



GLASS: THE LEADING SUSTAINABLE MATERIAL FOR HEALTHY, REUSABLE AND INFINITELY RECYCLABLE PACKAGING



1 INTRODUCTION



SUSTAINABLE DEVELOPMENT GOALS



Sustainability has never been a more prominent issue.

Commitments such as the **UN Sustainable Development Goals**, **EU Green Deal** and **UN Global Compact** are setting sustainability at centre stage, politically and socially, prompting businesses to assess how they operate – and how they are judged by consumers.

There is growing pressure on brands to behave more sustainably, and a growing need for additional recycled materials to meet their public sustainability targets.



The European Green Deal

#EUGreenDeal



We are approaching what the UN Global Compact calls the “decade of delivery” to make good on the Global Goals and Paris Climate Agreement by 2030, and yet...



50%

only 50% of companies have **delivered on Responsible Production and Consumption**



48%

48% of large companies report facing **challenges in extending their sustainability commitments** throughout the supply chain.

Sustainability is fast becoming a consumer priority, too.

- As people all over Europe take more steps to reduce their environmental footprint, they are also becoming more vocal in their expectations that **businesses do more** to help them make more sustainable choices.
- It's over to businesses to address these growing consumer expectations for brands to **offer more sustainable options** and provide information on how to properly dispose of packaging. Nowadays, being seen to be slow to engage means risking your reputation.
- Brands have an opportunity to **take the lead and transform their own sustainability story**. In doing so, they can unlock additional opportunities, for example in consumers being willing to pay more for sustainable options.
- It's time for brands and businesses to engage fully on sustainability to stay on track – so **here's how the glass industry is progressing on our own sustainability commitments**.



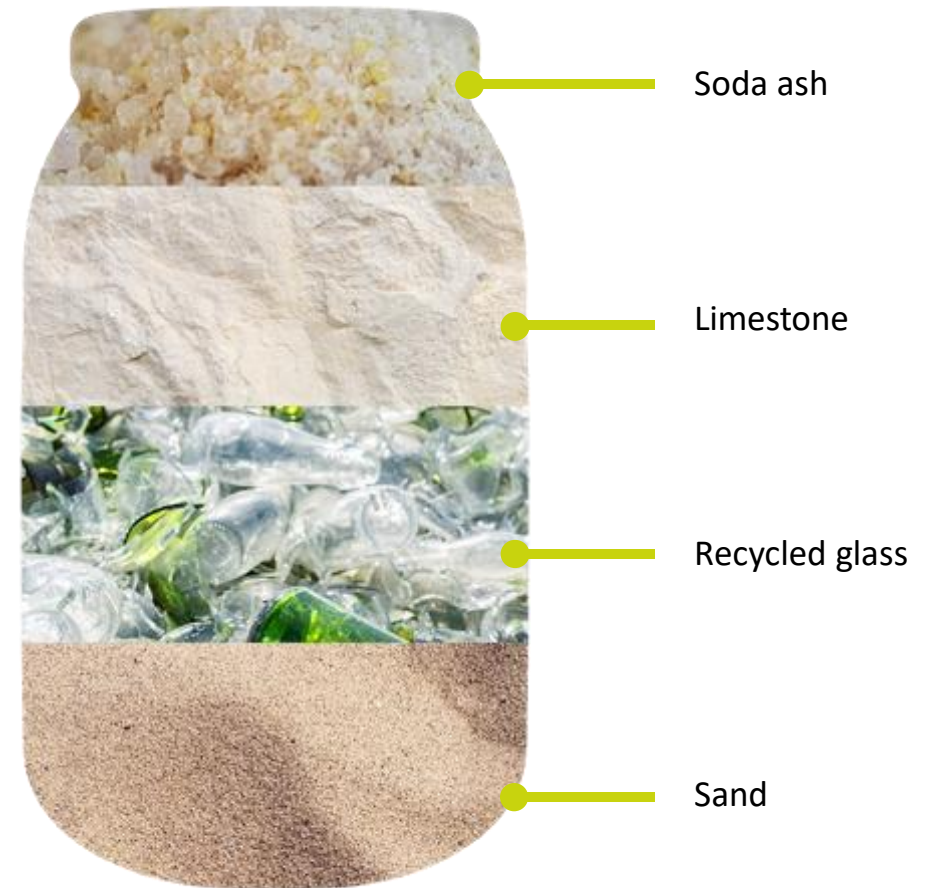
And as the world responds to the COVID-19 pandemic, protecting health has never been more important – even in our everyday consumer habits.

