

# Appendices

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# APPENDIX I

## Assessment methodology details

Our research methods followed the three phases below:

### Phase 1 – Preliminary sector research

This was desk-based research on how FMCG companies are using plastic and included reviewing available market research on the state of the FMCG sector as well as the global plastics industry. Government statistical databases on waste management practices of households and major industry collaborations (e.g. Plastics Europe) and reports were also reviewed.

### Phase 2 – FMCG survey

All eleven companies were sent a survey to complete at the beginning of July 2018 and were given three weeks to respond (see Appendix II for the questionnaire). This period was extended throughout August to enable companies that were not able to respond within the original timeframe to complete their response. The table below shows the response rate and type of response received.

Company	Responded	Completed >90% Questions	Completed >50% Questions	Completed <50% Questions	Provided Statement
Coca Cola					
Colgate-Palmolive					
Danone					
Johnson & Johnson					
Kraft-Heinz					
Mars					
Mondelez					
Nestlé					
PepsiCo					
Procter & Gamble					

Unilever					
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### **Phase 3 – Review**

A preliminary review of each company's response identified consistency gaps, or points of clarification that would provide further insight on specific company activities. This review occurred mostly through August through the exchange of direct questions and/or telephone conferences, which took place with most of the companies. Any changes to company responses were then recorded in the survey.

## APPENDIX II: QUESTIONNAIRE

Question
1.0 Production facility locations
2.1 Do you know the tonnages of plastic used in your business?
2.1a Single-use plastic change over past five years
2.2 Has the company established sustainable packaging guidelines for all packaging materials?
2.3 Does the company have a circular economy strategy?
2.4 If your company sells liquid refreshments or products, do you have a global requirement to exclude microplastics?
2.5 If your company sells liquid refreshments or products, do you test for microplastics?
3.1 Has your company set overall reduction targets for all packaging materials?
3.2 Has your company substituted single-use plastics with other materials?
3.3 Does your company currently, or plan to, use any of the following materials? <ul style="list-style-type: none"><li>• Bio-based plastic packaging</li><li>• Biodegradable plastic packaging</li><li>• Compostable plastic packaging</li></ul>
3.4 Has your company set a phase-out date for single-use plastic packaging?
4.1 Has your company introduced multiple use* packaging? <i>*Multiple use is defined as refillable or reusable packaging only.</i>
4.2 If not yet introduced, does your company plan to introduce reusable and refillable packaging?
4.3 Is your company investing in any research and development initiatives related to new delivery systems for the replacement of single-use packaging?
5.1 What types of resins are you using for your packaging?
5.2 What percentage of your company's single-use plastic packaging was actually recycled last year by your

customers?
5.3 What is the destination of your customer's recycled plastic?
5.4 What is the percentage content of recycled content in your single-use packaging for 2017?
5.5 Has your company adopted recycled content targets?
5.6 What role do you see your company playing in the recovery of plastic packaging?
5.7 Has your company committed to eliminate all non-recyclable plastic packaging from its products?
6.1 What percentage of your 2017 product portfolio, by sales volume, was sold in single-use packaging?
6.2 Is your projected growth rate below, aligned with, or above that of your sector?
6.3 How will your growth plans impact the future of single-use plastic packaging in each region you sell your products?
7.1 Have you engaged with your packaging suppliers to set objectives and targets to eliminate non-recyclable plastics and single-use packaging?
7.2 Please provide details on the quantity of single-use secondary and tertiary packaging used and disposed of in 2017 for in-factory operations and inbound transportation.
7.3 Do you have a policy regarding reusable distribution containers for the transport of produce?
7.4 Do you have requirements for suppliers to implement best practice measures and audit and report on actions to prevent production pellet loss?
7.5 How do you audit your pellet suppliers' environmental impact?
8.1 Do you engage with customers and staff on reducing plastic waste?
8.3 Company positions
8.4 What do you consider the strongest policy drivers for innovation?
8.5 Do you commit to transparently reporting annually on your plastic footprint?
8.6 List all of the trade associations your company is members of or financially supports
8.7 What are the actions of the trade associations you are part of, or fund, regarding single-use plastic policies and regulations

## APPENDIX II: COMPANY BACKGROUND INFORMATION AND RESPONSES (SUMMARY)

**Disclaimer:** the information presented below is based primarily upon the company survey responses, as well as information obtained from subsequent requests for clarification and confirmation and previous Greenpeace surveys and company CSR reports. The information presented here aims to reliably summarize the company responses, as provided.

### Coca Cola

Company name	The Coca-Cola Company
Sales	\$35.4bn
Geographical presence	Approx. 900 plants across the world reaching customers in 200+ countries
Projected annual growth	4%
SUP recycling rates - company's estimate	Not disclosed
Plastic use 2017	2,800,000 tonnes
Commitments	<ul style="list-style-type: none"><li>• 100% of packaging is recyclable by 2025</li><li>• 50% recycled content in all packages by 2030</li><li>• 100% recyclable bioplastics, where used</li><li>• Recycle a bottle or can for every one sold by 2030</li></ul>

#### Summary of company response

##### Company responses to data-related questions on plastic use (plastics footprint)

The Coca-Cola Company disclosed its PET usage in tonnage, indicated the number of PET bottles and mentioned a couple of its main markets for PET, without a precise geographical breakdown. The company also provided a breakdown of their packaging by type as well as its annual growth for the last five years. It has joined the Ellen MacArthur Foundation New Plastics Economy (EMAF NPEC) initiative and has committed to being more transparent regarding its plastic packaging footprint in the future. The company started to publicly report in Q3 2018 on the number of packages as well as the total weight of the packaging material used, but did not provide specific indicators that it will use in its reporting.

##### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

The Coca-Cola Company states that it does not have goals for the elimination of single-use plastics or targets for reducing the overall amount of single-use plastic packaging units it is

producing and selling. Its positions on plastic waste relate to the recovery and recycling of materials that can then be used in other materials or products. The company commits to collect and recycle the equivalent number of packaging units it sells globally and to use 50% recycled content in all its packaging by 2030. The company stated that globally the current percentage of recycled content in its resin is just under 10%, but that it reached high proportions of recycled content in some of its packaging.

### **Plastics use changes in company packaging portfolios**

The company notes that its use of virgin plastic has slowed with increased use of recycled content material. However, globally, its use of plastics has increased 3-5% annually over the last 5 years, in line with its overall business growth, while on the African continent its PET plastic usage is growing faster than business growth.

The Coca-Cola Company states that PET plastic (the primary polymer it uses) is a desirable material that can help drive a more circular economy through the recovery and reuse of its value, and commits to using 50% recycled material in its PET bottles. The company developed a PET bottle made from up to 30% plant based materials and commits to use 100% recyclable bioplastic versus biodegradable or compostable packaging options. It also states that this bioplastic does not affect the recyclability of their bottles.

The company also mentions lightweighting as part of their plans to achieve their reduction of their carbon footprint by 25% by 2020.

### **Monitoring where plastics go at their end-of-life**

The Coca Cola Company provided the combined 2016 refill, recover and recycle percentages for its bottles and cans for a limited number of markets (Western Europe, Japan, Mexico and South Africa) but the total or per country quantities were not disclosed. Also, the information did not cover major parts of the company's markets. In addition, the response gave no indication of whether the company is tracking the recycling rate of its packaging or knows where the final recycling of its packaging occurs. By 2030, the company aims to collect and recycle the equivalent of 100% of what they sell globally.

### **Solutions being developed or adopted by the company**

Current refillable systems represent 15% of the company's total global sales.<sup>1</sup> One-way plastic (PET) packaging is now the dominant delivery system, contributing to 59% of global sales in 2016, an 18% increase compared to 2012 as refillable glass and refillable PET formats declined.<sup>2</sup> The company acknowledges that single-use plastic is growing in its overall proportion of product formats, but it is assessing what strategic mixes are appropriate in the local markets in which it operates. No further details were provided on what the companies considers to be strategic.

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<sup>1</sup> Greenpeace US survey.

<sup>2</sup> The Coca-Cola Company Sustainability Reports 2012 and 2017.

The Coca Cola company mentions recyclability as a new delivery system for the replacement of single-use packaging. However, Greenpeace does not consider recyclability/recycling to be a new /alternative delivery system to single use plastic packaging systems.

The primary innovation promoted by the company is the use of its new Freestyle RFID fountain system that has customers' reuse cups with chips to provide preset fill levels and flavours. This system was first introduced in 2009 and is now used in various institutions (e.g. universities, businesses) and venues (e.g. cruises).

## Colgate-Palmolive

Company name	Colgate-Palmolive
Sales	\$15.4bn
Geographical presence	Operates in 75 countries
Projected growth	1%
SUP recycling rates - company's estimate	Not disclosed
Plastic use 2017	613,000 tonnes (all packaging including fiber): unknown for plastic
Commitments	<ul style="list-style-type: none"><li>• 50% recycled content across all packaging materials by 2020</li><li>• 25% recycled content for plastics by 2025</li><li>• Package recyclability company-wide by 2025</li></ul>

### Summary of company response

#### Company responses to data-related questions on plastic use (plastics footprint)

Colgate-Palmolive disclosed the total volume of packaging but did not provide a breakdown by type of material or region. The company did not disclose plastic use specifically, separated out from all packaging materials, or its plans to manage the impacts of its use, and provided no detailed information on its different markets, recycled content, recycling rates, or evidence of specific plans or commitments. However, the company does commit to reporting annually on its plastic use, plastic type, recycled content and hazardous content in the future, as part of its obligations via the Ellen MacArthur Foundation New Plastics Economy Global Commitment (EMAF NPEC).

#### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

Colgate-Palmolive stated that it has not set a phase-out date for single-use plastic packaging, or adopted other associated reduction targets. The company's focus is currently on redesign, recyclability and phasing out non-recyclable content by 2025, but it is unclear how these objectives currently relate to its Sustainable Packaging Guidelines, as limited materials were made available to Greenpeace.

Within its existing use of plastics, the company has set a recycled content target of 25% for plastic by 2025, and 50% of all packaging by 2020. The 50% target extends to all packaging materials, including pulp and paper, and as of the end of 2017, 42% of its packaging was

composed of recycled content. It did not disclose how much of its current plastic packaging uses recycled materials.

### **Plastics use changes in company packaging portfolios**

Colgate-Palmolive states that it is investing in new delivery systems for home care products to reduce the use of single-use plastics, however the specific programmes of work in this area and how these compare to other packaging innovation budgets were not disclosed. The company provided two examples that it claims show that it is reducing its plastic footprint: changing an in-store display; and changing a multi-pack from a plastic blister with paperboard to an all-paperboard design. Over the past five years the company estimates that its total use of plastics has increased, but the specific tonnage change or the change in the number of units has not been disclosed.

### **Monitoring where plastics go at their end-of-life**

Recycling rates were not provided due to a lack of available data to the business. Also, the company does not track the destination of its customers' recycled plastic. In an subsequent answer to Greenpeace, Colgate-Palmolive mentioned that the company works with NGOs to develop a path to have better data on recycling rates and infrastructure, but it does not provide details on the scale of the initiative, timelines, markets or the types of plastic it wants to monitor.

