ELLEN MACARTHUR FOUNDATION | UN environment programme | NEW PLASTICS ECONOMY Global Commitment

This report has been compiled by the Ellen MacArthur Foundation, with input from the UN Environment Programme in relation to the government signatories.

The Global Commitment

2020 Progress Report

Foreword

The way we use plastic contributes to the three planetary crises of climate change, nature loss, and pollution. Our system of take-make-waste generates greenhouse gas emissions throughout the plastic lifecycle and sees millions of tonnes of waste enter the ocean each year. Plastic pollution is clearly a threat to planetary and human health. But it is one that we are beginning to address.

United by the goal of tackling plastic pollution at its source, more than 500 businesses, governments, and other organisations have come together behind a common vision of a circular economy for plastics, in which it never becomes waste. As signatories of the New Plastics Economy Global Commitment, these organisations have set ambitious 2025 targets to help realise that vision.

This second annual progress report looks at how signatories, which together account for more than 20% of the plastic packaging market, are faring against the targets. Through the baseline established in last year's report, now it is possible for the first time to quantify the evolution of progress.

The report shows progress between 2018 and 2019. For example, recycled content in packaging grew 22% year-on-year and the number of reduction targets more than doubled, amounting to a reduction in the annual consumption of virgin plastics of at least 1.1 million tonnes by 2025. This represents CO_2 savings equivalent to taking over 350,000 cars off the road.

However, much more must be done, and at greater speed, to achieve the 2025 targets. We have also seen substantial differences in progress between signatories: some have taken big steps forward, while others have shown limited progress against quantitative targets.

Meanwhile, the Covid-19 pandemic has further exposed the drawbacks of our linear economy, emphasising the urgent need to rethink how we produce, use, and reuse plastics. We have, for example, seen rocketing demand for takeaway food containers and bubble wrap – most of it not recyclable – and the halting or reversal of policies aimed at reducing single-use plastic products. A circular economy not only presents the opportunity to tackle plastic pollution at its source, but also to build a more resilient and regenerative economy, helping us restore the environment, create jobs, and benefit society.

This crisis has also demonstrated the speed at which the world can mobilise change, and post-COVID-19 economic recovery plans present an opportunity to take the necessary action on plastic pollution. We are calling on industry to step up efforts to reduce single-use packaging and products and eliminate packaging types that have no credible pathway towards being recycled in practice and at scale. Industry cannot deliver this change alone, so we are also calling on policymakers to put in place the enabling conditions, incentives, and frameworks to accelerate the transition to a circular economy for plastic.

We know what needs to be done to deliver a world without plastic pollution. Together, we must make it happen.

Andrew Morlet
CEO, Ellen MacArthur Foundation

Inger Andersen
Executive Director, UN Environment Programme

Disclaimer

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About the New Plastics Economy Global Commitment

The Global Commitment

The New Plastics Economy Global Commitment unites businesses, governments, and other organisations behind a common vision and 2025 targets to address plastic waste and pollution at its source, starting with packaging. It is led by the Ellen MacArthur Foundation in collaboration with the UN Environment Programme.

Launched in October 2018, the Global Commitment now unites more than 500 organisations behind a common vision of a circular economy for plastics, in which plastics never become waste. To help make this vision a reality, all business and government signatories of the Global Commitment have committed to ambitious 2025 targets. They are working to eliminate the plastic items we don't need; innovate so all plastics we do need are designed to be safely reused, recycled, or composted; and circulate everything we use to keep it in the economy and out of the environment.

Credibility and transparency are ensured by a clear minimum level of ambition for signatories, common definitions underpinning all commitments, publication of commitments and annual reporting on progress against the commitments. The minimum ambition level will be reviewed — and will become increasingly ambitious — over time to ensure the Global Commitment continues to drive true leadership.

Current signatories to the Global Commitment:

- **250+** businesses across all stages of the plastic packaging value chain, representing more than 20% of all plastic packaging used globally
- **200+** endorsing signatories including 27 financial institutions with a combined USD 4 trillion worth of assets under management; leading institutions such as National Geographic, World Wide Fund for Nature (WWF), the World Economic Forum, the Consumer Goods Forum, and International Union for Conservation of Nature (IUCN); and 50 academics, universities, and other educational and research organisations
- **20** national, sub-national, and local level governments across five continents

Through the Global Commitment, the Plastics Pacts network and Global Tourism Plastics Initiative combined, more than 1,000 organisations globally are now united behind the common vision for a circular economy for plastics.

250+
business signatories

200+
endorsers

20
government signatories

The Plastics Pact network

Realising the ambitious vision of a circular economy for plastics will require unprecedented levels of collaboration, not just globally, but also at national and regional levels to work towards solutions that can be applied in practice and at scale in each and every local context. This was the driving factor behind the launch of the Plastics Pact network of initiatives, which now covers 20 countries — representing over 30% of global GDP — with a total of nine Plastics Pacts launched to date across Europe, the US, Chile, and South Africa and further initiatives set to follow.

Each Plastics Pact brings together businesses, governments, NGOs, and other key organisations within a country or (supra-national) region to implement solutions towards a circular economy for plastics. Led by a local organisation, Plastics Pacts drive collective action towards a common vision, and a set of ambitious local targets, with public reporting on progress. The Pact network offers the initiatives a platform through which to exchange lessons learnt and best practices across regions.

The Global Tourism Plastics Initiative

The Global Tourism Plastics Initiative is the interface of the Global Commitment with the tourism sector. Launched in 2020, it is led by UNEP, and the World Tourism Organization, in collaboration with the Ellen MacArthur Foundation, and now has more than 25 signatories. Like the Global Commitment, the Global Tourism Plastics Initiative unites its signatories behind the same common vision and a set of concrete 2025 commitments, mobilising the global tourism sector to take concerted action on plastic waste and pollution.

The broader movement towards a circular economy for plastics

The vision, commitments, and definitions of the Global Commitment have helped to create a common language and driven action extending well beyond the signatory group:

- **Many organisations leading major global efforts on plastics have all endorsed the common vision**, including World Wide Fund for Nature (WWF), the World Economic Forum's Global Plastics Action Partnership, The Recycling Partnership, and the Consumer Goods Forum.
- **Signatories are moving their suppliers and partners to action.** By engaging their suppliers across the plastics value chain, asking them to comply with Global Commitment requirements or to support them with achieving their goals, Global Commitment and Plastics Pact signatories are further extending the reach of the movement towards a circular economy for plastic.
- **The investment community is also playing a growing part**, including through significant interest in the data on transparency generated by Global Commitment reporting and related adoption of key reporting metrics and definitions by, for example, the S&P Global Corporate Sustainability Assessment, the basis for selecting companies for the Dow Jones Sustainability Indices.

About this report

Introduction

This document is the second in a series of annual Global Commitment progress reports. After a quantitative baseline was set by the first report in 2019, this 2020 report provides the first insight into the trajectory of progress against that baseline being made by leading businesses and governments towards creating a circular economy for plastics.

Reporting signatories

In this report, 118 businesses that produce, use, and recycle large volumes of plastic packaging (representing 98% of the business signatories eligible to report through the Ellen MacArthur Foundation)[1] and 17 governments across five continents (out of 20 government signatories) have reported on progress against public targets to help build a circular economy for plastics.[2] They have all been asked to report against a common set of commitments, using the same definitions with the aim of driving transparency and consistency in data sharing on plastics across a significant group of businesses and governments.

Reported data

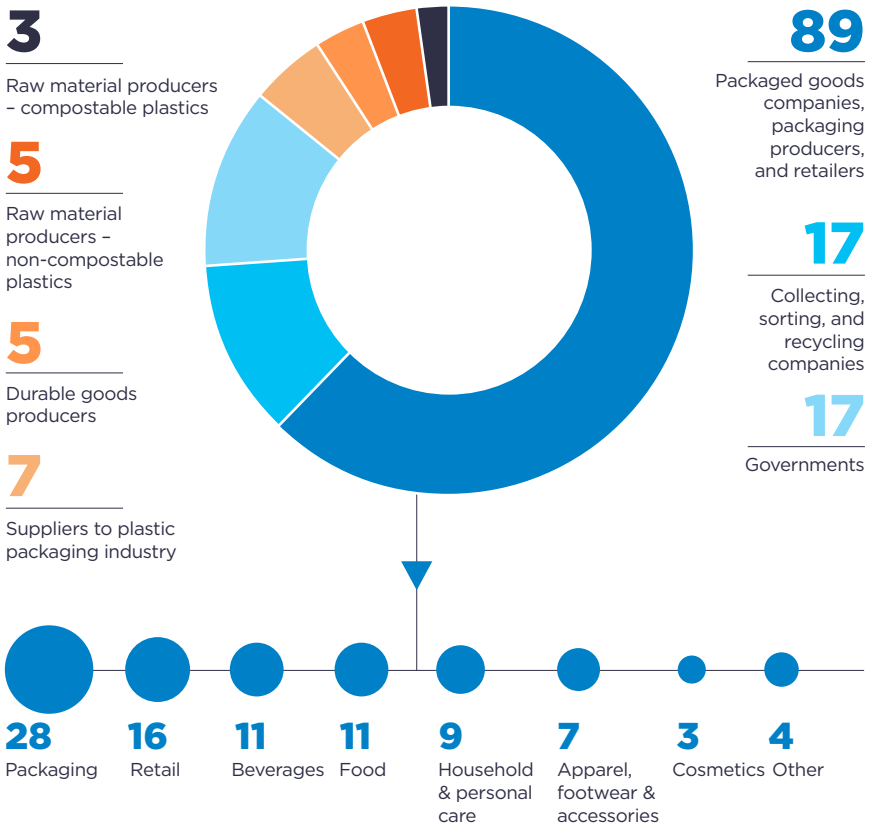
This report should be read alongside the individual progress reports submitted by business and government signatories. This year we have made these available via an online platform which allows users to browse individual company data and provides a downloadable version of the full set of data. Through making the data accessible in this way we aim to maximise transparency on the progress of individual signatories and the data collected through the reporting process.

This second report, like the first, provides a quantitative and qualitative assessment of progress made across the signatory group and the actions they have taken to realise their 2025 commitments and targets over the last year. Due to the timing of reporting cycles, most quantitative data provided by business signatories in this reporting cycle is for 2019 and aggregated statistics are therefore referred to throughout the report as 2019 data, with data submitted in the 2019 reporting cycle referred to as 2018 data. References throughout the report to "%s of signatories" refer to the percentage of *reporting* signatories.

FIGURE 1

Signatories reporting in 2020

Breakdown, by category, of signatories reporting through the Ellen MacArthur Foundation and UN Environment Programme



Note on Covid-19

The impact of Covid-19 will only become apparent in the data in next year's Global Commitment progress report.

The Covid-19 pandemic has without doubt had an impact on the plastics system in 2020. However, as this report is based primarily on 2019 data, the effects of the pandemic are not yet reflected in the numbers contained in this report.

