak Environmental Performance," which is a cradle-to-gate calculation that considers all emissions connected to the production of all raw materials, as well as Elopak's own operations including final conversion, and all transportation up to the delivery at Elopak's customers' gate. The scope covers Elopak's European operations.

The methodology used is in line with the ISO standards for Life Cycle Assessments (ISO 14040 and 14044). The Product Category Rules (PCR) for beverage cartons are followed where relevant to the carbon footprint calculation methodology (PCR Beverage Cartons 2011:04 Version 1.0, developed in accordance with ISO 14025:2006). Further details on the methodology (process map, system boundary, inclusions, cut-offs, allocation rules) are available upon request.

Primary data is used for Elopak's own operations and the production of some raw materials. Internal production data is taken from Elopak's reporting tool, "Footprinter" (2016 data), and includes Elopak's purchase of renewable energy certificates (Guarantees of Origin) for European plants only. Internal transport data is calculated based on reporting from Elopak's units (2016 data). Suppliers' primary data is used for key raw materials.

Secondary data is sourced from LCA databases, such as EcolInvent, and studies for some of the raw materials, such as PlasticsEurope and the European Aluminium Association, as specified in the beverage carton PCR.



**Greenhouse Gas Verification Statement Number
CCP251468/1/2017/03/2018**

The inventory of Greenhouse Gas emissions in the period
January 1st 2017 to December 31st 2017 for

Elopak AS

P.O.Box 418
Skøyen,
N-0213 Oslo,
Norway

has been verified in accordance with ISO 14064-3:2006 as
meeting the requirements of:

**The Greenhouse Gas Protocol – A Corporate
Accounting and Reporting Standard**

To represent a total amount of:

14,936 tCO₂e

For the following activities
Packaging materials manufacture and supply, office facilities, business travel (air
and leased cars).

Lead Assessor: Paul Parker
Technical Reviewer: Paulomi Raythatha

Authorised by:



Jonathan Hall
Business Manager
SGS United Kingdom Ltd
Verification Statement Date 14th March 2018
This Statement is not valid without the full verification scope, objectives, criteria and conclusion available
on pages 2 to 4 of this Statement.



Elopak Group 100% Owned Subsidiaries (Production, Sales & Administration Units)

KPIs

		Total Year					
		2008	2012	2015	2016	2017	2017 vs. 2008
Total CO ₂ e emissions (market-based approach)	tonnes CO ₂ e	48 584	42 706	21 726	15 446	14 936	-69 %
Produced cartons	mill cartons	8 046	8 386	10 188	10 870	11 325	41 %
Carbon emissions per produced carton	g/CO ₂ e per carton	6,04	5,09	2,13	1,42	1,32	-78 %
Energy intensity per produced carton	kWh/per 1000 cartons	13,6	13,0	13,1	13,0	12,0	-12 %
	kWh/per 1000 m ²			158	156	144	

Scope 1	tonnes CO ₂ e	10 927	9 198	10 555	9 942	8 709	-20 %
Scope 2 (market-based approach)	tonnes CO ₂ e	33 452	29 534	5 459	359	868	-97 %
Scope 2 (location-based approach)	tonnes CO ₂ e	33 452	29 534	31 436	33 726	32 081	-4 %
Scope 3 (excluding third party transport)	tonnes CO ₂ e	4 204	3 974	5 712	5 145	5 359	27 %