- Consumers are increasingly focused on **hygiene credentials** when it comes to purchasing their food and drink – while supply chain shortages highlight the importance of packaging which protects and ensures **long-lasting groceries**.
- Because of its inherent properties, glass acts as a safe barrier to external agents, meaning **products are safely preserved for longer in glass**, even once opened.
- This makes glass the **natural choice** for preserving not only the quality of the product, but the health of the people who use it.



IN A NUTSHELL, GLASS...

- has the strongest environmental credentials of any packaging material – it's **100% and infinitely recyclable in a local closed loop system**, making recycled glass a vital resource for new production.
- on average, a glass container made in Europe contains **52% post-consumer recycled glass**.
- is made from **ingredients found in nature** – not from non-renewable petrochemical derivatives.
- is **non-toxic and inert** – preventing any transfer of flavours and preserving taste, odour, colour and texture.
- is a **single-layer material** – so there's no need for chemical liners that can interact with food and beverages.
- is the most effective packaging material for **protecting food** – forming a virtually complete barrier which prevents any loss of quality.



Our Commitment to the SDGs

Glassmakers have a long history of innovating and adapting. Now, we're working together across the industry to deliver on sustainability, whether that's reducing our own production footprint, engaging with consumers to bring their packaging back into a circular economy, or delivering on a closed loop recycling ecosystem.

Sustainability is a major driver for business and our industry spends €600 million per year on energy efficiency; decarbonisation and plant upgrades. We're proud of what we have achieved to date, and our dedication to innovation means we will continue to go further to protect the planet, maintain health and drive green and circular economies in the years to come.

As an industry, we aim to:

Achieve 100% actual recycling of collected glass packaging



12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Continuously decarbonise the production process



13 CLIMATE ACTION

Build long term partnerships with the value chain, consumers, NGOs and other stakeholders to achieve our sustainability goals



17 PARTNERSHIPS FOR THE GOALS

2 COMMITTING TO RESPONSIBLE PRODUCTION AND CONSUMPTION





Striving for sustainability

The glass packaging industry understands the need for sustainable business commitments to match consumer action, through **climate neutrality**, **minimal environmental impact** and **ongoing investment in innovation**. But there's more we can do to help remind the world what they already love about glass, and the value it brings in creating a more sustainable future.

Our commitments:

- 1 Use resources wisely.** The same glass material can be indefinitely reused without any loss of quality, and recycled again and again into new bottles and jars – cutting waste and CO₂ emissions and saving raw material.
- 2 Recycle.** People can actively contribute to reduce packaging waste, save raw materials, and help achieve a 100% collection rate across Europe by recycling their glass items wherever possible – and we'll support them in doing it.
- 3 Protect.** Glass is a sustainably sound packaging material. Because of its inherent properties, glass acts as a safe barrier to external agents, meaning products are safely preserved for longer in glass, even once opened. This makes glass the natural choice for preserving not only the quality of the product, but the health of the people who use it.

Glass is a leader in the Circular Economy

Responsible Production

- Glass is a permanent material which is infinitely recyclable, as well as reusable and refillable – reducing waste generation and saving on natural resources. **Once produced, a glass bottle becomes the main resource needed to produce new bottles** – meaning the more recycled content we can use, the more we reduce our need for virgin raw materials, lowering energy and CO₂ emissions.
- We incorporate more recycled content than virgin raw materials into glass and this contributes to increased energy efficiency. Each time a bottle or jar is recycled into new containers, energy and raw materials are saved and less CO₂ is emitted, by **2.5% for each 10% increase in recycled glass**.
- As collection rates rise, the use of virgin raw materials can be gradually reduced. Increasing European collection levels of good quality recycled glass will bring about real reductions in the environmental impact of glass production.



Responsible Consumption

- Europe has the **world's highest recycling rates** at 76%, with an extensive network of kerbside or neighbourhood collection systems. By endlessly recycling most of this collected content into new production, we can save some 9 million tonnes of CO₂ per year.
- Today, **7 in 10 glass bottles are collected for recycling in the EU** – 90% of them close the loop as they go back into a bottle to bottle production system. What's more, we're continually striving to improve that figure and close the gap.