Next year, we do expect to see the impacts of Covid-19 on the plastics system reflected in the data reported by Global Commitment signatories. Several business signatories have provisionally shared insights into shifts in overall sales volumes and sales mix (e.g. from out-of-home consumption and non-essential goods to at-home consumption and essential goods) and thus changes to packaging volumes and packaging mix. Some signatories in the collection, sorting, and recycling industry have faced restrictions on movements during lockdowns, forcing some sorting and recycling facilities to temporarily close. Various pilots and innovation projects have also faced delays.

At this stage, it is hard to predict what the overall impact on the key metrics reported for the Global Commitment will be.

Several signatories have shared that they still expect to make significant progress in 2020 in certain areas, such as increasing recycled content, and many businesses and governments have already shown sustained or even increased commitment to building a circular economy for plastic. At the time of publication, no Global Commitment signatory has revised any target downwards in response to the events of recent months. Some have explicitly reconfirmed publicly their commitment. In a joint statement published in the *Financial Times* in June 2020, over 50 policymakers, CEOs, and other influential individuals highlighted circular economy as a solution to build resilience into the global economy in response to the economic impact of the Covid-19 pandemic. Others have even raised their ambition level in the last few months, with companies such as **L'Oréal** and **Colgate-Palmolive Company** setting new, more ambitious targets to create a circular economy for plastics over the past months.

The circular economy presents opportunities to build a more resilient and regenerative economy.

By highlighting some of the main drawbacks and the fragility of our current linear economy, the pandemic has reinforced the need to rethink our economic model and build a more resilient system. As we look for ways to recover from the economic shock of Covid-19, circular economy presents opportunities to address global challenges, including plastic pollution and climate change, while helping us restore the environment, create jobs, and benefit society. The Ellen MacArthur Foundation has addressed the economic opportunities of building a circular economy for plastic packaging into post-Covid-19 recovery plans in one of a series of policy and investment Insight papers available here. The Global Tourism Plastics Initiative provided guidance for the tourism sector to continue and strengthen efforts in tackling plastic pollution during the pandemic.

Executive summary

To deliver a world without plastic pollution, industry and policymakers need to take urgent action to tackle the problem at its source. The Global Commitment unites more than 500 organisations behind concrete 2025 targets to eliminate the plastic items we don't need; innovate so all plastics we do need are designed to be safely reused, recycled, or composted; and circulate everything we use to keep it in the economy and out of the environment.

This second progress report shows that the signatory group made progress in their first year after signing the Global Commitment, but that a substantial acceleration of progress will be needed in the coming years to achieve the 2025 targets.[3]

Significant advances have been made in two key areas: the incorporation of recycled content in plastic packaging, and the phasing out of the most commonly identified problematic categories of plastic packaging, such as PS, PVC, undetectable carbon black, single-use plastic bags and straws.

However, there has been limited progress on increasing recyclability of plastic packaging and on reducing the need for single-use packaging altogether. Progress on shifting towards reusable packaging is limited, and elimination efforts remain focused on a relatively small set of materials and formats.

There are also significant differences in the rate of progress between signatories – while some have taken big steps forward, others have shown little to no progress against quantitative targets. We urge those signatories that have made limited progress this year to significantly increase their efforts to ensure they are on course to meet their 2025 commitments.

In response to these findings, and the latest peer-reviewed science, the Ellen MacArthur Foundation and UNEP make four calls to action in this report.[4] These will be vital to deliver on 2025 targets and achieve the broader system shift required.

We call on businesses to:

1 Take bold action on packaging types that are not recyclable today — either developing and executing a credible roadmap to make recycling work, or decisively innovating away from these packaging types

2 Set ambitious reduction targets

Recognising that voluntary action by industry alone cannot deliver change on the scale and at the pace needed, we call on governments to:

3 Establish policies and mechanisms, that provide dedicated and stable funding for collection and sorting, through fair industry contributions, such as extended producer responsibility (EPR), without which recycling is unlikely to ever scale

4 Set a global direction and create an international framework for action, through the UN Environment Assembly, building on the vision of a circular economy for plastics

Key progress metrics

1 Elimination of problematic or unnecessary plastic packaging

Businesses that have eliminated or have never had the most commonly identified problematic packaging categories in their portfolio:

17%

in 2019. Of packaging producer, packaged goods and retail signatories

+25%
vs 2018. Growth in number of signatories, for signatories reporting both years

Governments with measures in place to stimulate elimination of plastic packaging:

100%

in 2019. Of government signatories

2 Moving from single-use towards reuse models, where relevant

Share of reusable plastic packaging:

1.9%

in 2019. For packaged goods and retail signatories (percentage of weight)

▲ 0.1pp
vs 2018. Increase (in percentage points) for signatories reporting both years

Businesses with planned reuse pilots:

56%

in 2019. Of packaging producer, packaged goods and retail signatories

+43%
vs number piloting over the reporting period. Increase in number, for signatories reporting in 2019

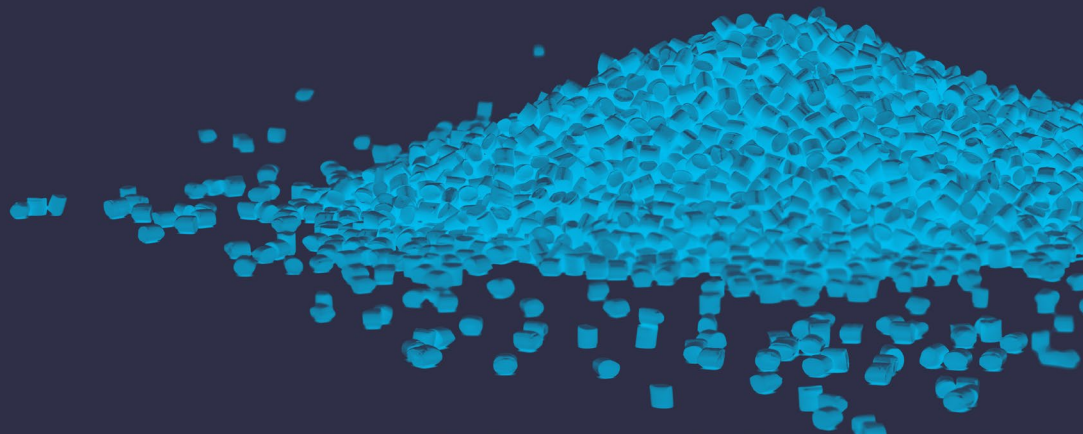
3 100% of plastic packaging reusable, recyclable, or compostable

Share of reusable, recyclable, or compostable plastic packaging:

65%

in 2019. For packaged goods and retail signatories (percentage of weight)

+1.3%
vs 2018. Growth in share of reusable, recyclable or compostable plastic packaging for signatories reporting both years



Key progress metrics

4 Recycled content

Post-consumer recycled content in plastic packaging:

6.2%

in 2019. For packaged goods and retail signatories (percentage of weight)

+22%
vs 2018. Growth in average recycled content, for signatories reporting both years

Recycling capacity (output):

1.1m

Recycling capacity output 2019 - recyclers (metric tonnes)

+28%
vs 2018. Growth in recycling output from signatories reporting both years.

5 Plastic packaging footprint and transparency

Businesses publicly disclosing plastic packaging volumes:

47%

in 2019. Of packaged goods and retail signatories

+24%
vs 2018. Growth in number of signatories, for signatories reporting both years

Businesses with (virgin) reduction targets for plastic packaging:

31%

in 2019. Of packaged goods and retail signatories

+133%
vs 2018. Growth in number of signatories, for signatories reporting both years

Growth in reported plastic packaging volumes:

+0.6%
vs 2018. Growth in volume (weight), for packaged goods and retail signatories reporting both years

Growth in use of virgin plastic in packaging:

-0.1%
vs 2018. Growth in volume (weight), for packaged goods and retail signatories reporting both years

Perspective on progress

In this section, the Ellen MacArthur Foundation and UNEP offer a perspective on the progress seen over the reporting period.

Promising progress is being made in some key areas.

Recycled content in packaging grew by 22% year on year, showing an encouraging trajectory towards 2025 post-consumer recycled content (PCR) targets.

While progress varies significantly between signatories, average PCR for packaged goods and retail signatories increased by 22% year on year, collectively reaching 6.2% PCR for 2019. This increase contributed to a minor 0.1% reduction in the total volume of virgin plastic used by those companies in their packaging over the same period.

31% of packaged goods and retail signatories — 18 in total — now have targets in place to reduce virgin plastic in packaging or reduce plastic packaging altogether. A further 37% indicated they are looking into establishing them.

Targets set by 10 of these companies (those who have set 2025 targets expressed as reductions in absolute terms) alone would lead to a reduction in virgin plastics use by at least 1.1 million metric tonnes, or 23%, for those businesses by 2025. Governments have also begun to set reduction targets. For example, **The Netherlands** has set a target for participants in its Plastics Pact NL to use 20% less plastic packaging by 2025.

The increased adoption of reduction targets is positive, and we hope many more businesses and governments set such targets. Set properly, targets like these can mobilise increased efforts and investments behind upstream solutions that reduce the use of packaging in the first place. However, care should be taken on how these targets are set – at the moment we are seeing reduction targets emerge in different formats, not always covering the entire scope of a business and sometimes expressed in relative rather than absolute terms, meaning that it is unclear what actual reduction, if any, will be delivered.

More signatories are eliminating packaging and materials commonly identified as problematic or unnecessary, such as PS, PVC, PVDC, undetectable carbon black, single-use plastic bags and straws.

The vast majority of signatories (100% of governments and 81% of businesses with problematic or unnecessary plastics in their portfolio) have now indicated that they have plans or measures in place to eliminate or reduce one or more of these categories. For categories like EPS and undetectable carbon black as many 79% of businesses who have them in their portfolio have indicated plans to reduce or eliminate them.

More businesses are testing and piloting reuse models.

39% of signatories had pilots in progress over the reporting year, with a further 17% of signatories reporting plans to deliver pilots going forward. While most signatories working on pilots over the reporting period were doing so on a relatively small scale – with one or two pilots each – a few businesses reported large numbers of pilots delivered, including **NATURA COSMETICS** (24), **L'Oréal** (22), **Henkel AG & Co. KGaA** (10), and **Unilever** (9).

Measurement and transparency on plastics use is increasing.

Signatories are publishing more data about their plastic packaging portfolios, with 47% of packaged goods and retail signatories – representing 85% of the packaging volume in this group – now disclosing their total packaging volumes publicly, compared to only 37% in 2018. We encourage others to follow their example.

Substantial investments towards achieving the 2025 targets have been reported, bringing the total amount publicly committed by Global Commitment signatories to more than USD 10 billion.

This includes EUR 900 million (~USD 1.06 billion) reported by **Danone S.A.** and USD 633 million by Henkel AG & Co. KGaA. These sums come on top of **Nestlé**'s commitment to invest CFH 2 billion (~USD 2.2 billion) between 2019 and 2025, including more than CHF 1.5 billion to pay a premium for food-grade recycled plastics, **Indorama Ventures Public Company Limited**'s USD 1.5 billion towards achieving its target to expand its recycling business, and the Government of the **United Kingdom**'s mobilisation of GBP 3 billion (~USD 3.9 billion) towards packaging innovation and improving local collection and recycling infrastructure.