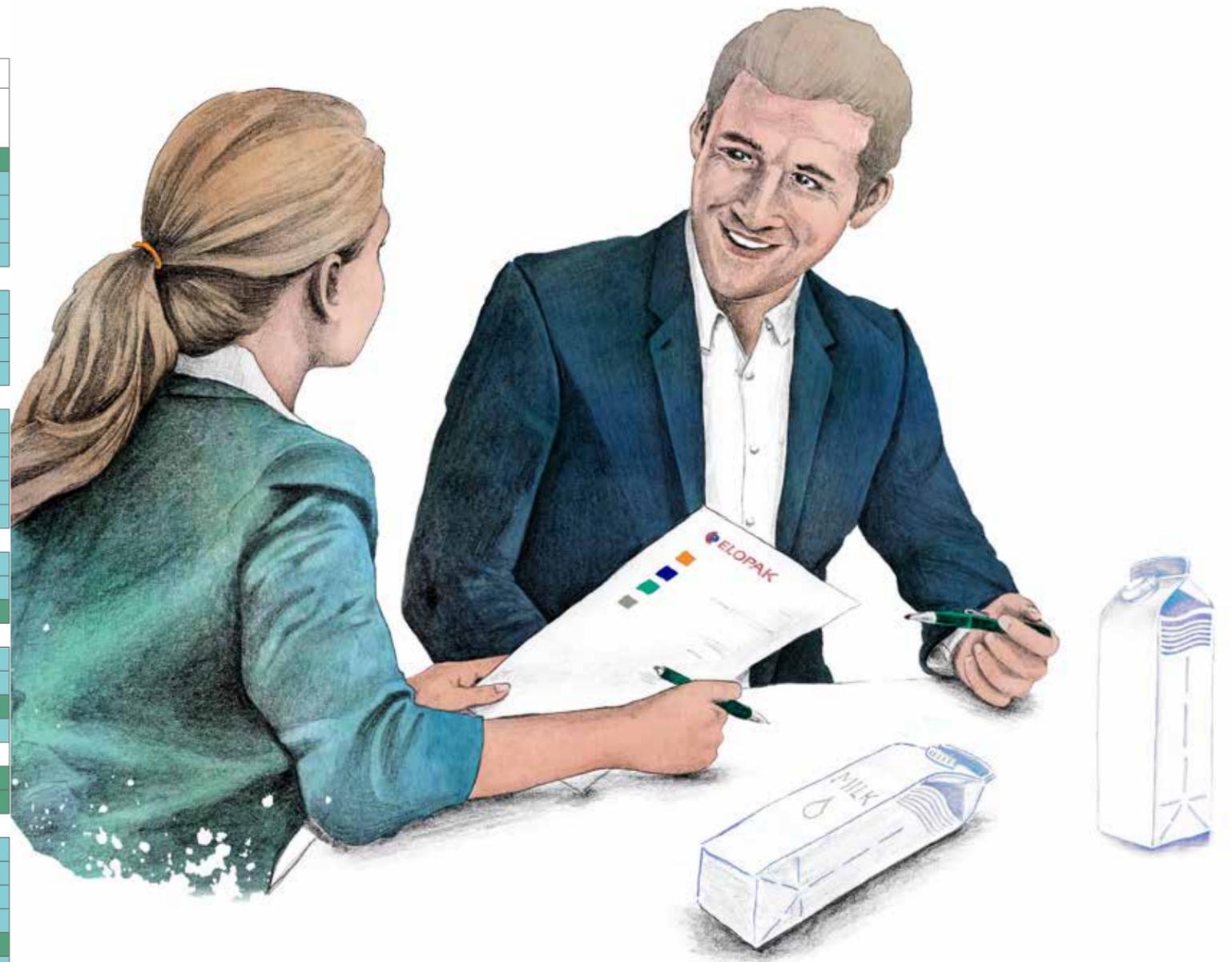
SCOPE 1		tonnes CO ₂ e	2008	2012	2015	2016	2017	2017 vs. 2008
Natural gas	tonnes CO ₂ e	8 586	7 155	7 216	6 531	6 279	-27 %	
Propane	tonnes CO ₂ e	607	708	2 062	1 782	1 490	145 %	
Heating oil	tonnes CO ₂ e	882	607	726	1 067	386	-56 %	
Waste incineration	tonnes CO ₂ e	841	728	537	521	514	-39 %	
Other energy	tonnes CO ₂ e	11	-	15	40	40	264 %	

SCOPE 2		tonnes CO ₂ e	2008	2012	2015	2016	2017	2017 vs. 2008
Electricity (market-based approach)	tonnes CO ₂ e	32 172	29 337	5 431	219	212	-99 %	
District heating	tonnes CO ₂ e	1 280	197	28	128	656	-49 %	
Total energy emissions (Scope 1+2 market-based approach)	tonnes CO ₂ e	44 379	38 732	16 015	10 289	9 577	-78 %	