- The only limit to using more recycled glass is availability and quality, and that's why the industry is committed to **expanding waste reduction** through consumer education campaigns on the infinite recyclability of glass, as well as sector-wide partnership platforms.



Glass is natural



Glass is infinitely recyclable



Glass preserves product quality



Glass is caring



Capturing consumer attention through a new Glass Hallmark



Goal:

- We want to help brands support consumers to take more sustainable actions – and remind the world what they already love about glass, and how glass contributes to a more sustainable future.
- That's why this year, we're introducing a new Glass Hallmark: a **recognisable symbol, available for licensed use on all glass packaging**, created to communicate our messages about glass packaging at a glance.

Design:

- Co-developed with designers, consumers (who voted on the final logo) and brands, the glass hallmark incorporates the unique features of glass that make it a high quality and sustainable packaging material:

- 1 Glass is natural.** Glass is simple and doesn't pollute the environment: it's made from raw materials found in nature.
- 2 Glass is infinitely recyclable.** Glass is 100% and infinitely recyclable, and can be recycled again and again without any loss of quality.
- 3 Glass preserves product quality.** Glass is inert and acts as a safe barrier to external agents. It protects not just product quality but the health of the people who use it.
- 4 Glass is caring.** Choosing glass protects the health of the environment and ourselves.



3 MAKING RAPID STRIDES ON CLIMATE ACTION



Climate Action in the Glass industry

The climate crisis is real, and we're committed to long-term industry transformation to become **carbon neutral**.

Our vision is to have climate-neutral packaging which has minimal impact on the environment.

INNOVATION

- Demonstration of **hybrid furnace** project
- Continued investments in **energy efficiency**

CIRCULAR ECONOMY

- Virtuous contribution of glass as an **infinitely recycled packaging material** that minimises use of virgin materials and avoids waste

LIFE CYCLE ASSESSMENT IMPROVEMENTS

- Measuring **climate neutrality** and capture
- Analysing how the glass industry can **offset its impacts** and **improve its environmental footprint**



Furnace of the Future

Piloting the industry's vision for climate neutral packaging

- Our pilot furnace project underpins the industry's ambition for climate neutrality.
- By using more recycled glass, we can dramatically reduce CO₂ emissions, by 2.5% for each 10% more recycled glass used.
- In 2020, for the first time ever, a large group of European container glass manufacturers have joined forces to develop breakthrough furnace technology which will replace fossil-fuel energy sources and allow us to cut CO₂ emissions by 50%.
- This will be the world's first large-scale hybrid electric furnace to run on 80% green electricity and able to melt all kinds of glass together with recycled glass.
- Ardagh Group – the world's second-leading glass packaging manufacturer – has volunteered to build and test the furnace in Germany.
- Due to be operational by 2022, this pioneering hybrid technology will become a major milestone towards climate-neutral glass packaging.





Investing in sustainable innovation

The industry is also investing in sustainability in other areas, from investing in lightweighting to decoupling emissions from production.

- We work with our customers to develop innovative, competitive & environmentally-sound packaging, such as light-weighting our containers to help producers and retailers achieve cost savings and sustainable operations in production and transport.
 - **THE RESULT?** Glass bottles are **30% lighter than 20 years ago**, and we've even created the world's lightest beer bottle – 155g for a 330ml container – while retaining its quality and strength, and improving its environmental performance.
- We're constantly improving our energy efficiency and resource management: €610 million is invested each year on decarbonisation, energy efficiency and upgrading our 160 EU plants - 10% of operational and maintenance costs every year.
 - **THE RESULT?** While glass production continues to grow, energy consumption has been reduced by almost 50% in 40 years, while CO₂ emissions are down by 70% in 50 years.

4

SHAPING PARTNERSHIPS FOR THE GOALS





We work with a network of partners across Europe

- In an increasingly unstable global environment, making progress against the SDGs is not merely an option: it's a business and social imperative.
- We are strongly committed to working in partnership with the whole value chain – from energy and raw material suppliers to the end consumer – as well as stakeholders across and outside the glass industry to identify and implement solutions to optimise our Circular Economy.