Other areas have seen limited progress and require an urgent increase in actions and investment.

There was limited evidence of businesses innovating to reduce single-use packaging at scale.

Elimination efforts remain focused on a relatively small set of materials and formats, and are being delivered primarily through substitution with other plastics or paper, or lightweighting (cutting down the weight of packaging, often by reducing thickness, for example). Only 23% of examples reported by signatories used more innovative methods to fundamentally rethink packaging, products, and supply chains to reduce the need for packaging in the first place.

The vast majority of reusable packaging activity is focused on small-scale testing and piloting across a few product lines, with only a small minority of brands exploring bolder ideas to scale across their portfolio or already deriving significant revenues from reuse models. The percentage of signatories' packaging that is reusable increased only very marginally from the prior year (by 0.1 percentage points) and remains low at 1.9% for packaged goods and retail signatories.

Progress at scale in these areas requires more fundamental changes to packaging and delivery models which take more time to create, test, and scale than incremental packaging design changes. However, despite the increase in pilots, we do not see a sufficient level of ambition, attention, and investment to trigger a significant shift going forward.

There is a significant task at hand to meet the target of 100% reusable, recyclable, or compostable by 2025.

65% of packaged goods and retail signatories' plastic packaging was reported as being reusable, recyclable or compostable — an average increase of around 1 percentage point across signatories reporting in both years.

64% of signatories' plastic packaging was reported as being recyclable in practice and at scale. For the majority of the remaining 36%, it is the packaging type itself (the basic combination of format and material) that makes this packaging non-recyclable, rather than detailed design choices (such as pigments, caps, and labels). This means fundamental decisions and bold action are required to make them recyclable at scale, or to move away from them altogether.

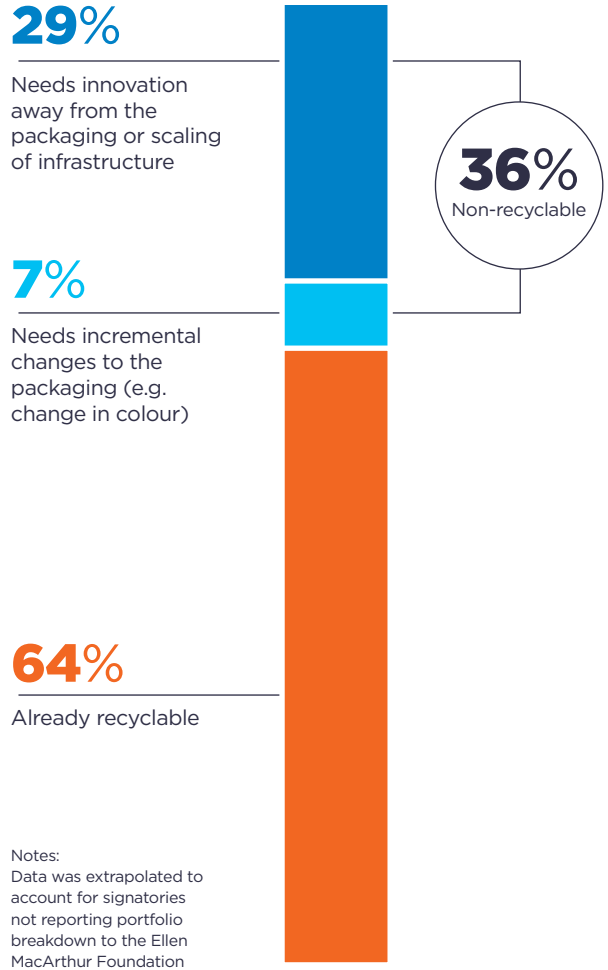
We see substantial differences in progress between signatories.

While some signatories have made good steps forward, others have failed to demonstrate meaningful progress on any of their commitments. Many businesses will need to accelerate their efforts to advance in the coming years and meet their 2025 targets.

FIGURE 2

Recyclability of plastic packaging

Share of packaging recyclable as a % of total packaging weight, for packaged goods and retail signatories

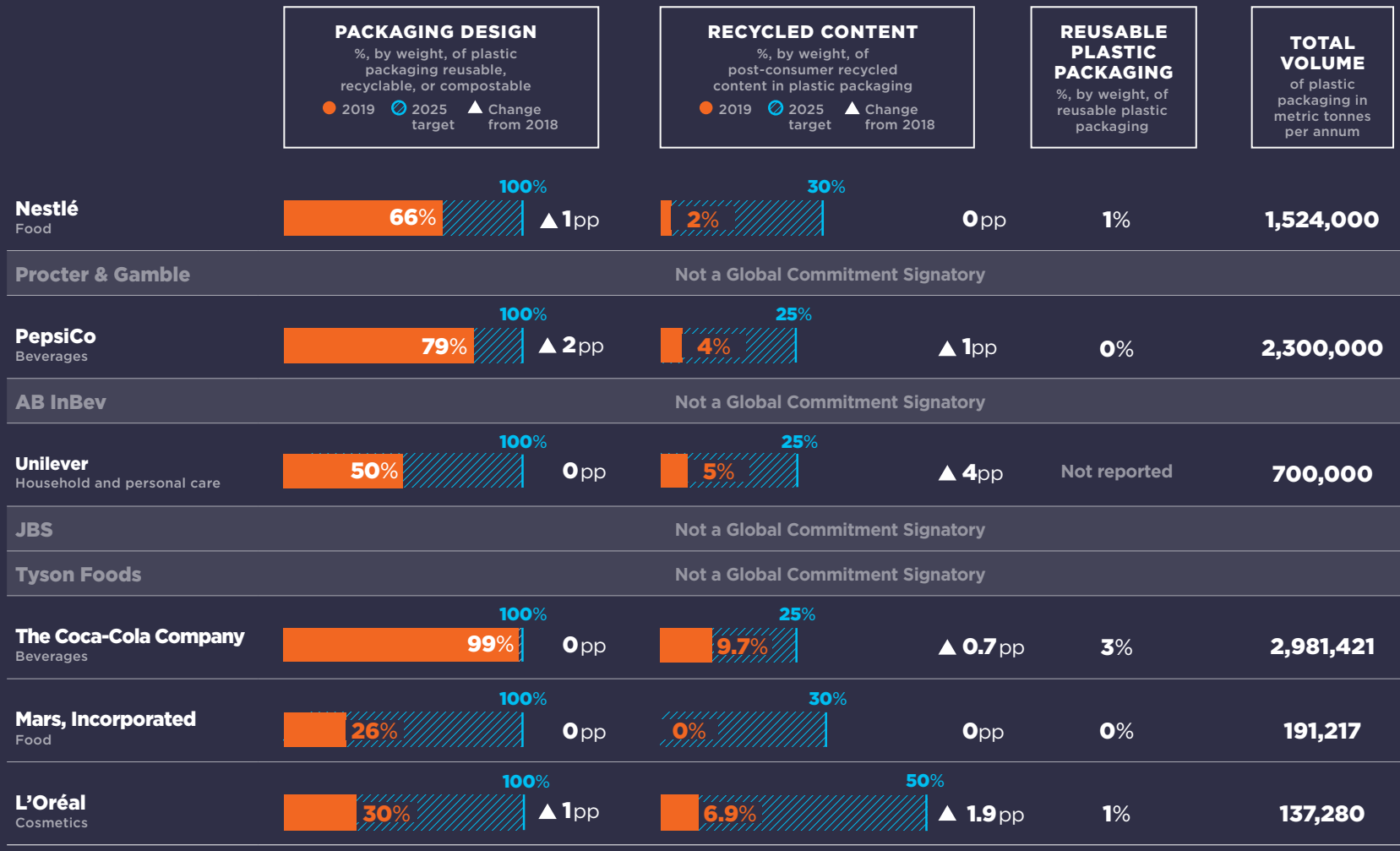


Notes:
Data was extrapolated to account for signatories not reporting portfolio breakdown to the Ellen MacArthur Foundation

FIGURE 3

Progress by FMCGs (1): top 10 FMCG companies

Key metrics for the top 10 FMCG companies globally, by revenue

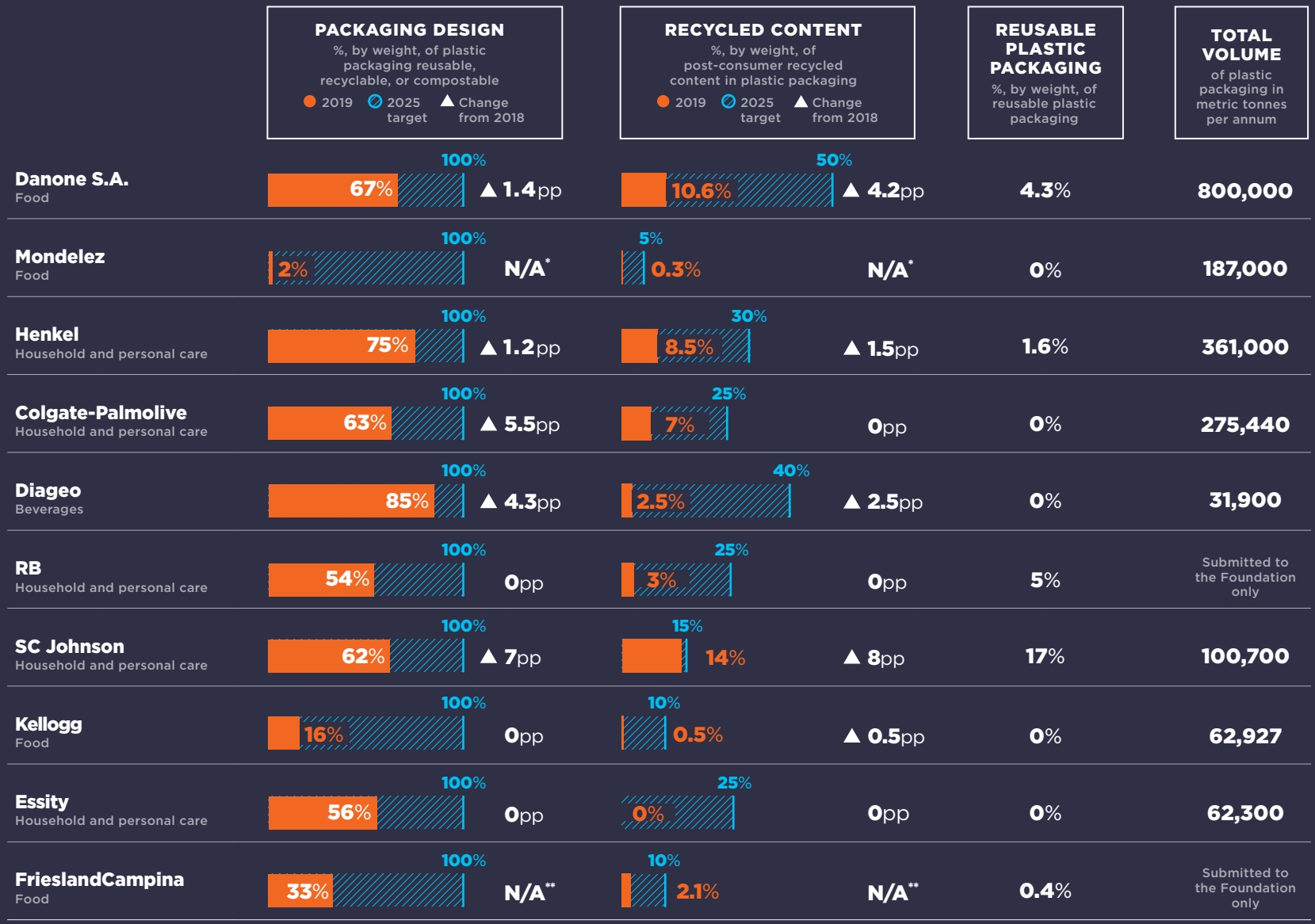


Notes:
a) Year-on-year growth was calculated using percentage points for all metrics.
b) All quantitative data are provided for the latest year reported, in most cases for the relevant company's financial year ending 2019. Details of the reporting timeframe for each signatory are provided in their online individual reports.

