

# PULP DIRECT

UPM **BIOFORE**  
BEYOND FOSSILS 

1 / 2019  @UPMPulp #pulpdirect

UPM **PULP**



**EU aims to  
change the  
plastic tide**



**Let's call plastic  
packaging  
a wrap**



**Making the  
classic carton  
fully renewable**



**What's hot in  
Shanghai during  
Pulp Week?**

# EU aims to change the plastic tide

Convenient as they may be, single-use plastic items like plates and cutlery mount up to pollute our oceans and shores at an alarming rate. Now these everyday products – along with plastic straws, balloon sticks and cotton buds – will be banned in the EU market starting from 2021.

However, the biggest change might need to happen in our behaviour.

TEXT Anna Gustafsson / IMAGES Shutterstock

A tiny seahorse clinging to a pink cotton bud, a sea turtle strangled by a plastic fishing cord... Disturbing images of the amount of plastic in our oceans have circulated in the media during the past few years. According to a report by the World Economic Forum there will be more plastic in our oceans than fish by 2050 – unless something in our lifestyle changes.

The EU has stepped up the fight against plastic. Action started already a few years ago with successful reduction of the consumption of plastic bags. Now the European Parliament has voted in favour of banning 10 types of single-use plastic items and fishing gear from the EU market from 2021. The drafting of the Directive was led by the Liberal rapporteur and Member of the European Parliament **Frédérique Ries**.

“This is essential for the planet, and this is what the millions of Europeans who watch us and are ready to consume

differently are asking us to do,” says the MEP from Belgium.

“The new plan will reduce the environmental damage bill by EUR 22 billion, which is the cost of plastic pollution in Europe until 2030. What is great is that alternatives to these single-use plastic items do exist, they are cheap, and most are made in Europe.”

## Alternative materials

The EU plastic strategy also outlines that consumption of several other plastic items, for which there are currently no alternative materials, must be reduced by at least a quarter by 2023. These items are single-use fast food boxes and food containers for fruits and vegetables. The market for alternative materials is expected to grow to EUR 1.5 billion, as estimated by Nasdaq.

”  
Alternatives to single-use plastic items do exist, they are cheap, and most are made in Europe.

Senior Scientist **Heidi Peltola** works at the VTT Technical Research Centre of Finland and specializes in biopolymers, biocomposites and their processing.

“Cellulosic fibres as biocomposite reinforcements can provide a natural look and feel with improved properties and sustainability and can reach full bio-based content depending on the selected plastic material,” she says.

“In addition to biocomposites, cellulose presents wide opportunities to replace plastic. Cellulose-based materials are promising candidates as so-called ‘second generation’ feedstock for bioplastic production.”

The EU has invested already over EUR 250 million to finance research on replacements for plastics through the Horizon 2020 programme. In the coming two years an additional

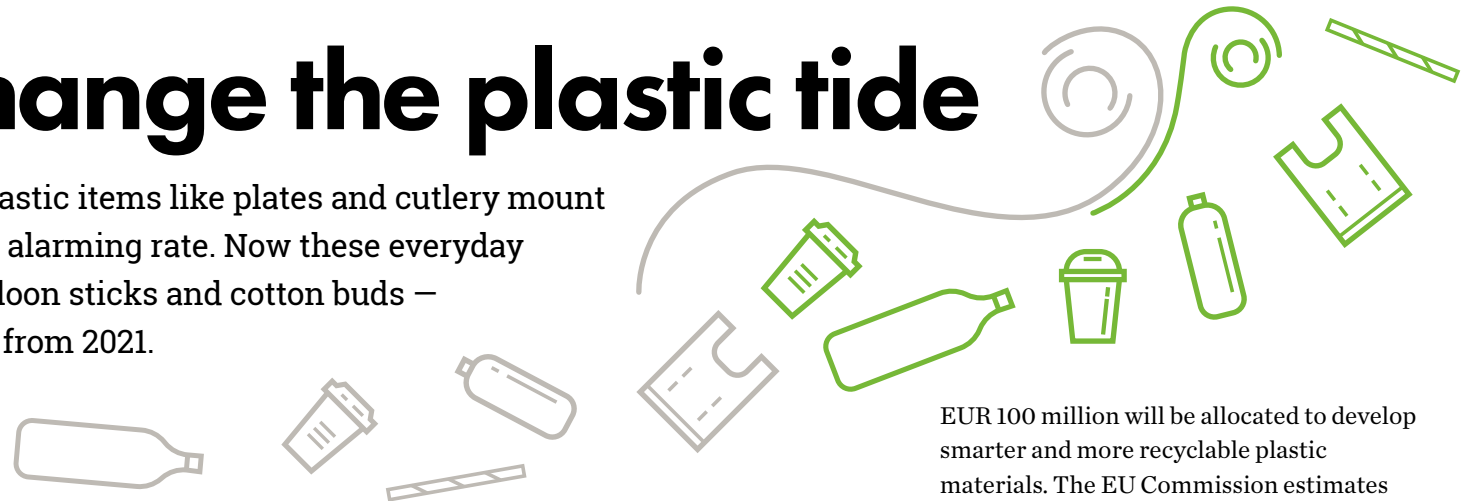
EUR 100 million will be allocated to develop smarter and more recyclable plastic materials. The EU Commission estimates the single-use plastic ban could create 30,000 new jobs due to the increase in the need for innovations.