To progress on our sustainability goals, we're committed to working with:

INDUSTRY & WASTE
STAKEHOLDERS
THROUGHOUT THE
VALUE CHAIN

CONSUMERS
ACROSS
EUROPE

POLICYMAKERS,
CIVIL SOCIETY
AND NGOS



...to 'Close the Glass Loop'

- The more recycled glass the industry collects, the more cullet can be used in a new production loop – lowering how much energy and raw materials are needed for the production of new bottles.
- That's why we're collaborating across and beyond the industry to advance recycling of glass packaging within a closed loop.
- Launched in June 2020, '**Close the Glass Loop**' is an industry partnership platform to increase the quantity and quality of recycled glass by establishing a material stewardship programme throughout the value chain that will result in more bottle-to-bottle recycling.

OUR GOAL?

- **90% average EU collection rate of used glass packaging by 2030** (up from the current average of 76%)
- **better quality of recycled glass**, so that more recycled content can be used in a new production loop.



A European platform and 11 national platforms



1. Design

- Packaging Designers
- Glass manufacturers
- Brands

2. Packaging production

- FEVE
- Glass manufacturers
- Decorators
- Accessories
- National Glass Associations

3. Brands

- Wine
- Spirits
- Beer
- Food
- Water
- Etc

4. Distribution

- Logistics companies
- Retailers

5. Consumption

- European consumers

6. Collection

- European Consumers
- National and Local Authorities
- Municipalities
- EPR Organisations
- PROs Organisations

7. Recycling

- Cullet processors
- Waste management companies





close the glass loop

“ Glass is a great example of a circular material. You are already achieving outstanding results in waste collection and recycling. But today you show that you want to do more, that you are determined to bring levels up across the EU and seek the room for improvement all along the chain.

I am confident that you will complete your mission and make the Close the Glass Loop Platform the springboard to the higher levels of the waste hierarchy.

”

- Virginijus Sinkevičius,
European Commissioner in charge of Environment,
Oceans and Fisheries



- The European Platform brings together glass manufacturers, glass processors, food & beverage producers, extended producer responsibility schemes and municipalities, which collectively represent all the players involved in the glass collection & recycling circular economy.
- We work hand-in-hand with a network of national partners across Europe to develop and implement tailored solutions for glass collection which work in the local context.
- At the same time, we rely on a coordinated approach at European level, to exchange best practices which will help us to close the collection gap. This is based on three pillars:

- 1 Addressing common challenges in **circularity and innovation**
- 2 Coordination of **National Platforms**
- 3 **Communication and awareness-raising**, to promote best practices.

Learn
more

www.closestheglassloop.eu



Recyclable



Returnable

...to offer packaging solutions which work for the market



- Glass packaging is a versatile packaging solution which can be a **one-way** (recycled) or **returnable** (re-used and refillable) packaging solution - both are sustainable from an environmental, economic and social point of view.
- **Recyclable glass bottles** are best for local and global markets: glass containers produced in one market can be filled by customers and shipped, sold and recycled anywhere.
- **Returnable glass bottles** are best for local markets: used by customers for local, artisanal production in the markets where local deposit-refund schemes are in place to return bottles back to the filling system.
- Our EU average LCA results provide an overview of the environmental impact of our products across the continent, and are one of the most representative LCAs of any packaging material.
- We have made this peer-reviewed data publicly available, enabling customers to plug it into their environmental databases and calculate their own product footprints – helping brands and retailers to decide which packaging solution best fits their needs.



...to establish a true Circular Economy



1. DESIGN

Glass is designed for the environment: glass bottles are 30% lighter today than 20 years ago while maintaining product preservation, recyclability and innovative design.



2. PRODUCTION

Production has increased by 39.5% in the last 25 years, and the industry maintains 125,000 direct and indirect jobs in 162 plants across Europe.

We have reduced our energy use by 80% in the last 50 years.

We contribute €1 billion per year to public finances and €9.5 billion to the EU annual GDP. On average up to €610 million is invested per year – 10% of operational and maintenance costs.



3. DISTRIBUTION

More than 50% of glass bottles and jars are delivered to customers within a 300km distance.

EU glass packaging industry: Making the EU circular economy real in 7 steps



7. RAW MATERIALS

Using 1 tonne of recycled glass saves 1.2 tonnes of virgin raw materials and avoids 60% of CO₂. More than 70% of raw materials travel less than 300 km.

6. RECYCLING


Glass is 100% infinitely recyclable in a bottle-to-bottle closed loop, with no loss of quality. Recycled glass is a precious raw material permanently available for multiple recycling.

5. COLLECTION

76% of all glass bottles are collected for recycling annually.