FIGURE 4

Progress by FMCGs (2): other large FMCG signatories

Key metrics for other large packaged goods companies in the Global Commitment (largest by revenue, excluding those in Figure 3)



Notes:

a) Signatories' year-on-year growth is given in percentage points for all metrics.

b) All quantitative data are provided for the latest year reported, in most cases for the relevant company's financial year ending 2019. Details of the reporting timeframe for each signatory are provided in their online individual reports.

* No prior year data - business was not a signatory

** No prior year data - business did not report

Call to action

In this section, in response to this report's findings and the latest peer-reviewed science,[7] the Ellen MacArthur Foundation and UNEP call for bold and urgent actions by businesses and policymakers that are vital to make plastic pollution a thing of the past.

We call on businesses to:

1 Take bold action on packaging types that are not recyclable today — either developing and executing a credible roadmap to make recycling work, or decisively innovating away from these packaging types.

For some non-recyclable packaging types, there is broad industry alignment on the way forward, for example PVC, PS, and EPS packaging are being phased out widely. However, for others, such as small format flexibles (for example, sachets or crisp bags), the packaging industry must collectively answer the question: do we see a credible pathway to collect, sort, and recycle them in practice and at scale by 2025, and, if so, how? The answer should drive bold action to do whatever it takes to either urgently establish the necessary collection, sorting, and recycling infrastructure, or to innovate away from these items altogether. Not answering this question now risks wasting time and resources on incremental improvements and fragmented efforts that will never lead to system-level solutions.

2 Set ambitious reduction targets.

If we fail to act, by 2040 the volume of plastic on the market will double, the annual volume of plastic entering the ocean will almost triple, and ocean plastic stocks will quadruple.[5] Better recycling is not enough to avoid this – we must eliminate the plastic we don't need, beyond removing just the straws and carrier bags, and rapidly scale innovative new delivery models that deliver products to customers without packaging or by using reusable packaging. To tackle ocean plastic pollution, about 50% of predicted plastic use will have to be eliminated by 2040;[6] yet, we don't see this reflected in the actions of most businesses (see elimination and reuse progress in previous chapter). Setting ambitious reduction targets for plastic packaging would help to mobilise efforts on this part of the solution. To support signatories with their efforts, we will launch the Upstream Innovation guide with actionable frameworks, guidance, and case examples in Q4 2020.

We call on policymakers to:

3 Establish policies and mechanisms that provide dedicated and stable funding for collection and sorting through fair industry contributions, such as EPR, without which recycling is unlikely to ever scale.

Without dedicated funding, the process of collecting, sorting, and recycling is not economically viable for most types of plastic packaging in most geographies. If we do not roll out mechanisms that provide stable, dedicated funding to collect and sort packaging, in which all industry players pay their fair share — for example through Extended Producer Responsibility (EPR) schemes — we are unlikely to see any significant increase in global collection and recycling rates. Beyond ensuring dedicated funding for collection and sorting, further policy measures could help close any remaining price gap between recycled and virgin plastics (e.g. fiscal incentives, removing subsidies for fossil fuels) and/or ensure the uptake of recycling and the use of recycled content (e.g. binding recycling rate targets, minimum recycled content requirements, public procurement policies favouring recycled content, bans or taxes on landfilling and incineration).

4 Set a global direction and create an international framework for action, through the UN Environment Assembly, building on the vision of a circular economy for plastics.

Voluntary industry initiatives and local or national level actions by frontrunning governments play a vital role in responding quickly to global challenges, pioneering solutions, and demonstrating what's possible at scale. However, these efforts will, by themselves, never be enough to eliminate plastic waste and pollution. We need a truly global response to this global challenge. Therefore, we call on governments to come together at international level through the UN Environment Assembly to collectively set a clear direction and create an international framework for action, giving the impetus to all governments and businesses around the world to move forward more decisively. Setting out unified global goals and targets, together with national action plans and consistent measurement, could harmonise policy efforts, enhance investment planning, stimulate innovation, and coordinate infrastructure development. We need an international response to plastic pollution that matches the scale of the problem.

1 Elimination

IN THIS CHAPTER

Why elimination?

Which materials, formats, and components are being eliminated?

What types of solutions are being used by businesses to reduce or eliminate problematic and unnecessary plastic packaging?

How are governments driving elimination?

What sector-level trends do we see for elimination?

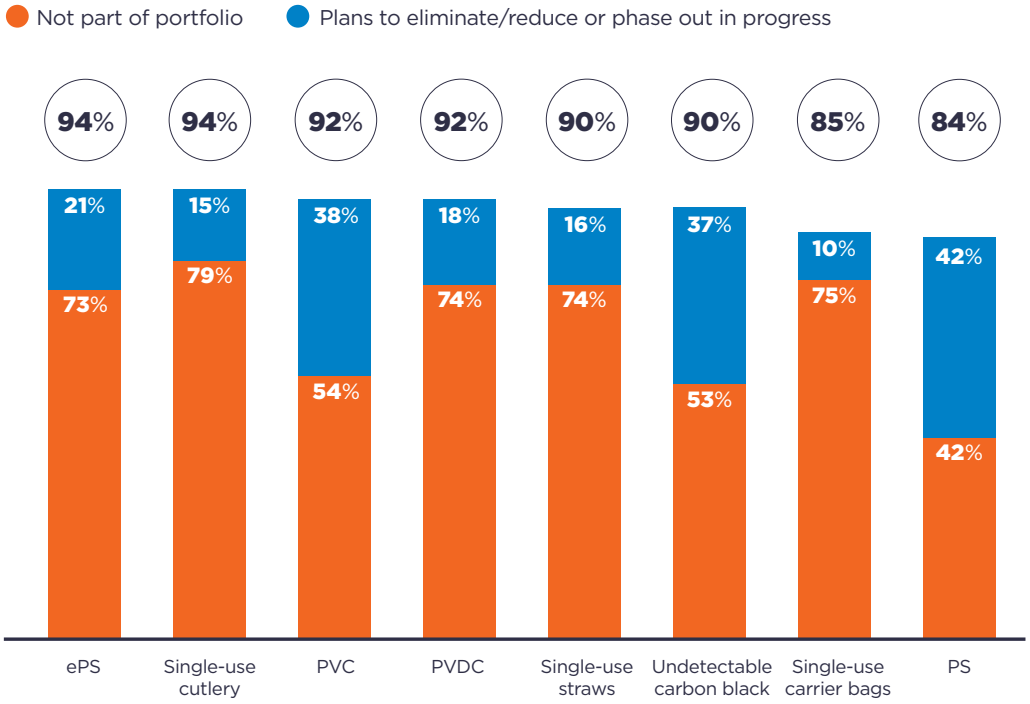
Why elimination?

Elimination of problematic or unnecessary plastic packaging through redesign, innovation, and new delivery models is a priority. The demand for plastic packaging is set to double over the coming two decades and it will be impossible to keep this increased flow of plastics in the economy and out of the environment without elimination. To achieve a circular economy, we need to curb the growth in the amount of material that needs to be circulated. While plastics bring many benefits, there are some problematic items on the market that need to be eliminated to achieve a circular economy, and sometimes plastic packaging can be avoided altogether while maintaining utility. Elimination is about more than bans on straws and plastic bags — it is a broad innovation opportunity. More information about eliminating plastic packaging, including inspiring case studies and actionable frameworks for approaching packaging design decisions, can be found in our Upstream Innovation guide, to be published in Q4 2020.

FIGURE 5

Elimination of commonly identified problematic categories of plastic packaging

Businesses eliminating/reducing each category or without the category in their portfolio, as a % of all packaging producer, packaged goods and retail signatories



Which formats, materials, and components are being eliminated?

Action to phase out the categories of plastic packaging most commonly identified as problematic (including EPS, PS, undetectable carbon black, PVC, and single-use plastic carrier bags) is increasingly widespread. 100% of government signatories are targeting one or more of these categories. For most of these categories the majority of businesses signatories indicated that they do not – or no longer – have these categories in their portfolio (see Figure 5). For businesses indicating they do still have these categories in their portfolio, the majority indicated plans to phase them out. For example, 79% of those still using EPS and undetectable carbon black indicated phase-out plans.

Formats
48% of business signatories indicated plans to eliminate or reduce at least one specific format of plastic packaging. Efforts by businesses and governments to eliminate specific formats were largely focused on removal of well-publicised examples such as single-use plastic bags and items such as single-use cutlery and straws.

There was, however, evidence of some signatories broadening the scope of their elimination efforts to look at new formats, with a number reporting current or planned phase-outs of additional categories such as poly-bags, sachets, and secondary film on multi-buy items (see Figure 6).