Colgate-Palmolive partners with TerraCycle to operate in six countries. This partnership is claimed to have diverted 7.6 million pieces of plastic away from landfill across 36,000 locations. The company was also one of the initial investors in the Closed Loop Fund, a scheme to develop local recycling infrastructure in the United States, and a similar scheme in Europe, CEFLEX, is also supported.

### **Solutions being developed or adopted by companies**

While Colgate-Palmolive does not use bio-based polymers, biodegradable plastic, or compostable plastic, it states that it is currently researching and evaluating some of these for use. There are also plans to introduce reusable and refillable packaging in some form, however it is not clear what this entails, the timeline for their delivery or where and how reuse would be introduced and how this would impact overall production of single-use plastic items.

# Danone

Company name	Danone
Sales	\$29bn
Geographical presence	Approx. 200 plants across the world reaching customers in 200+ countries
Projected growth	4-5%
SUP recycling rates - company's estimate	301 472 tons overall, with recycling rates provided by resin and geographical region; but no breakdown of tonnage by region
Plastic use 2017	710,145 tonnes
Commitments	<ul style="list-style-type: none"><li>• 100% of packaging is recyclable, reusable or compostable by 2025</li><li>• 25% recycled content in all packages by 2025, 50% for beverages</li><li>• Developing new reuse models where relevant by 2025</li><li>• 100% recycled-PET products available by 2025</li><li>• eliminate problematic and unnecessary packaging</li></ul>

## Summary of company response

### Company responses to data-related questions on plastic use (plastics footprint)

Danone provided detailed information on the use of its single use plastic packaging, sharing the separate tonnage for food and beverages, the tonnage and percentages by type of resin as well as recycling rates in its regional markets. However, some key information was not disclosed, such as the number of single-use plastic packaging items the company produces, detailed breakdown by market, how its growth plans incorporate the need to address the use of single-use plastics, specific actions being deployed to address the use of non-recyclable food packaging, and the ultimate destinations of the plastics it places on the market.

In 2016 the company shared publicly the tonnage of its plastic and paper packaging in its Packaging Policy and has stated its commitment to publicly report more information in October 2018 . Danone will also report on its plastic usage, circularity, and progress towards manufacturer commitments, to the Ellen MacArthur Foundation as part of the New Plastics Economy Global Commitments (EMAF NPEC).

### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

Danone does not have commitments to phase out or reduce the total number of single-use plastic units the company produces. Instead, Danone states that its packaging policies are

focused on delivering a 'recyclability by design' concept that include the following commitments:

- Use of sustainable resources
- Optimisation of packaging weight and eco-design
- Achieving zero plastic to landfill for industrial waste
- Innovation to simplify consumers' lives and get them involved in sorting and recycling
- Co-creating a second life for all plastics

These commitments will be extended in 2018 to include its recent commitments under the EMAF NPEC Global Commitment:

- 100% recyclable, reusable, or compostable packaging by 2025
- Increasing recycled content to 25% across all plastic packaging by 2025 (current average 0-22% in beverage only).
- Monitoring packaging-to-product ratios to optimise packaging
- Developing new reuse models where relevant by 2025

In these commitments, there is no specification of what proportion of the packaging will be reusable by 2025 and the scope of the reuse models is not quantified.

In describing the specific actions being undertaken by the business, almost all innovations and case studies are related to the drinks side of the business. Danone's plastic use is primarily (66%) confined to beverages, but there are very few examples of any innovation or work taking place in the food business. Food packaging, which includes polystyrene in yogurt pots and pouches for baby food, is not highlighted as an area of focus in the answers provided by the company.

Shortly before the publication of this report Danone indicated to Greenpeace that it wants to eliminate problematic and unnecessary packaging. Danone did not define the precise scope of "unnecessary and problematic"s and the company provided an example of assessing alternatives to plastic straws to be piloted in Bali, Indonesia.

### **Plastics use changes in company packaging portfolios**

A reduction in overall single-use plastics packaging use of 5% in tonnage since 2016 is reported for the group, with no indication of any reduction in the number of items. The beverage part of the business reduced its use of plastic by 9% within this period, whilst the food business increased its use of plastic by 3% in absolute terms.

Currently Danone is only using recycled content in its beverage PET bottles and its use varies from region to region, from 0% in Australia and New Zealand, to a maximum of 22% in Central and South America. The company commits to increase the recycled content in all plastic packaging to reach an average of 25% recycled material by 2025, with 50% rPET in its water/aquadrink bottles, aiming for 100% for its Evian brand.

Danone indicates that the company is transitioning from PS to materials it claims are easier to recycle (an example it uses is moving to Polylactic acid). The company also commits to eliminate PVC from its food packaging by 2021.

Some limited examples have been provided by the company regarding the elimination of secondary plastic packaging from its Evian branded Nature Pack bottles, without mentioning what this reduction represents in terms of scale or quantity. The company has stated that more than 50% of its water business is delivered in a returnable packaging system (jug and glass bottle).

### **Monitoring where plastics go at their end-of-life**

Danone estimates that 301,472 tons of plastic was recycled by its customers and while it does not provide a regional breakdown by volume and by geographical region, it indicates the recycling percentages by type of resin for each of its regional markets. The company launched an internal initiative to try to monitor its packaging flow in its 10 top markets but acknowledges the systemic challenges of obtaining this information as well as the need for better traceability, industry wide.

### **Solutions being developed or adopted by the company**

Danone has indicated that it is pursuing the following initiatives which it considers solutions:

- Increasing the use of recycled content to 100% in some beverage products, 50% in other water and aquadrinks beverage products, and 25% overall
- New packaging-less product delivery systems (e.g. home water purification systems)
- Use of a specialised fund to support informal recycling systems in eight countries, including Brazil, Ghana, Indonesia, and Mexico
- Introduction of greater use of bio-based materials
- Engaging with customers through better labels to promote better sorting and recycling
- Delivering outreach campaigns in key regions with specific examples of educational programmes in Indonesia.