## Setting a global example

European legislation has been applauded around the world. **Katherine Gaschk** is a Research Masters’ candidate from Murdoch University in Perth, Australia, focusing on waste management research.

“Ultimately it is human behaviour that is responsible for plastic pollution. Removing plastics will certainly help to reduce pollution, but there is also a need to educate retailers, consumers and manufacturers about the impacts of plastic pollution and how we can reduce our dependence on plastics.”

In the future, many everyday plastic items we use out of habit might be replaced by materials made from natural sources. But in the end the most significant change to solve the marine litter crisis might happen in our behaviour. When consumer interest in sustainable alternatives to plastics rises, the technologies will follow. ∞







Plastic packaging:  
**LET'S  
CALL IT A WRAP**



As consumers and regulators are getting increasingly worried about plastic waste, eyes are turning to food producers and supermarkets to lead the change. We talked to supermarket chains and experts across Europe to find out what will be the way forward.

TEXT Rob Hyde / IMAGES Shutterstock

According to a report by Zero Waste Europe, there will be more than 900 billion items of packaged food and drink consumed in Europe in 2020. What kind of materials these packages are made of and whether they will be recycled or not will make a big difference.

One of the key players in driving the change towards more sustainable packaging is supermarkets. As consumers demand better practices and alternatives to plastic, European supermarket chains have been keen to answer the call, pledging to reduce the amount of plastics used in their stores.

However, reducing the amount of plastics is not as straightforward as it may sound. While there are many bio-based alternatives available, there are several angles, both economical and hygienical, to be considered. EU and country level regulations aim both to reduce the amount of

single-use plastics but also strive to make sure that goods are packaged in a safe and durable way – for which plastic is still one of the best alternatives.

### The rise of plastic

In 2015, an average European generated a staggering 31.23 kg of plastic waste, according to Eurostat. As it is estimated that roughly 40% of all plastic waste comes from food packaging, the impact of decisions made by food producers and sellers on recyclability and raw materials is significant.

“The last 20 years led to an extreme increase in the selection, reduction and enlargement of portions on food shelves. There are now mini portions, often as multipacks, and huge

portions à la USA,” says **Roland Schultz**, global director for marketing and packaging at Albis Plastic, an international distributor of compounded thermoplastics to leading manufacturers and brands.

“Service restaurants have disappeared,

slaughterers have given up their businesses and now discount supermarkets dominate the market.”

For others, however, whilst the increase in the selection of packaged supermarket products cannot be denied, it is more a cause for alarm than celebration.

**Joosten Brüggemann** is the managing director of TRADE MARKETEERS Branding & Packaging GmbH & Co. KG, based in Oldenburg, northern Germany. Its clients include Coca Cola, Kellogg's, Pedigree and Whiskas. He says despite the push towards reduced plastic packaging, the reality is that recent decades have been about supermarkets pushing alternative forms of plastics, instead of alternative packaging forms.