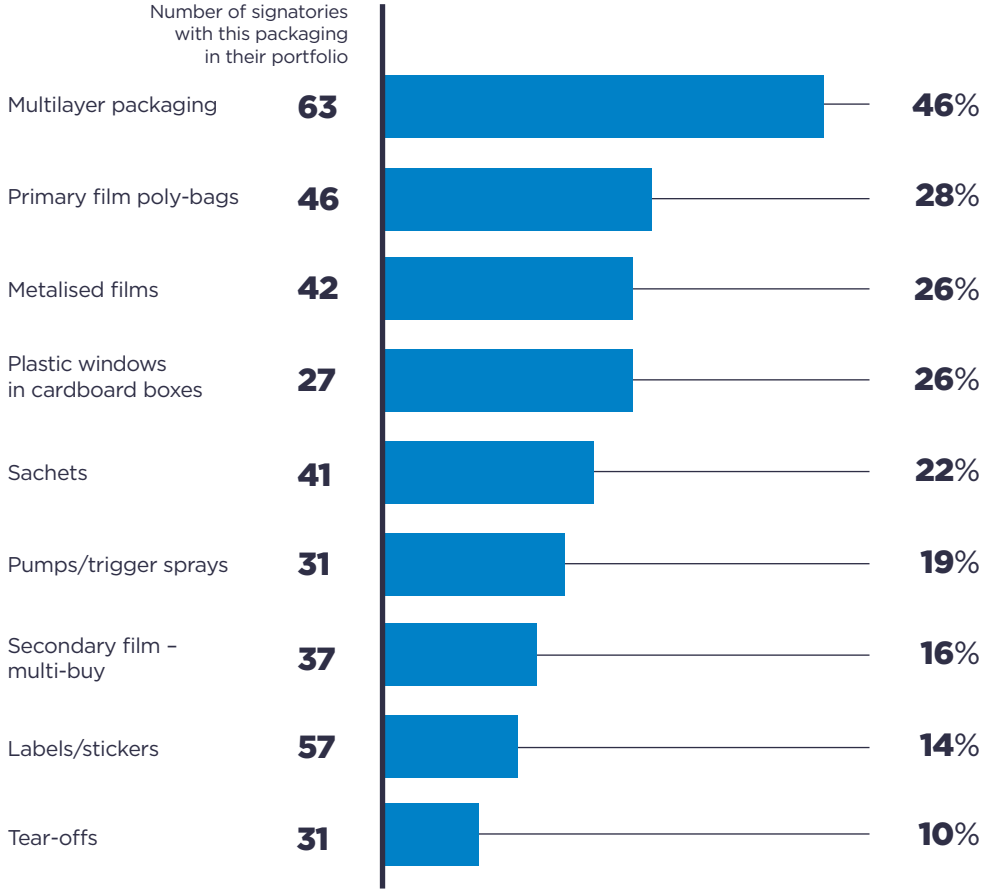
Components
19% of signatories indicated plans to reduce or eliminate packaging components, the elimination of which often improves the recyclability of the remaining packaging.

The components signatories most frequently reported that they are working on eliminating were plastic windows as well as pumps and trigger sprays. 26% of signatories with plastic windows in their portfolio, and 19% of those with pumps and trigger sprays, reported plans to reduce or eliminate them going forward.

FIGURE 6

Other packaging categories being eliminated or reduced

Businesses eliminating/reducing each category, as a % of signatories with the category in their portfolio



Materials
Most signatories producing and using packaging were focusing their elimination activity primarily on phasing out specific materials that they have identified as problematic, with 83% identifying at least one material they had either reduced or eliminated completely in the last year (56%), or were planning to eliminate or reduce going forward (27%).

The materials most commonly identified by business signatories as having been reduced or phased out in the last year were PVC, multilayer materials, and PS. The phase-out of these materials was delivered primarily through substituting for another plastic material. The phase-out of certain pigments was another area of focus for a number of signatories. This included many businesses working on removing undetectable carbon black – enabling better detection of packaging by sorting equipment – and some also looking to move away from coloured packaging and towards clear packaging, with a view to increasing the quality of recyclates.

A number of governments also identified specific materials they were targeting for phase-out, including PVC, PS, and oxo-degradable plastic (more information on the activities of governments is provided below).

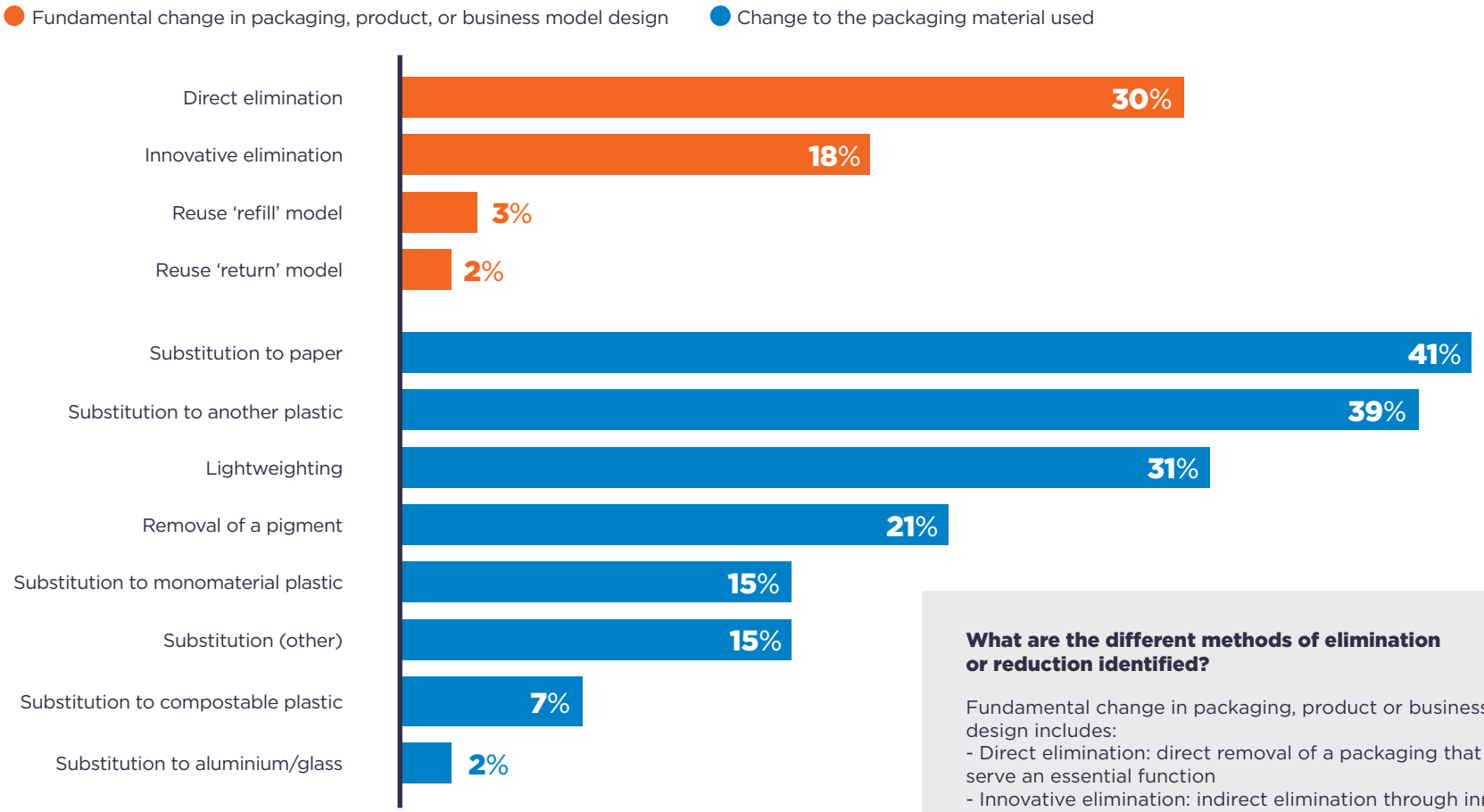
What types of solutions are being used by businesses to reduce or eliminate problematic and unnecessary plastic packaging?

Around 66% of signatories reported substituting with paper or other plastics to deliver reductions in or the elimination of problematic or unnecessary plastic packaging, making these the most commonly used solutions. Nearly a third (30%) of signatories also reported examples of direct elimination (where packaging is simply removed and not replaced). However, relatively few signatories reported using other more innovative solutions involving a fundamental change in their packaging, products, or business model (such as switching to reuse models) to deliver elimination (see Figure 7).

FIGURE 7

Methods of elimination or reduction

Signatories using each method, as a % of packaging producer, packaged goods, and retail signatories reporting specific examples of elimination and reduction activities



Notes:
This chart is based on an analysis and categorisation by the Ellen MacArthur Foundation of the examples of elimination and reduction activity submitted by signatories.

What are the different methods of elimination or reduction identified?

Fundamental change in packaging, product or business model design includes:
- Direct elimination: direct removal of a packaging that does not serve an essential function
- Innovative elimination: indirect elimination through innovation of a packaging that does serve an essential function
- Reuse 'refill' model: packaging that is owned and refilled by the user
- Reuse 'return' model: packaging and 'packaging ownership' that are returned to a business

More information on different types of elimination methods and examples will be available in the forthcoming Upstream Innovation guide.

How are governments driving elimination?

While most governments, like businesses, are approaching elimination by targeting specific categories of plastic packaging or products (see Figure 8), there are early signs that some may be beginning to drive a more holistic approach to elimination through setting quantitative targets to reduce the use of plastics overall. Notably, **The Netherlands**, as part of the Plastics Pact NL, has set a target to use 20% less plastics by 2025, and, as part of the European Plastics Pact, 18 national governments (including **Germany**, **France**, **Italy**, and **Spain**) have signed up to reduce virgin plastic products and packaging by at least 20% (by weight) by 2025, with half of that reduction coming from an absolute reduction of plastics.[8]

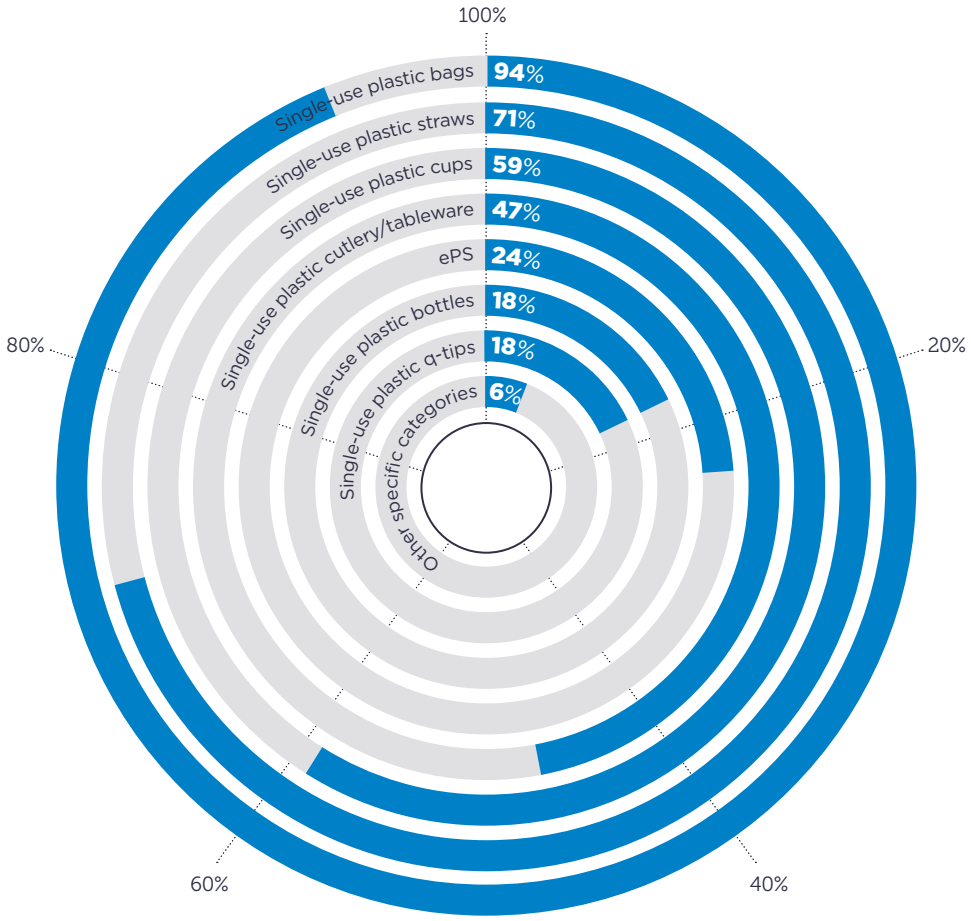
Measures targeting specific categories of plastic packaging or products identified as problematic or unnecessary continue to be implemented (see Figure 8), including through imposition of charges, taxes or bans. 100% of government signatories indicated they had measures in place to target at least one category, with 82% targeting two or more.