It has not been disclosed if or how the company plans to extend the use of reusable product systems going forward. No information has been provided on food packaging innovation beyond the use of bio-based materials.

# Johnson & Johnson

Company name	Johnson and Johnson (J&J)
Sales	\$13.6Bn sales for its consumer products sector
Geographical presence	Operations in 60 countries, and sold in over 175
Projected growth	5%
Plastic use 2017	Not disclosed
SUP recycling rates - company's estimate	Not disclosed
Commitments	<ul style="list-style-type: none"> <li>• Increase recyclability of products to 90% in Canada, France, Germany, the United Kingdom, and the United States by 2020</li> </ul>
Actions taken to reduce plastics use	<ul style="list-style-type: none"> <li>• Replaced plastic sticks in cotton buds to paper sticks in 50% of their markets</li> <li>• Reduced material use through lightweighting</li> </ul>

## Summary of company response

### Company responses to data-related questions on plastic use

J&J did not respond formally to our request for information. Instead of responding to the questions we asked, they provided a two-page response that touched on only a few of the issues raised. In particular, no information was provided on: plastic use (tonnes); changes in plastic use over time; polymers used by the business; recycled content present in the packaging they supply; recycling rates, and end of life destinations of the plastics they place on the market

### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

J&J does not have commitments to phase out or reduce the total number of single-use plastic packaging units the company produces, and is instead focusing on improving the recyclability of their packaging in five countries: Canada, France, Germany, UK, and USA. In these countries the company aims to have a minimum of 90% recyclability for its packaging. It has also committed to engaging in partnerships in three countries where recycling systems are less mature, but it did not disclose which countries. Their efforts are focused on: improving recyclability, lightweighting materials, increasing recycled content, responsible sourcing and legal compliance.

### Plastics use changes in company packaging portfolios

J&J has not provided any information about the reduction of plastic use in tonnes or items and has instead

reported several plastic use mitigation measures included in their sustainable packaging strategy, as described above, including influencing recycling rates by raising consumer and customer awareness.

In line with its commitment to achieve 90%+ recyclability in its five key markets by 2020, J&J has achieved 79% recyclability in North America and 76% recyclability in the UK, Germany and France. These statistics are stated to be based on a number of assumptions that were not disclosed or detailed to Greenpeace.

A new Design for Recyclability policy is said to be in development and will be deployed in 2018. J&J points out that while there is no global definition of recyclability, their policy sets forth guardrails for recyclability, but does not provide information about what these guardrails are.

### **Monitoring where plastics go at their end-of-life**

J&J did not provide any information regarding monitoring where its plastics go at their end-of-life.

### **Solutions being developed or adopted by the company**

Little information has been provided by the company on its potential solutions for single-use plastics in the product ranges they offer, and the company did not state that any innovation is occurring in these areas. J&J did disclose its replacement of plastic sticks in cotton buds with paper sticks in Japan, the UK and the rest of Europe. This change is now intended to be deployed in other parts of the world.

As of 2017, the company had fully phased out all use of microbeads in its cosmetic and personal care products, following its commitments to do so in 2013.

## Kraft-Heinz

Company name	Kraft-Heinz
Sales	\$6.9bn
Geographical presence	Operations in 40 countries, and sold in over 200
Projected growth	Not disclosed
Plastic use 2017	Not disclosed
SUP recycling rates - company's estimate	Not disclosed
Commitments	<ul style="list-style-type: none"><li>100% of packaging is recyclable, reusable, or compostable by 2025</li></ul>

### Summary of company response

#### Company responses to data-related questions on plastic use (transparency)

Although the company did respond to the questionnaire we sent them, the vast majority of questions were not answered. No quantitative information was provided by the business regarding its use of plastic use or its plans and all information was linked back to existing public statements and policies, which were limited in both scope and depth. Kraft-Heinz states that it will provide greater transparency on its impacts and plans for plastics in 2019.

#### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

Kraft-Heinz does not have commitments to phase out or reduce the number of single-use plastic packaging units the company produces and is instead focusing on developing recyclable, reusable or compostable packaging, but does not provide details on proportions.

As of August 2018, Kraft-Heinz has committed to researching technical alternatives to deliver 100% recyclable, reusable or compostable packaging by 2025, with no specification on what proportion of the packaging will be reusable. It aims to achieve this through collaboration with Environmental Packaging International (EPI) to explore technical, end-of-life and infrastructure solutions. More generally, Kraft-Heinz states that it plans to increase the use of recycled content and decrease the overall volume of packaging but there are no figures provided and no time-bound or specific commitments have been provided to achieve these aims.

#### Plastics use changes in company packaging portfolios

The company reports that it has exceeded its 50,000 tonne reduction target for all packaging materials, but has not disclosed how this target, or its attainment, relates to total plastics use. The company plans to publish data related to its use of plastics for the first time in their 2019 corporate social responsibility report.

Further information regarding its plan to achieve its 2025 commitment for 100 percent recyclable, reusable or compostable packaging will also be detailed in its 2019 reporting.

### **Monitoring where plastics go at their end-of-life**

Kraft-Heinz did not provide any information regarding monitoring where its plastics go at their end-of-life.

### **Solutions being developed or adopted by the company**

Very little information was provided by the company regarding what innovations it plans to deploy to achieve its targets. The company has indicated that some of these will be disclosed in 2019 and has provided a single example from the European part of its business; exploring a recyclable Heinz Tomato Ketchup PET plastic bottle which it claims could be fully circular by 2022, using recycled material that can be made back into food-grade packaging. No other innovations, or markets, have been disclosed by the company.