4. CONSUMPTION: USE AND REUSE

91% of Europeans prefer glass, while 1 in 2 Europeans are using more glass packaging than 3 years ago. Glass can be recycled, refilled or reused.



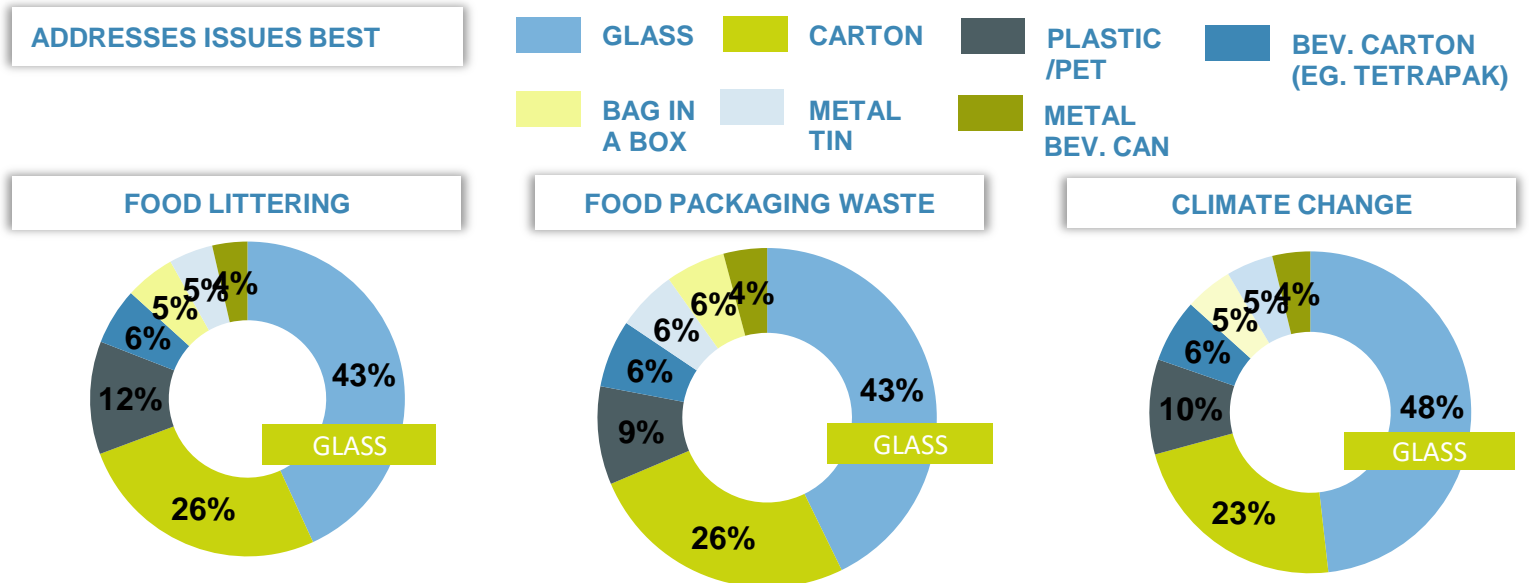
5 RESPONDING TO A MARKET
THAT'S ASKING FOR GLASS

Consumers want glass

- FEVE's latest independent survey revealed that consumers are increasingly turning to glass as their preferred sustainable packaging option.
- Half are buying more products in glass than three years ago, and its popularity is on the rise, fuelled by recognition of the sustainability credentials and infinite recyclability of glass.

What's on their mind?

- 75% of consumers are highly worried about littering of food containers in the environment, and 1 in 3 consider this the most important issue related to food & beverage packaging.
- 64% are worried about food packaging waste, while food contamination, climate change and food waste are also concerns.
- Glass is considered the best packaging solution for avoiding littering (ranked top by 43% of consumers), avoiding food packaging waste (43%), and addressing climate change (48%).



Source: 2020 InSites Survey on Packaging & Recycling, surveying over 10,000 Europeans in 13 EU countries: Austria, Croatia, Czech Republic, France, Germany, Italy, Poland, Portugal, Slovakia, Spain, Switzerland, Turkey and the UK. Available at: [friendsofglass.com](https://www.friendsofglass.com)

Consumers want glass

What's more...