Charges and taxes continue to be used by governments including the **United Kingdom**, **Peru**, and **Portugal** to reduce volumes of plastic bags and other single-use plastic items; single-use carrier bag sales in the **United Kingdom** have dropped by more than 95% in the main supermarkets compared to the year before its carrier bag charge scheme was introduced. In August 2019, **Peru** implemented a plastic bag tax which will increase annually until 2023 to PEN 0.50. The Portuguese National Budget Law for 2020 has forced the establishment of a tax for single-use packaging products for take away and home-delivery meals in **Portugal**.

FIGURE 8

Plastic packaging and products targeted by governments

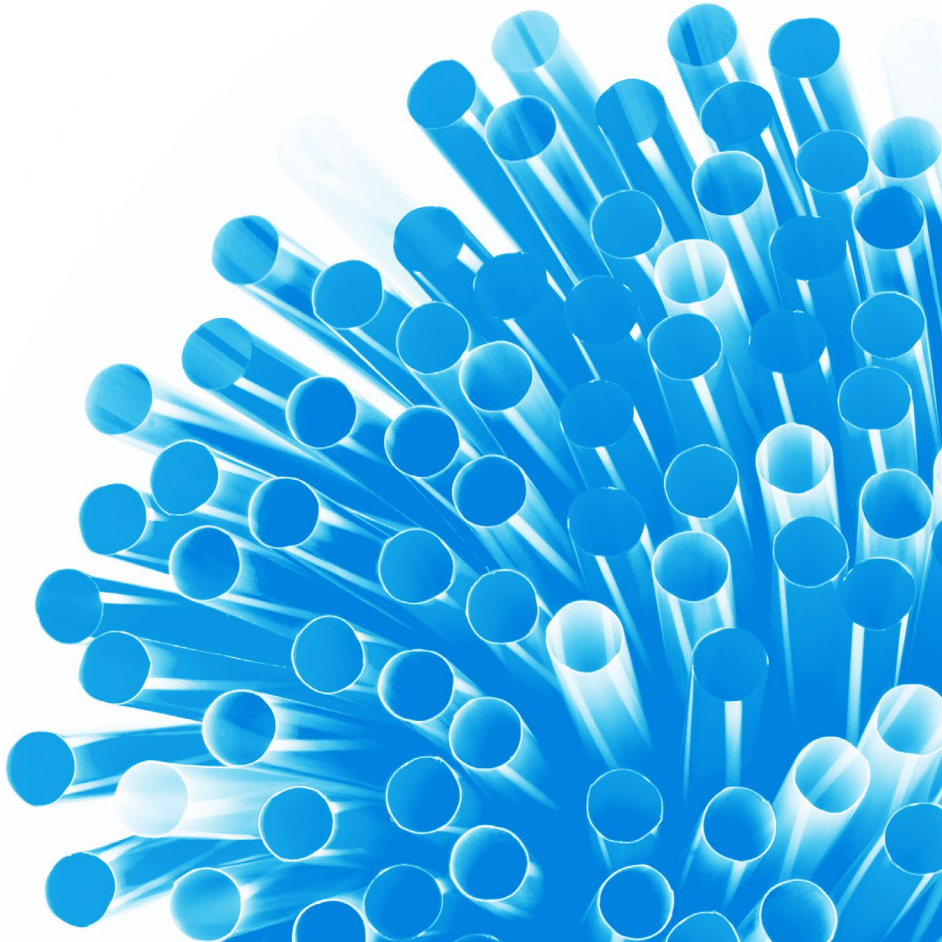
% of government signatories with measures to target each category



A number of governments are instituting bans or phase-out programmes for a range of single-use plastic products and materials:

- In **Buenos Aires**, bans on straws and plastic bags instituted in 2019 are estimated to have prevented the consumption of more than 53 million straws and 500 million bags to date.
- **Peru** has also passed regulations imposing a nationwide progressive ban on single-use plastic products.
- The **United Kingdom** will introduce a ban on plastic straws, drink stirrers, and cotton buds in England from October 2020, while the Welsh Government will introduce legislation to ban several single-use plastic products by autumn 2021.
- **New Zealand** is planning to consult on proposals to phase out seven single-use items including cotton buds, straws, drink stirrers, cups, tableware, produce stickers and single-use produce bags, as well as materials used in packaging it has identified as hard-to-recycle including PVC, polystyrene, and oxo-degradable plastics.

Public procurement has also been used by some governments as a means of driving change. For example: **Copenhagen**'s Green Public Procurement policy prohibits PVC products, **Rwanda** and **Sao Paulo** are taking measures to avoid procuring single-use plastic products for offices and public events, and the **United Kingdom** has committed to removing all consumer single-use plastics from the government estate.



Source: Molson Coors Brewing Company

What sector-level trends do we see for elimination?

Beverages

Signatories within the beverage sector reported work to phase out problematic and non-recyclable materials such as PS, PVD and PVDC, eliminating formats such as small-format items and secondary packaging (including shrink wrap and other multi-buy packaging), and redesigning labels or removing colours in PET to improve recyclability:

- **Keurig Dr Pepper** reported that they had reduced their use of PS by 42% in 2019 and are due to fully eliminate the material in 2020.
- **Molson Coors Brewing Company** has invested more than USD 11 million in equipment to reduce use of six-pack rings and flow wrap. The company is replacing all six-pack rings with recyclable cardboard cases in the United Kingdom, removing 137 tonnes of plastic. It will also reduce single-use plastic flow wrap on multipacks by 912 tonnes by replacing it with cartonboard in 2020. In Hungary they have invested in a new can line that will eliminate the need for shrink wrap by producing cans on high sidewall trays.
- **PepsiCo** will switch all flavours for SodaStream from plastic to metal bottles by 2025, expecting to avoid nearly 200 million single-use plastic bottles over the next five years.
- **Pernod Ricard** reported that they are planning to discontinue all mini (50 ml) PET bottles by 2025, and replace them with recyclable alternatives. The company has also imposed complete bans on the use of poly-bags and single-use straws through its packaging and POS guidelines.
- **The Coca-Cola Company** worked with suppliers to design KeelClip, an alternative to plastic rings and plastic film in multipacks using paperboard substrate.

Food

Actions reported by food manufacturers and retailers often addressed many of the most commonly identified categories of problematic and unnecessary plastic packaging including PVC, PS, and undetectable carbon black. A number had also removed plastic windows or were working on more innovative solutions to eliminate the need for some packaging altogether:

- **Danone S.A.** is in the process of phasing out PS in Europe by 2024 and worldwide by 2025 (from a baseline of around 100,000 tonnes of PS rigid packaging in 2019).
- **Mars, Incorporated** reported a number of examples of elimination activity including removal of 17% of PVC (108 tonnes), 3 tonnes of plastic windows from its Uncle Ben's rice boxes*, and 232 tonnes of plastic trays from its large Easter eggs in the United Kingdom. Future plans include phasing out flexible plastic overwraps for pet food multipacks (by substituting with paper), which would save 140 metric tonnes per year.
- **Ahold Delhaize** is using a dry misting technology to remove the need for plastic packaging around fruits and vegetables in 150 stores in The Netherlands, which could help save 270 tonnes of plastic packaging per year. The retailer is also using 'natural branding' instead of stickers to mark its organic fruits and vegetables, which also reduces the need to wrap them, saving 13 metric tonnes of plastic packaging.
- **Kesko Corporation** eliminated 182 million plastic windows from its bread packaging and **Barilla G. e R. Fratelli SpA** eliminated 5 million plastic windows from its pasta boxes.

Uncle Ben's will be rebranded to Ben's Original™

Source: Mars, Incorporated

Household and personal care

Elimination efforts of signatories in the household and personal care sector were mostly focused on phasing out commonly identified problematic categories such as PVC, PS, and undetectable carbon black pigment, with a number also working on phasing out non-recyclable pumps and trigger sprays. There were relatively few examples provided of packaging removal among companies in this sector. However, of those examples given, actions included:

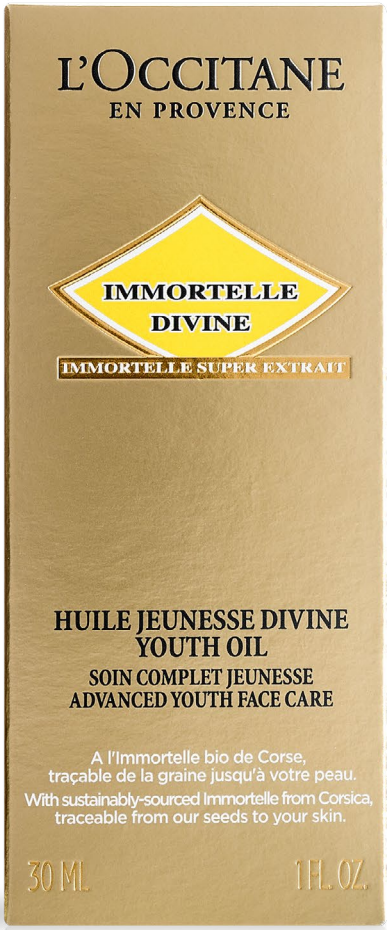
- **Colgate-Palmolive Company** eliminated 55% of its PVC (2,250 metric tonnes) in 2019 and have plans in place to fully exit PVC in all packaging by the end of 2021.
- **Henkel AG & Co. KGaA** achieved a reduction of 500 tonnes of undetectable carbon black packaging by switching to carbon-free black for toilet cleaner bottles, with plans to eliminate 100% of undetectable carbon black by 2025 as well as all PS, PVC, and plastic windows in its portfolio.
- **RB** is working to eliminate 100% of PS, EPS, undetectable carbon black, and multilayer materials by 2025, as well as a substantial proportion of pumps and trigger sprays.

Apparel, footwear, and accessories

Many fashion brands were working to remove single-use plastic poly-bags, e-commerce shipping packaging and hangers, with most single-use shopping bags already being eliminated. A number of reported examples involved substitution with paper or cardboard alternatives.