## Mars Incorporated

Company name	Mars Incorporated
Sales	\$35bn
Geographical presence	152 production facilities within 50 countries of operations
Projected growth	Not disclosed
Plastic use 2017	129,000 tonnes
SUP recycling rates - company's estimate	Not disclosed
Commitments	<ul style="list-style-type: none"><li>• 100% recyclability by 2025</li></ul>

### Summary of company response

#### Company responses to data-related questions on plastic use (plastics footprint)

Although it doesn't currently publish its plastic use, in the survey answer Mars has provided the overall tonnage of its single-use plastic packaging, as well as information on what resins it uses in its markets and the percentages of what is recyclable for a couple of their products in Europe and North America. Mars does not commit to disclosing this information publicly on a regular basis but does say it is considering if it will to do this as part of its engagement with the Ellen MacArthur Foundation.

#### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

Mars does not have commitments to phase out or reduce the number of single-use plastic packaging units the company produces, and is instead aiming for 100% recyclability by 2025. Mars also states that it is working on packaging through efforts to achieve its carbon reduction commitment of an absolute reduction of 27% of emissions by 2025. There is currently no separate commitment specifically related to packaging, so it is not clear if single-use plastic will decrease through this approach.

The company has made commitments to have certified, verified and recycled content in its pulp and paper packaging by 2020, but there are no targets related to plastic. The company commits to having 100% recyclability for its entire packaging portfolio. The recyclability commitment is the only one that is directly applicable to plastic use.

#### Plastics use changes in company packaging portfolios

Mars is one of only two companies to report an absolute reduction by weight in plastic packaging use over the past five years, achieving a 7% reduction. It was not disclosed

whether any of the reduction is linked to a reduction in single-use plastic unit sales or revenue, or if it was exclusively driven by lightweighting or material substitution.

Mars initially indicated that 100% of its primary packaging is single-use but subsequently claimed that they do have some multi-use packaging, without providing any examples that conform with Greenpeace's definition of multi-use (see details below under solutions).

The company was unsuccessful in achieving a 2015 commitment to reduce packaging by 10% from a 2007 baseline; no new targets were set in this area.

### **Monitoring where plastics go at their end-of-life**

Mars did not have data on what percentage of its single-use plastic packaging was actually recycled by its customers and said it is not tracking this information. The company stated that it thinks its customers generally recycle what they can as part of its own zero waste to landfill goals, but provided no evidence to support this.

### **Solutions being developed or adopted by the company**

Mars is just starting to explore innovation and research and development into reuse or refill systems for its products. Although this is stated to be at a concept stage, the business states that they are not currently investing heavily in specific initiatives. Mars provided one example of an existing 'refill' system for Eclipse gum whereby bulk product is purchased by customers for replenishing their gum bottles.

Other solutions have focused on reducing challenges to recycling plastics, such as polystyrene. In its drinks business, it has reduced the usage of polystyrene by substituting it with calcium carbonate. They have not stated the magnitude of this effect on its overall single-use plastic consumption.

Material substitution does not currently include the use of biopolymers, biodegradable, or compostable materials. The company states that it is not progressing with these options due to concerns around the functional, economic, and end-of-life infrastructure to handle or process them.

## Mondelez

Company name	Mondelez
Sales	\$26bn
Geographical presence	Over 100 factories in every region of the world
Projected growth	0.9% (2017 growth)
Plastic use 2017	Not disclosed
SUP recycling rates - company's estimate	Not disclosed
Commitments	<ul style="list-style-type: none"><li>• 65,000 tonne aggregate tonne reduction between 2013 and 2020</li><li>• 100% recyclability by 2025</li></ul>

### Summary of company response

#### Company responses to data-related questions on plastic use (plastic footprint)

Mondelez does not, and does not plan to, publish information related to its use of plastics.

#### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

Mondelez does not have a commitment to eliminate or reduce the total amount of single-use plastic items the company produces.

The company is committed to avoiding the use of 65,000 tonnes of packaging between 2013 and 2020, or around 10% of its total packaging, all materials combined – this equates to just under 10,000 tonnes avoided each year. The company also states that it will address the overall weight of packaging eliminated, not per unit. Aggregate targets over these periods of time relate to total materials avoided. It stated that plastic will be a proportion of the 65,000 tonnes target. The company also state that it has worked to optimize packaging design and source material which it claims can have a huge impact. Immediately after this statement, it mentioned how much packaging material they have avoided, on track to its 65,000 tonnes commitment.

Mondelez has not provided any details on how its reductions are being calculated, but it does claim that as of 2017 it has avoided 53,500 tonnes of packaging materials. As the reduction target does not have an explicit plastic component, it is not clear how this target is affecting its use of different material types.

In terms of recycled content, Mondelez states that food safety legislation prevents the use of recycled content in its food plastic packaging but it has an existing goal to ensure that all of its paper-based packaging is from recycled or verified-non deforested sources by 2020.

### **Plastics use changes in company packaging portfolios**

Approximately 25% of the company's packaging weight is thin flexible plastic film.

Mondelez did not provide any information on the tonnages of plastic materials it uses, or how this volume has changed over time. Greenpeace requested information on how much plastic packaging was used by the business to contextualise the 65,000 tonne reduction commitment, but no further information was provided on plastic reduction specifically. The company did not disclose how its business growth plans would affect their use of single-use plastics.

### **Monitoring where plastics go at their end-of-life**

Mondelez did not provide any information regarding monitoring where their plastics go at their end-of-life.

### **Solutions being developed or adopted by the company**

Mondelez's actions to address plastic use have primarily involved moving towards single-material types of flexible films to help enable recyclability. More than 80% of its films are now single polymer, but the company does not track any information related to how many of their customers are able to, and actually, recycle their packaging. The other area of focus for the business is on packaging optimization – using the appropriate amount of material to protect and deliver the product to its customers.