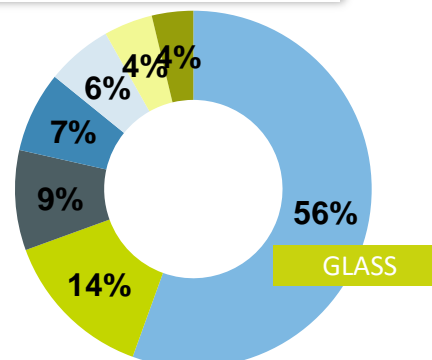
- increasing numbers of consumers are open to changing their behaviour to choose and use more glass packaging, in light of its prime health and sustainability credentials.
- 60% of consumers are worried about food waste.
- Almost 2 in 3 Europeans (63%) are worried about food contamination, with 22% considering it the most important issue related to packaging when deciding which products to purchase.
- The image of glass as the safest food & beverage packaging increases year by year, from 49% in 2014 to 56% in 2019.
- With the health and safety credentials of packaging becoming more important in the COVID-19 era, consumers want packaging which is both protective and safe.



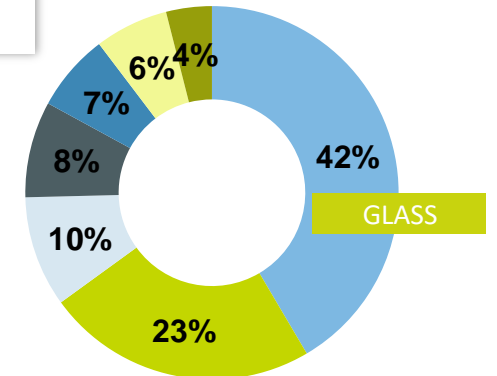
ADDRESSES ISSUES BEST



FOOD CONTAMINATION



FOOD WASTE



...and retailers are responding to this demand

CASE STUDY:

- Lidl France's 2020 "Get Into Glass" campaign (« On se met au verre »)
- Lidl has committed to offering 100% recyclable packaging and cut plastic packaging by 20% by 2025.
- To meet these sustainability commitments and educate consumers about responsible consumption, Lidl France launched a consumer campaign highlighting its product range in glass jars and bottles, renewed every 10 weeks.
- The range is accompanied by a series of YouTube videos with DIY tutorials to give a second life to glass packaging.



Friends of Glass

Meet the container glass industry's platform for building engagement with consumers



2009

Hank the Singing Bottle
Recycling



2010

Glass has nothing to hide
Health



2011

Pass the bottle
Recycling



2012

Little Taste Testers
Taste



2014

Look Beyond the Label
Health



2015

Taste of Europe
Taste



2016

Endless Lives of Glass
Environment



2017

Sustainable living
Environment



2018/19

Endless Ocean
Environment

Endless Ocean

Promoting glass in partnership with retailers and NGOs

- Since 2018, our Endless Ocean campaigns have been positioning glass as the sustainable ocean friendly packaging option for consumers.
- We leverage relationships with environmental NGOs like Surfrider Europe, Legambiente, Cetasea and WWF, influencers and retailers around Europe to promote glass.
- Our message is simple: we can all play our part in protecting our ocean, and **it starts with something as simple as buying and recycling just one extra glass bottle or jar each week.**
- In 2019, we partnered with retailers and NGOs across Europe to build **bespoke checkouts that triggered a marine life message of thanks** any time a glass packaged item is scanned.
- The social-driven campaign achieved over **25 million views, 27 million engagements** and **108 million impressions**, and was featured on midday and evening TV news in Spain – showing that this is an issue which is close to many people's hearts.
- In 2018, we led a **global toast to the ocean** on social media – leading to a demonstrable 13% increase in interest in glass packaging among YouTube users – a result deemed best in class by Google.

Learn
more

www.friendsofglass.com



People in Europe are getting a shock when they shop.

Videos available at friendsofglass.com/endlessocean

European version

Germany, France, Italy, Spain and Portugal

Retail partners:

Rome, Italy

Madrid, Spain

Vettmann, Germany

Lisbon, Portugal

Paris, France

PAM Panorama

Bio C Bon

REWE market

Continente

Franprix

A woman with blonde hair in a ponytail, wearing a striped t-shirt, is standing next to a green recycling bin. She is holding a clear glass bottle. A young child in a blue t-shirt is also holding a glass bottle and looking at it. The background shows a residential building and a parking area with a red and white barrier.

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