More specifically:

- **ASOS** removed 70,000 plastic hangers and 20 million swing tickets and plastic kimbals from its Design brand, as well as all plastic collars used across formal wear. The company is also planning to eliminate LDPE pillow bags inside handbags and rucksacks, plastic moulds for rigidity in hats, as well as LDPE plastic bags containing spare buttons, sequins, and beads by the end of 2020.
- **H&M Group** has tested solutions to eliminate poly-bags in its supply chain, including shipping e-commerce orders in paper instead of plastic bags. The company is aiming to completely eliminate a number of categories of plastic packaging from its portfolio by 2025 – or before – including PS, multilayer materials, undetectable carbon black, poly-bags, sachets, single-use carrier bags, single use hangers, plastic windows, and tear-offs.
- **Inditex** has eliminated single-use plastic outer bags that protect cardboard boxes for online orders for its Zara Home – it will eliminate 100% of the bags across all brands in 2020, and also plans to phase out EPS by 2023.
- **Superdry Plc** swapped its underwear boxes from unrecyclable rigid PP to a recyclable cardboard alternative with a cut-out window instead of plastic window, substituted ridged unrecyclable PP hangers for socks and flip flops to cardboard, and plans to remove plastic single-use hangers for women's swimwear by 2023.



Source: L'OCCITANE en Provence

Cosmetics

Elimination efforts reported by signatories within the cosmetics sector targeted materials and formats such as metalised films, multilayer packaging, secondary packaging (for example, films for multi-buy), and components such as pumps, triggers, spatulas, and plastic windows.

- **L'Oréal** has indicated plans to phase out metalised films, pumps with metallic springs, multilayer materials and PS, and has ongoing work to remove flow wrap in certain applications. Having succeeded in fully eliminating PVC in 2018, the company reduced its use of cellophane by 5.5% (77 tonnes) in 2019.
- **L'OCCITANE en Provence** has begun to eliminate spatulas in its face creams and removed plastic windows from its travel retail kits, with plans to reduce use of multilayer materials, sachets, labels, stickers, pumps, and trigger sprays by 2025. It is also working on eliminating films on its retail products, including those around cardboard boxes (see image) and on multi-buy applications.
- **NATURA COSMETICS** has eliminated seals and shrinks in its Ekos packaging over the reporting period and has established an internal commitment to eliminate unnecessary packaging elements, including cellophane, seals, shrink, flow wrap and other secondary packaging, by 2022.

2 Reuse models

IN THIS CHAPTER

Why reuse?

How much and what types of packaging are being designed to be reusable today?

How are businesses approaching the shift towards reuse models?

How are governments driving reuse?

What sector-level trends are emerging on reuse?

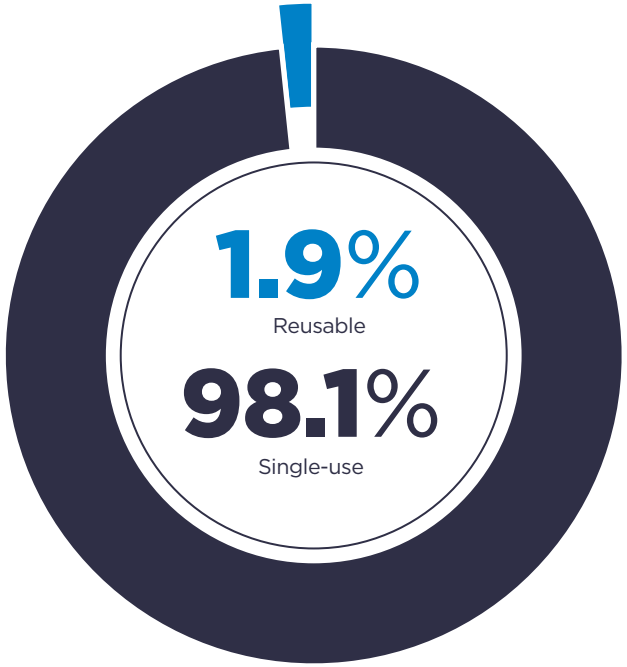
Why reuse?

The shift away from single-use towards reusable packaging is a critical part of eliminating plastic pollution. While improving recycling is crucial, we cannot recycle our way out of the plastic issues we currently face. Wherever relevant, reuse business models should be explored as a preferred option, reducing the need for single-use plastic packaging. To learn more about the four key business models for reuse, the major business benefits of reuse, and countless examples of reuse in action, see the Ellen MacArthur Foundation's Upstream Innovation guide, to be published in Q4 2020, and the REUSE book, published in June 2019. UNEP's review of Life Cycle Assessment studies comparing single-use plastic products and their alternatives can be found here.

FIGURE 9

Share of reusable packaging

% of total plastic packaging weight, for packaged goods and retail signatories



How much and what types of packaging are being designed to be reusable today?

1.9% of plastic packaging used or produced by signatories in 2019 was reusable. This has not increased from the prior year and is primarily driven by a few companies who derive significant revenues from reuse models – in particular, **The Coca-Cola Company** and **Danone S.A.**, who both have established business segments using return-based models to deliver beverages.[9] While 54% of signatories indicated having reuse models in place somewhere in their portfolio, for the vast majority of signatories this is typically limited to a few product lines.

The most common products for which reuse models are in place are non-alcoholic beverages, cleaning products, and cosmetics and personal care. Food applications are also a growing area of focus, with 20% of businesses identifying this as an opportunity for future expansion of reuse efforts.

From a geographical perspective, retail and packaged goods businesses most commonly indicated having reuse models available in **South America**, **Europe**, and **North America**. They were least often reported in markets in **Africa**. These same geographical trends were also reflected in signatories' reported future growth plans for reuse models.

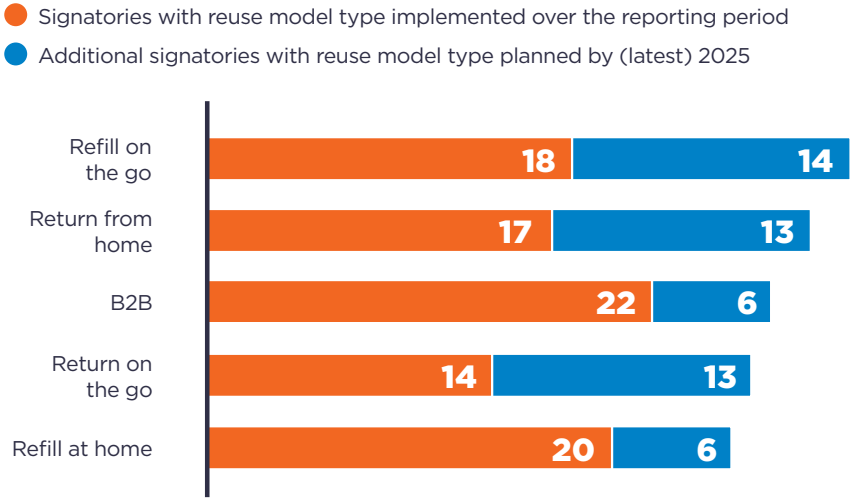
When looking at the popularity of different types of reuse models among signatories, B2B (supply chain) and 'Refill at home' were the models most commonly indicated as already being in place, with 22 and 20 companies respectively indicating they were working with these models. 'Return on the go' was the model type least commonly reported as being in place already, mentioned by 14 companies. However, looking at future plans on reuse indicated an increase in focus on 'Return on the go', 'Refill on the go' and 'Return from home' models going forward, with 'Refill on the go' having the most businesses working on it overall (Figure 10).

Information on the different reuse model types can be found in the Upstream Innovation guide, to be published in Q4 2020.

FIGURE 10

Types of reuse models

No. of packaging producer, packaged good and retail signatories indicating each model type in place / planned for introduction



Reuse models are categorised based on the following types:

Refill at home: users refill their reusable containers at home (for example, with refills delivered through a subscription service)

Refill on the go: users refill their reusable container away from home (for example, at an in-store dispensing system)

Return from home: packaging is picked up from home by a collection service (for example, by a logistics company)

Return on the go: users return the packaging at a store or drop-off point (for example, in a deposit return machine or a mailbox)

B2B: business-to-business reuse models include for instance companies reusing their own transport packaging, or industry-wide reuse systems based on interconnected operators managing a shared set of standardised, reusable packaging

More information about, and examples of, reuse models will be provided in the Upstream Innovation guide, to be published in Q4 2020.

How are businesses approaching the shift towards reuse models?

An increasing proportion of businesses are working to test and pilot reuse models in their businesses. 39% of packaging producer, packaged goods, and retail signatories had pilots in progress over the reporting year, with a further 17% of signatories reporting plans to deliver pilots going forward.

Exploration from most signatories is relatively tentative at this point, with signatories engaged in pilot activity reporting a relatively small number of pilots – one or two each. However, a few businesses reported larger numbers of pilots delivered over the reporting period, including **NATURA COSMETICS** (24), **Henkel AG & Co. KGaA** (10), and **Unilever** (9). Others indicated plans to ramp up their piloting activity to deliver large numbers of pilots by 2025, including **L'Oréal** (74), **Nestlé** (20), **H&M Group** (15), and packaging producer **Silgan Plastics** (25).

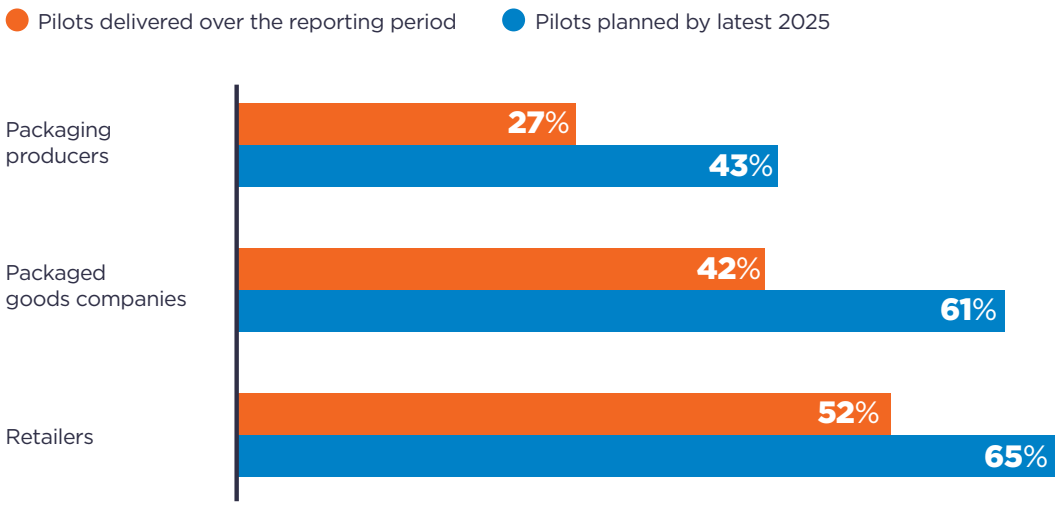
There are limited examples of large packaged goods and retail signatories deploying reuse models at scale at this stage, although a small minority of signatories have substantial existing reuse-based businesses. These include **Danone S.A.**, with approximately 50% of its plain water business volume delivered via reusable containers and jugs, **SC Johnson** offers refillable cleaning products that account for 17% of its total packaging weight, and **The Coca-Cola Company**, which delivers 23% of overall global sales volumes through return and refill reuse models.