SCOPE 3		tonnes CO ₂ e	2008	2012	2015	2016	2017	2017 vs. 2008
Travel air	tonnes CO ₂ e	3 491	2 757	4 099	3 551	3 856	10 %	
Travel car	tonnes CO ₂ e	713	1 216	1 612	1 594	1 502	111 %	
Total travel	tonnes CO ₂ e	4 204	3 974	5 712	5 145	5 359	27 %	
Third party transport*	tonnes CO ₂ e			17 805	18 292	19 799		
Total emissions (excl. third party transport*)	tonnes CO ₂ e	48 584	42 706	21 726	15 446	14 936	-69 %	
Total emissions (incl. third party transport*)	tonnes CO ₂ e	48 584	42 706	39 531	33 738	34 734	-29 %	

KEY RESOURCE AND WASTE DATA		2008	2012	2015	2016	2017	2017 vs. 2008
Water consumption	m ³	41 554	42 200	45 209	45 797	43 031	4 %
Recycling of paper and board waste	tonnes	25 532	28 246	49 438	55 952	43 726	71 %
Incineration of paper and board waste	tonnes	1 180	1 156	1 090	897	519	-56 %
Landfill of paper and board waste	tonnes	66	-	6	32	15	-77 %
Total paper and board waste	tonnes	26 777	29 402	50 535	56 881	44 260	65 %
Solvents / inks	kg	181	77	51	45	26	-86 %
Photochemicals	kg	12	6	66	84	60	400 %
Cleaning towels	kg	38	26	9	25	41	8 %
Waste oil	kg	3	3	6	14	10	233 %
Other hazardous waste	kg	43	40	57	58	50	16 %
Total hazardous waste	kg	278	151	189	225	187	-33 %
Energy consumption converted to MWh							
Electricity	MWh	74 789	74 276	89 904	91 536	88 943	19 %
District heating	MWh	4 587	705	102	626	3 325	-28 %
Waste incineration	MWh	3 014	2 611	1 925	1 867	1 844	-39 %
Natural gas	MWh	42 507	35 420	35 722	37 502	35 249	-17 %
Propane	MWh	2 604	3 040	8 849	8 289	6 914	166 %
Heating oil	MWh	3 230	2 223	2 658	3 597	1 306	-60 %
Other energy	MWh	11	-	1 188	3 227	3 343	30 291 %
Total energy consumption	MWh	130 742	118 275	140 347	146 644	140 924	8 %
Air travel short haul	#	2 053	3 792	6 000	6 694	6 837	233 %
Air travel medium haul	#	3 618	3 620	4 559	4 729	5 601	55 %
Air travel long haul	#	868	166	509	549	615	-29 %
Air travel total	#	6 539	7 579	11 068	11 972	13 053	100 %

*Third party transport: Scope 3 emissions in GHG Protocol covering transportation services purchased by Elopak



Elopak Group (Inclusive 100% of Partly Owned Joint Ventures)

KPIs

		Total Year					
		tonnes CO ₂ e 2008	2012	2015	2016	2017	2017 vs. 2008
Total CO ₂ e emissions (market-based approach)	tonnes CO ₂ e	63 576	57 987	38 045	30 357	28 774	-55 %
Produced cartons	mill cartons	11 538	12 226	13 710	14 216	14 849	29 %
Carbon emissions per produced carton	g/CO ₂ e per carton	5,51	4,74	2,77	2,14	1,94	-65 %
Energy intensity per produced carton	kWh/per 1000 cartons	11,9	11,5	11,8	11,8	10,8	-9 %
	kWh/per 1000 m ²			157	156	144	

Scope 1	tonnes CO ₂ e	13 348	11 330	12 234	11 316	10 006	-25 %
Scope 2 (market-based approach)	tonnes CO ₂ e	45 834	42 614	20 016	13 770	13 311	-71 %
Scope 2 (location-based approach)	tonnes CO ₂ e	45 834	42 614	45 993	47 137	44 524	-3 %
Scope 3 (excluding third party transport)	tonnes CO ₂ e	4 394	4 043	5 794	5 271	5 457	24 %



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