“The past 20 years have been marked by the development of new plastics as alternative packaging options, raising the use of plastics in the food industry to a very high level. This variety of plastic solutions has meant one no longer thinks about alternatives.”

### Tackling the plastic problem

Supermarkets in Germany, however, are very keen to point out how, instead of increasing use of plastics, they are striving to reduce it.

**Christina Stylianou** is the press spokesperson for Netto Marken-Discount AG, the German discount supermarket chain owned by the Edeka Group. Its first store was opened in 1984 and today it has 4,200 stores across Germany.

According to Stylianou, Netto has been offering a selection of drinks with reusable packaging for over 30 years.

“We have the largest beverage selection in reusable packaging and offer our customers nationwide half of our beverage selection in reusable containers – a total of around 2,000 different reusable drinks.”

Similar reactions come from the Cologne-based REWE Group, founded in 1927. Today REWE has 3,300 stores across Germany – and also operates smaller supermarket chains such as Billa and PENNY.

Press spokesperson **Kristina Schütz** says REWE has made colossal contributions to reducing plastic packaging within its supermarkets.

“Foil savings on sandwich and garbage bags, kitchen towel packaging and toilet paper on selected REWE and PENNY own-label products resulted in a total saving of more than 300,000 kg of plastic film since 2016.”

European supermarket chains have been pledging to reduce the amount of plastics used in their stores.



Kaufland is a supermarket chain with over 1,200 stores in Germany, the Czech Republic, Slovakia, Poland, Romania, Bulgaria and Croatia. The company's spokesperson **Jörn Roßberg** says Kaufland is constantly focusing on ways to become more environmentally-friendly for the future.

"By 2025, plastic consumption at Kaufland will be reduced by 20%, and all private label packaging will be 100% recyclable."

#### Toward plastic-free

Despite these considerable achievements, bolder still perhaps is removing plastic from the supermarket shelves altogether.

EkoPlaza is a Dutch chain of organic food supermarkets and host of the world's very first plastic-free pop-up store in Amsterdam, offering organic products entirely free of plastic wrapping. Ekoplaza's quality manager **Steven Ijzerman** believes that the idea of all European supermarkets having plastic-free aisles is wholly feasible.

"Our world's First Plastic Free Aisle gave awareness to customers, government and industry. We should now just work on better alternatives than plastic. There are

Packaged goods producers and sellers should take the biggest responsibility for reducing the amount of plastic waste.

already many good options and more to come."

When it comes to supermarket customers, however, many feel Germany is still not doing enough. In a 2018 study by Ipsos, German consumers believed that packaged goods producers and sellers should take the

biggest responsibility for reducing the amount of plastic waste. And almost a quarter of people also viewed that the responsibility is shared not only with producers and sellers but regulators and consumers alike.

Student **Jonas Wermelt** from Bremen thinks that there is still a long way to go. While he acknowledges that Germans separate rubbish far more systematically than some other European counterparts, he believes that there is plenty of room for improvement.

"It is still terrible and also really annoying that supermarkets still use so much plastic. The government should just ban it."

Whether that will happen remains to be seen. Meanwhile, the search for better practices and development of alternative materials continues. ∞

100%  
HYGIENIC  
RECYCLABLE  
SUSTAINABLE  
BIODEGRADABLE

## SAFETY FIRST

One of the reasons why plastic still reigns is food safety and regulation. The EU's "from farm to fork" food safety policies both regulate using harmful substances in packaging materials and protect consumers by enforcing hygiene and quality.

Roland Schultz from Albis Plastic notes that plastic's ability to protect against spoilage is often no longer recognised. Unpackaged food can also lead to wasting natural resources, as food can spoil faster.

"The great challenge for the food supply chain is to continue to ensure optimal protection and hygiene while bringing the recyclability of all packaging towards 100%."

Adopting new FCMs, or food contact materials, in the EU takes a lot of research – and time. The Brussels-based non-profit SAFE – Safe Food Advocacy Europe has prompted the EU to put more focus into researching and utilising recycled materials.

"While this ecological shift has very positive purposes, in particular in the field of environmental preservation, it is still not investigated enough in the area of human health and safety," the organization writes.