The company is not using any bio-polymers, biodegradable or compostable materials, and has no plans to do so as it doubts their potential as alternatives to plastics. It does not have any plans to research or invest in potential new delivery systems for its products that do not rely on single-use plastic packaging.

## Nestlé

Company name	Nestlé
Sales	\$92.5bn
Geographical presence	Factories in over 80 countries
Projected growth	2-4%
Plastic use 2017	1,500,000 tonnes
SUP recycling rates - company's estimate	Estimate ~40% using an EU average
Commitments	<ul style="list-style-type: none"><li>• Avoid use of 140,000 tonnes between 2015-2020</li><li>• 100% of packaging is reusable or recyclable by 2025</li><li>• 25% recycled content in PET bottles in Europe by 2025</li></ul>

### Summary of company response

#### Company responses to data-related questions on plastic use (plastics footprint)

Nestlé provided detailed information on each of their markets and how they are seeking to work towards their new commitments to address the use of plastic. Nestlé was the only company to identify the specific indicators it will be reporting on in its next sustainability report. These include:

- Tonnes of plastic (by type) used and eliminated
- Tonnes of plastic by type leaking into the environment
- Tonnes and percent of packaging that is recyclable or reusable
- Tonnes and percent of recycled plastic content
- Tonnes and percent of reuse, single use
- Tonnes and percent of non-fossil based plastic

#### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

Nestlé has not set a date for phasing out single-use plastics, and does not have targets for reducing the overall amount of single-use plastic units the company produces. Nestlé has recently adopted a new plastics strategy that aims to make 100% of its packaging reusable or recyclable by 2025, and to avoid 140,000 tonnes of all materials used for packaging between 2015 and 2020. Avoided materials means that the company will reduce the like-for-like material weight of packaging and therefore will not require the same amount of materials, essentially lightweighting; the aggregate savings is the summation of avoidance each year to determine whether its 140,000 tonnes target will be achieved.

The company has developed a Corporate Packaging Environmental Sustainability Roadmap that addresses:

- Product design and 'eco-design' principles
- Weight optimisation
- New and sustainable-managed resources
- Supporting recycling and energy recovery
- Using recycled materials
- Excluding microplastics

The company states that it is also exploring reuse, refill and new delivery systems that make environmental and economic sense, with the aim of setting ambitious and realistic targets on the reduction of single-use plastics packaging within the next three years.

### **Plastics use changes in company packaging portfolios**

Nestlé has increased its use of plastic packaging by 5% over the past five years. It is not clear what formats or regions are driving this growth. The company claims to have avoided 22,558 tonnes of packaging, but the proportion of this related to plastic specifically has not been provided.

Approximately 98% of Nestlé's products, by sales volume, are sold in single-use packaging. The company has reusable packaging formats within its Nestlé Waters business, whereby 20% of its sales are in returnable glass and large-format bottles. It has also introduced re-use systems for their group and transit packaging (e.g. pallets, slip sheets) that means more than 75% of these materials are now recycled or re-used.

### **Monitoring where plastics go at their end-of-life**

Nestlé was one of three companies that provided data on monitoring recycling rates for its products based on national statistics. Nestlé states that data was not available for all type of resins in its Eastern Europe, Central and South America and Africa markets.

### **Solutions being developed or adopted by the company**

Nestlé has adopted an approach focused on research and development for innovation and has not identified any specific opportunities that it is planning to implement beyond the concept stage. It currently uses approximately 4.5% recycled plastic in their water bottles, but it has not disclosed how this relates to its total polymer use across its entire product portfolio.

One challenge the company notes is on the use of recycled polymers in its food products due to food safety legislative restrictions on the use of recycled materials. Although the company states it uses 'circularity thinking' in its business strategy, it does not believe that the circular economy theory is widely appropriate for all of their decision making.

Work is also taking place to use alternatives to fossil-based plastics, with trials and research and development taking place on bio-based polymers, biodegradable packaging, and compostable packaging (e.g. Nestlé Waters is developing a 100% bio-PET bottle).

The company states that it is actively working with its supply chain through face-to-face meetings to explore how suppliers can contribute to the packaging commitments Nestlé has made.

# PepsiCo

Company name	PepsiCo
Sales	\$63.5bn
Geographical presence	295 factories across the world
Projected growth	2.3% (2018 growth)
Plastic use 2017	1,830,000 tonnes
SUP recycling rates - company's estimate	Not disclosed.
Commitments	<ul style="list-style-type: none"><li>• 100% of packaging is recyclable, compostable, or biodegradable by 2025</li><li>• Increasing use of recycled PET (no target disclosed)</li><li>• Reduce the carbon footprint of packaging (no target disclosed)</li><li>• Increase recycling rates (no target disclosed)</li></ul>

## Summary of company response

### Company responses to data-related questions on plastic use (plastics footprint)

PepsiCo disclosed its plastic packaging usage in tonnage and also provides its breakdown in terms of product category. It did not provide the breakdown of its plastic use in terms of region. It did not answer the following questions:

- Disclose the change in single-use plastic over the past five years
- Projected growth and mitigation measures of single-use plastics in the context of its business growth plans
- Details on the quantity of single-use plastic in secondary and tertiary packaging for in factory operations and inbound transportation

PepsiCo state that in 2017, it used an average of approximately 9 percent recycled PET across its company-owned beverage portfolio in the US, and approximately 16 percent for its company-owned beverage operations in Europe. The company does not commit to transparently reporting annually on its plastic footprint, but says it will periodically disclose data on total plastic use, types of plastic used, and overall packaging statistics.

### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

PepsiCo does not have a commitment to phase out or reduce the overall amount of single-use plastic it sells by unit or weight. Its focus on addressing plastic use is by improving the end-of-life management options available to customers. For flexible films, this includes:

- developing recyclable bags in collaboration with other companies;

- designing compostable bags that meet the ASTM D6400 and/or D6868 standards; and,
- designing biodegradable bags that meet ASTM D5511, D5988, DS271, DD6691, and EN 29408 standards

The compostable standards included in this commitment relate to materials that can be broken down in industrial composting facilities.

### **Plastics use changes in company packaging portfolios**

PepsiCo states that it knows how its use of plastics has changed over the past five years, but it has chosen not to disclose this.

### **Monitoring where plastics go at their end-of-life**

PepsiCo did not provide data on recycling rates for their packaging but indicated that they receive recycling data through public and third party sources, which varies from market to market. The company cited the example of the data and estimates coming from the National Association for PET Container Resources in the US; the PET container recycling rate in the US is estimated to be approximately 28-30% in recent years.

### **Solutions being developed or adopted by the company**

The company is focused primarily on innovating in three areas:

#### **1. Launching new home products that enable bottle refilling**

Drinkfinity and SodaStream lines provide customers with the ability to mix ingredient concentrate with still or sparkling water in their home or workplace. To ensure recycling of the pods, the company has introduced a program for U.S. consumers to mail used pods straight to a recycling facility in North America. The company has also launched a pilot program reimagining the traditional water fountain with the Aquafina Water Station, which dispenses still and sparkling water and offers flavor shots to customize drinks in consumers' own containers.

#### **2. Improving the end of life management possibilities of their packaging**

Research and innovation on creating more recyclable, compostable or biodegradable bags. The company is also supporting various recycling partnerships to promote simplified systems in the United States. Other collaborations are with the Materials Recovery for the Future Collaborative and the Circular Economy for Flexible Packaging (CEFLEX).

#### **3. Procuring renewable and recycled content for the beverage containers.**

Partnering with a variety of institutions, such as Danimer Scientific, PepsiCo is seeking to develop new biodegradable film resins for snacks packaging. In the drinks business, it is seeking to increase the amount of recycled content used in packaging. Recycled content targets have not been provided for the whole business, instead it has publicly stated that it seeks to increase its use of recycled content in

its plastic packaging. It also states that it has an internal target amount, target date and roadmap to achieve this.

## Procter & Gamble

Company name	Procter & Gamble
Sales	\$66.8bn
Geographical presence	Product sold in over 180 countries
Projected growth	1% (2018 growth)
Plastic use 2017	Not disclosed
SUP recycling rates - company's estimate	Not disclosed
Commitments	<ul style="list-style-type: none"><li>• Reduce packaging by 20% per unit of production by 2020</li><li>• Double our use of recycled resin in plastic packaging by 2020</li><li>• 100% recyclable or reusable packaging by 2030 (90% by 2020)</li><li>• 100% of paper packaging either recycle content or 3rd party certified virgin fiber</li></ul>

### Summary of company response

#### Company responses to data-related questions on plastic use (plastic footprint)

P&G chose not to respond formally to the survey's request for information. Instead of responding to the questions asked, it provided a two-page response that touched on only a few of the issues raised. In particular, no information was provided to Greenpeace on:

- Plastic use (tonnes)
- Changes in plastic use over time
- Polymers used by the business
- Recycled content present in the packaging it supplies
- Recycling rates
- End-of-life destinations of the plastics it places on the market

The company has stated that it will integrate additional information on its plastic usage in its 2018 sustainability report, without providing the details of its commitments (e.g. doubling recycled content in plastics).

#### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

P&G does not state whether it has set any phase out date or overall reduction targets for its production of single-use plastics. Instead, it is focusing on developing strategies for increasing recyclability and eliminating excess packaging where possible.

#### Plastics use changes in company packaging portfolios

The company did not disclose the quantity of single-use plastic it uses and did not provide any information or commitments related to its absolute reduction. It views single-use plastics through the lens of the functional delivery of the products it contains. In other words, a bottle of laundry detergent is not considered single use by the company as customers will slowly deplete the contents in multiple wash cycles. No information related to total single use volumes were disclosed using the more commonly accepted definition of single-use (see glossary in the main report “A Crisis of Convenience”).

P&G has a broad packaging reduction goal to reduce material use by 20% per unit of production, however there are no targets specifically for plastics. The company reported using 34,400 metric tons of Post-Consumer Recycled plastic (PCR) in its plastic packaging in 2017 and also committed to double the amount of recycled resin used in its plastic packaging by 2020. The company also intends to use 25,000 tonnes of recycled resins in the EU for its rigid plastic bottles by 2025, and currently has 25% PCR in its Fabric & Home bottles in North America.

However, as the total plastic tonnage was not disclosed, these figures lack sufficient context for it to be possible to assess what portion of the company's plastic footprint this represents.

P&G claims to have taken steps to reduce single-use plastic by ‘increasing the recycled content of haircare bottles to 25% by the end of 2018’. This recycled content is comprised of recovered beach plastic.

The company has not disclosed any information regarding the percentage change of single-use plastic usage over previous years.

### **Monitoring where plastics go at their end-of-life**

P&G did not provide any information regarding monitoring where their plastics go at their end-of-life.

### **Solutions being developed or adopted by the company**

P&G report its membership of various initiatives to tackle plastic pollution, such as the Materials Recovery for the Future (MRFF) in the United States and Terracycle, where it claims that over 500,000 pieces of packaging have been collected for recycling. No examples of partnerships or innovations were provided for regions outside of the United States or Europe.

The company has chosen to focus on recovering and reusing plastic that has already been generated, as opposed to the reduction of generating new plastic.