Joosten Brüggemann from TRADE MARKETEERS believes that while companies and supermarkets are doing their share, the shift away from plastics depends a lot on European and national programmes and legal frameworks.

"Unfortunately, regulating government frameworks, such as taxes, regulations or bans is still the fastest and most effective way to limit or eliminate plastic use." ∞



# Making the classic carton **fully renewable**

UPM BioVerno naphtha has helped Norwegian packaging company Elopak introduce an entirely wood-based carton into their product line-up, helping to achieve their sustainability goals.

TEXT David Nikel IMAGES Janne Lehtinen and Elopak

**N**orway-based Elopak joined forces with UPM Biofuels and Dow to offer 100% renewable cartons that are both recyclable and responsibly sourced. The improved Pure-Pak® product reduces the carton's carbon footprint by 20%.

While Elopak as a company recently celebrated its 60th anniversary, its signature Pure-Pak® product has hit its centenary. The remarkable staying power of the paperboard gable top carton is, thanks to its lightweight, user-friendly, and product protection properties, valued the world over by food and beverage manufacturers.

The package is used daily by consumers in over 100 countries for beverages and liquid foods of all kinds, but is perhaps best known for keeping milk and juice fresh and safe. Elopak sells around 15 billion cartons a year to more than 80 markets worldwide.

While the carton was already mostly made from renewable wood-based sources and was fully recyclable, Elopak were keen to push product development as far as it could go to create an entirely wood-based carton.

"Packaging is seen by many people as one of the worst offenders for

environmental impact, but it's needed to keep food fresh. Without packaging, there would be more food waste, so we have a responsibility to make the necessary packaging as sustainable as possible. It's an ongoing process of continuous improvement," explains **Marianne Groven**, Interim Director, Environment at Elopak.

## How cartons can be entirely wood-based

UPM BioVerno naphtha made from crude tall oil, a residue of pulp production, is the key ingredient in creating a more environmentally-friendly cap and coating for the Pure-Pak® product - but collaboration is required to create the finished product. Dow first converts UPM BioVerno naphtha into renewable resins that are used to create renewable polyethylene.

Elopak coats the carton with the polyethylene and also uses the product to create sustainable caps, completing a fully renewable carton.

Every tonne of UPM's wood-based naphtha that Dow converts into renewable plastics reduces one tonne of fossil raw materials used. The sustainability of the entire value chain is verified, and that's important to Elopak.



Without packaging, there would be more food waste, so we have a responsibility to make the necessary packaging as sustainable as possible.

**Marianne Groven**,  
Interim Director, Environment  
Elopak

"The fact that UPM could offer us a certified product is the key factor for us," explains Groven.

"Because of the cracking and mixing processes that take place during production, we need the certification in place to prove the entire value chain is sustainable. They were able to provide raw data to us, so we could calculate the CO<sub>2</sub> reduction."

While the 20% reduction in emissions may seem modest, on average 75% of the carton is already made of renewable paperboard. Groven is keen to emphasize other benefits beyond cutting carbon emissions:

"It's important for us that we are using renewable resources that replenish over time. Leaving the world with resources for future generations was an important motivation for us to make this change." ∞





# PREPARATION PHASES FOR A POSSIBLE PULP MILL IN URUGUAY MOVING FORWARD

TEXT Niko Kilkki / IMAGE Shutterstock

UPM is taking part in an international public tendering process in the port of Montevideo, Uruguay. The scope of the tender is the building and operation of a new port terminal. It would specialise in the storage and shipping of pulp, chemicals and other inputs related to pulp production with a capacity to handle approximately 2 million tonnes of eucalyptus market pulp annually.

Port development, supporting efficient and reliable outbound logistics, is a key fundamental for the potential installation

of the third pulp mill in the country. The modern facilities in the Montevideo deep sea port would offer a competitive gateway from South America to growing



export markets benefiting the Uruguayan economy.

The other critical preparation phase underway includes implementation of infrastructure initiatives such as development of Uruguay's rail and road network.