# Unilever

Company name	Unilever
Sales	\$62.6bn
Geographical presence	191 production facilities throughout the world
Projected growth	3-5%
Plastic use 2017	610,000 tonnes
SUP recycling rates - company's estimate	Not disclosed
Commitments	<ul style="list-style-type: none"><li>• 100% of plastic packaging to be reusable, recyclable, or compostable by 2025</li><li>• 25% recycled content in all plastic packaging by 2025</li><li>• Reduce the weight of packaging by one third by 2020</li><li>• Halve the waste associated with the disposal of products by 2020</li><li>• Increasing recycling and recovery rates by 15% by 2020 in its top 14 countries</li></ul>

## Summary of company response

### Company responses to data-related questions on plastic use (plastic footprint)

Unilever disclosed its plastic packaging usage in tonnage and also provided a breakdown for its top 13 markets, which is stated to represent nearly 90% of its plastic usage. The top three are in the EU (139kMT), SEAA – Indonesia, Vietnam, Thailand, Australia and New Zealand (94kMT), and in the US (86kMT). It didn't provide the breakdown of its plastic use in terms of product category.

Unilever have reported its recycled content usage in 2017 where it used approximately 4,850 tonnes of post-consumer recycled plastic, which equates to less than 1% of their total plastic use (our calculation). For future transparency, it said that it would report annually on its 2025 commitments, and by the end of 2018, would publish the percentage of its plastic packaging portfolio that is fully recyclable. The company also said that it has committed to publish the full 'palette' of plastic materials it uses in its packaging by 2020.

Unilever didn't provide data on its growth impact to its single-use plastic packaging usage. Instead, it said that it believed that its strategy would ensure its plastic packaging would increasingly be handled responsibly and with maximum value extracted. It also said that its 'no plastic' strategy will help the company to reduce impacts as it explores alternatives.

### Commitments the company has made towards its reduction in use of single-use plastics (in units) versus plastic overall

31% of Unilever's packaging is made of plastic. It does not have a specific commitment to eliminate or reduce total amounts of single-use plastic units from its packaging portfolio. The company prioritises three work streams:

1. **Less Plastic** – lightweighting packaging units and utilising new technologies to lower polymer requirements.
2. **Better Plastic** – increasing the use of recycled materials and content, and the recyclability of the final packaging unit. The company has committed to having 100% of its plastic packaging designed to be fully reusable, recyclable or compostable by 2025. It plans to eliminate specific plastics as part of this commitment, such as PVC where they have already removed 99% of this polymer from their portfolio.
3. **No plastic** – using alternative materials – such as aluminium, paper, and glass – in addition to new packaging formats and alternative delivery models. Example innovations being considered include changing from plastic toothbrushes to bamboo, introducing shower soap bars, and using cardboard packaging for deodorant sticks. Unilever conducts life cycle assessments of alternative material formats to minimise the likelihood of unintended consequences.

In 2017, Unilever committed to increase its recycled plastic content in its packaging to at least 25% by 2025. Achieving this commitment will therefore mark a substantial increase in the amount of recycled content used by the company as this will require roughly 152,500 tonnes of recycled polymers should their total plastic footprint remain the same. Several regional commitments and product launches have been identified by Unilever towards this goal, with Australian and UK sales incorporating 25-50% recycled content in some brands over the next year.

### **Plastics use changes in company packaging portfolios**

Over the past five years Unilever states that its plastic footprint has remained flat despite a wider business growth. It claims to have achieved this by focusing on light weighting activities that have reduced the average material footprint per consumer use by 29% since 2010. Unilever has its total packaging weight audited by KPMG.

The company provides several examples of how it has achieved reductions through the use of new technologies to optimise the amount of plastic material used in packaging, as well as its development and launch of refillable products. Examples were not limited to Europe and North America and included Brazil and India where refillable product formats were launched in 2017. Unilever did not disclose the proportion of sales that currently take place with refillable or reusable packaging formats.

Unilever aims to decouple environmental impacts from its business growth, but it has not committed to targets for absolute reductions in the single-use plastic units the company produces.

### **Monitoring where plastics go at their end-of-life**

In responding to the question on the actual recycling rate of its single-use plastic packaging, Unilever points to the absence of reliable and accurate measure for what is recycled globally. In light of that, it has developed a recycling and recovery index (RRI) with data collected from its markets across all of its packaging materials, including plastic. Unilever also states that it is unable to track its customers' recycled plastic destination across their markets.

In a follow up response, Unilever shared the Recycling and Recovery Index (RRI)<sup>3</sup> data collected across their top 14 countries for all its packaging materials including metals, glass, paper and board and plastic. It also mentioned that the company wants to help increase the RRI rate by 15% by 2020 across its top 14 countries. It didn't specify if the contribution will be for recycling only and not for waste to energy (incineration). In the same correspondence Unilever mentioned that it will publish the percentage of their global plastic packaging portfolio that is fully recyclable.

### **Solutions being developed or adopted by the company**

Unilever has active research and development and product launches that aim to move more products into refillable formats.

Unilever claims that there is a strong internal drive to create a circular economy for all packaging materials, including plastic. Unilever also said that it is developing technology to convert PET waste back into virgin grade material for use in food packaging.

Beyond the use of refillable and recycled content, Unilever is also investing in developing, what it believes, are the solutions to recycling sachets. It states that sachets are more popular in lower income countries where infrastructure is more limited. Its broader support for infrastructure and improving recycling capabilities of communities extends to Asia where it claims it is contributing to improved informal recycling initiatives.

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<sup>3</sup> Unilever's definition: Recycling Rate: The amount of packaging that is converted back into the original material; Recovery Rate: The amount of packaging where the embedded energy is recaptured