Both of these phases need to be successfully completed before UPM would be able to make a final investment decision on the new pulp mill. The preliminary estimate for a mill investment on site is approximately EUR 2 billion. ∞

# 8 THINGS TO DO IN SHANGHAI

Shanghai is a bustling metropolis full of things to see and experience during Pulp Week. Here are our tips on what's hot in the city...

TEXT Niko Kilkki / IMAGE Shutterstock

1

Rise up and see the city from a bird's-eye view at the **Shanghai Tower**.

2

Take a stroll around Shanghai's ancient water towns such as **Zhujiqiao, Zhou Zhuang and Suzhou**.

3

Get first-hand knowledge on what's happening in the local markets at the **CPICC China International Pulp Forum** on 20 March.

4

If shopping is your thing **Nanjing Road** offers everything from traditional Chinese stores and smaller boutiques to large shopping centres.

5

Join the **Hawkins Wright Symposium** on 21 March to learn about market developments and meet both new and familiar faces in the business.

6

Enjoy shops, restaurants and entertainment in the trendy **Xin Tian Di** district.

7

After a busy day relax in the **Yu Garden** – a classic garden right in the heart of Shanghai.

8

No Shanghai list would be complete without mentioning **The Bund** – experience the city's breath-taking skyline on the Huangpu River promenade.

# UPM SOLIDIFIES ITS POSITION AS ONE OF THE **WORLD'S MOST SUSTAINABLE** COMPANIES

TEXT **Niko Kilkki**

**U**PM has gained two major sustainability recognitions. The company is ranked in 23rd place in the Corporate Knights' list of the world's 100 most sustainable corporations. On the very same day UPM was also highlighted as a global leader on the CDP Forest A List.

Corporate Knights, a Canadian media and research company, analysed some 7,500 companies using quantitative sustainability indicators, such as carbon productivity (revenue-to-tonne-CO<sub>2</sub>

ratio), the percentage of

taxes paid and board gender diversity.

Corporations ranked on the Global 100 list demonstrated that doing well on sustainability issues

can also be good for

financial performance. UPM

was the only Paper and Forest Products company listed.

UPM  
was the only  
Paper and  
Forest Products  
company  
listed.

UPM's actions to tackle deforestation in its supply chain and enforce sustainable sourcing practices also gained them top marks in CDP's annual environmental performance evaluation.

In 2018 over 7,000 companies disclosed environmental data through CDP – an international non-profit organisation that drives companies and governments to reduce their greenhouse gas emissions, safeguard water resources and protect forests. UPM was among only six companies in the world who were able to secure the coveted A ranking.

UPM's strong position in the forest biomass value chain has enabled it to seize the limitless potential of the bioeconomy in replacing fossil-based materials in various applications and industries.

"It's in the core of our Biofore strategy to innovate for a future beyond fossils," UPM's **Sami Lundgren**, Vice President, Responsibility says. ∞

”

**Dear Reader,**

Plastics continue being a hot topic in public discussion and this has resulted in different kinds of action on many fronts. The EU, individual countries and companies are now planning and some have already executed measures to reduce their plastic footprint especially with more sustainable packaging materials.

The world's largest packaged food company Nestlé recently started eliminating plastic straws in their products and they are also transferring one of their brands from plastic to paper. These are just two actions from their plan to get rid of all single-use plastic and to make 100% of their packaging recyclable or reusable by 2025.

The pulp and paper industry is a significant part of the value chain that can offer sustainable, wood-based solutions for current and future needs.

However, the challenge is not just a question of materials. Starting with our own behaviour, all individuals can enhance the reduction, reuse, recycling and proper disposal of all kinds of material. What's more, joint efforts between industries are needed to develop proper infrastructure to enable circularity. Only in this way will there be significantly less waste ending up polluting the natural environment and oceans.

Best regards,

**Lajos**

**P.S.**



**LAJOS ERIC FORSTER**  
lajos.forster@upm.com  
+49 621 862 765 100

**PULP  
DIRECT**

EDITOR-IN-CHIEF **Lajos Eric Forster**

EDITOR **Sari Hörkkö**

WRITERS **Anna Gustafsson, Rob Hyde, Niko Kilkki, David Nikel**

CONTACT **UPM Pulp, Marketing**

pulp@upm.com • upmpulp.com



@UPMPulp #pulpdirect