A small minority of signatories (e.g. **L'OCCITANE en Provence**, **NATURA COSMETICS**) have begun to signal their ambition by setting quantitative targets to make reuse solutions available across a specific number of product lines or stores. However, no signatories indicated targets to deliver specific volumes of products or revenues via reuse models.

FIGURE 11

Piloting of reuse models

% of packaging producer, packaged goods, and retail signatories engaging in pilots



There were some strong indications of growth from reuse specialist signatories across both refill and return models:[10]

- London-based **CupClub Limited**'s returnable packaging service for food and beverage brands, which has tracking features in packaging to monitor usage and impact, saw 465% increase in turnover in 2019, with 400,000 orders from only 10,000 cups and return rates of 95%.
- **Ecostore**, which provides household and personal care products, has saved the equivalent of 275,000 one litre containers in 2019 through its in-store refill stations. The New Zealand-based company increased their number of refill stations from 60 to 75 in 2020, with the intention to continue to scale by a further 25% in 2021.
- **RePack**, based in Finland, which replaces single-use packaging in e-commerce with reusable packaging that customers can return to be reused, has scaled up operations to now work with more than 120 brands across 17 countries, including launching in North America with CanadaPost. Its ambition for the next year is to further increase its network to work with 200 brands.

How are governments approaching reuse?

Delivery of awareness-raising and education campaigns on reuse, alongside promotion of collaboration with the private sector and civil society organisations, were the measures being used most often by governments to drive progress on reuse, cited by 59% and 47% of governments respectively. Other efforts to drive adoption of reuse models have included support for pilot projects and changes to public procurement, such as banning single-use formats like cups and bottles at government properties and events, and instead opting for reusable options.

Notable new examples of progress on reuse by governments in the reporting year include:

- **Chile** has progressed with its proposed EPR regulation on packaging, which includes special incentives to be provided to reusable packaging and is expected to receive final approval at the end of 2020 with implementation in 2023. The government is also going through the approval process for a law that will limit the delivery of single-use products in restaurants, coffee shops, hotels, and other outlets, promoting reuse and certification of single-use plastics and the regulation of single-use plastic bottles.
- **France** intends to eliminate all single-use plastics by 2040 and set out several measures to promote reuse, including targets for the share of packaging put on the market that is reused to reach 5% by 2023 and 10% by 2027.
- **New Zealand** ran a 'Feels good to refill' campaign, which promoted refilling bottles over the summer period, educating people on the benefits of refilling and providing a website to allow them to find their nearest free refill station. The government is also funding a design project for a New Zealand container return scheme for beverage containers. This has included looking at options for refilling, recognising that reuse should be prioritised over recycling.
- **Peru** reported the approval of a new technical standard setting out the criteria for containers to be classified as reusable, as well as procedures to evaluate compliance with the criteria.
- **Scotland** has consulted on the proposal to introduce charges for environmentally harmful items, with single-use cups identified as a priority item. This built on the previous advice of an expert panel that a charge is more effective than a discount in changing behaviour and increasing reusable cup use.
- In July 2019 the Ministry of Territory and Sustainability of the Government of **Catalonia** issued a regulation limiting the use of single-use plastic products within its facilities. A government agreement is being finalised extending the limitation to all government and public sector facilities and public events.

Looking forward, there was a significant increase in focus on efforts to pilot or scale up reuse solutions and systems, with 47% of governments indicating they would do this going forward, double the 23% indicating they had worked on this to date.

What sector-level trends are emerging for reuse?

Retail

Many retailers have been working to test and expand existing refill and return offerings through their stores and e-commerce platforms:

- **Carrefour** launched an e-commerce model for reusable packaging embedded in its existing e-commerce platform, meaning customers didn't need to visit a separate website to buy products in reusable packaging. With the new integrated e-commerce model the company is expanding availability of its reusable offering from 5,000 to 125,000 customers.
- **Marks and Spencer plc** launched its first 'Fill Your Own' trial at a store in Southampton, United Kingdom, offering over 44 lines of packaging-free items including popular cereals, pasta, rice, lentils, confectionery, coffee, dried fruits, and nuts. The trial has since been extended to a second store in Manchester. The company has also introduced free water refill stations at two stores.
- **Pick 'n' Pay** has launched a pilot for 'nude' fruit and vegetable produce walls – dedicated plastic and packaging-free zones – in 20 stores across South Africa.
- **Schwarz Group** launched four reuse pilots over the reporting period and is now offering reuse solutions covering beverages, food, personal care, and cosmetics, as well as cleaning products. Examples include refill packs for soap and cosmetics and pilots of milk refill stations in Kaufland stores in Germany.
- **Starbucks Coffee Company** measured a 2.8% reusable rate in company-operated stores in the US and 105 million disposable cups saved by tracking discounts provided when customers brought their own cup. In the United Kingdom, a trial of a 5-pence disposable cup fee and a 25-pence reusable cup incentive increased reusable cup usage for hot drinks sold in stores from 2.2% to 5.8%.

Source: Schwarz Group

Source: PepsiCo

Beverages

Signatories in the beverage industry are applying all four reuse model types – return on the go, return from home, refill on the go, and refill at home – to deliver reusable solutions to their customers. Reported areas of testing and expansion included:

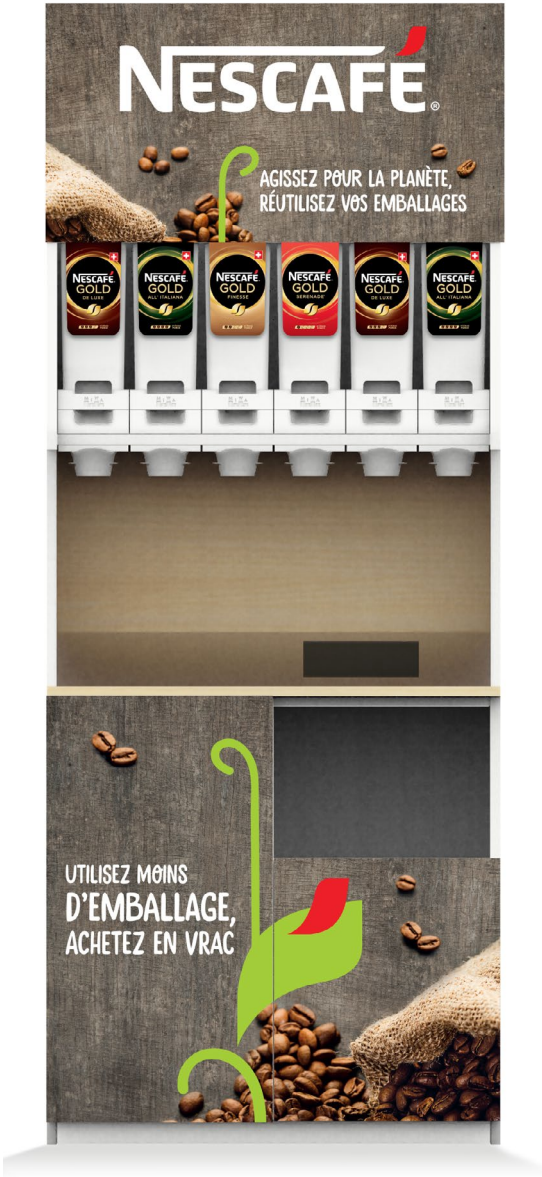
- **Danone S.A.**, which already delivers approximately 50% of its plain water business volume through reusable containers and jugs, has piloted a shrinkable 5 litre water jug through its Evian business that reduces plastic packaging by 66% and is made from 100% recycled PET. Danone is also planning to invest EUR 200 million in its 'Danone Packaging Transformation Accelerator', to scale up reuse models among the focus areas.
- **The Coca-Cola Company** is working with its bottlers to expand its refill-on-the-go dispensing models. There are plans to increase the number of water stations with flavour options both in Hong Kong (+400 stations) and the US (+250 stations) in 2020.
- **PepsiCo** is testing 'SodaStream Professional', which enables consumers to dispense customised water options, including flavours, sparkling or still water, into refillable personal containers. The company launched a pilot in 2019 which placed 30 units in workplaces, universities, and hospitality partners across the US, avoiding the use of nearly 160,000 bottles. There are plans to expand this rollout across the US later in 2020.

Food

55% of companies within the food sector have implemented, or are planning to implement, reuse solutions, with most focused on return from home and refill on the go models through partnerships with reuse specialists and retailers. Examples included:

- Alongside work to drive reuse delivery models in its beverage business (see above), **Danone** has tested a bulk yogurt dispenser in a bulk store in Paris under its "Faire Bien" brand and was launching returnable glass jars for dairy and plant-based products in London in Q3 2020.
- **Mars, Incorporated**, which aims to deliver pilots for 10 reuse projects by 2025, reported it has established a cross-business Reuse Taskforce to map reuse opportunities across its portfolio and markets, build out best practice, and drive innovation on reuse models. The company launched a pilot for cat food in 2020 on the **Loop** platform, available in Paris and Lille, and has also partnered with retailers to pilot bulk dispensing of M&Ms in several EU markets.
- **Mondelez International** announced its first reuse launch with **Loop** in early 2019, allowing consumers in Paris to order three of its Milka chocolate-filled or enrobed bakery products in a reusable container. The company reported it continues to explore other reuse models fit for the snacks segment.
- **Nestlé**, which has plans for 20 pilots of reuse models by 2025, collaborated with **MIWA** to introduce bulk dispensers for Nescafé and Purina One cat food in three Nestlé shops in Switzerland, which will be expanded to 15 shops by the end of 2020.

A number of other companies referenced new or existing partnerships involving **Terracycle Loop** to test and deliver reusable solutions for food applications, including **Barilla G. e R. Fratelli SpA**, **Danone S.A.**, **Kellogg Company**, **McCormick & Company Inc.**, and **Nestlé**.



Source: MIWA and Nestle

Source: SC Johnson

Household and personal care

Many companies in the household and personal care sector are actively testing and piloting reuse models across their portfolios and markets, with a particular focus on refill models – both refill on the go, through bulk dispensers, and refill at home, through concentrated refills. Examples include:

- **Colgate-Palmolive Company** is planning an oral care product to be implemented by the end of 2020 in partnership with **Loop**, and was also due to be part of the **Algramo** US NYC pilot starting in Q3 2020. By 2025 they plan to offer a refill option for every product category.
- **Henkel AG & Co. KGaA** launched 10 pilots over the reporting period, including setting up refill stations in the Czech Republic where customers can refill liquid detergents, fabric softeners, dishwashing liquids, or shampoos and shower gels.
- **SC Johnson** has launched concentrated refills for various products in the US, Canada, Mexico, the United Kingdom, China and Japan, and trials for its Ecover products at several stores including Waitrose, Sainsbury's, and Albert Heijn.
- **Unilever** launched nine reuse pilots over the reporting period, including rolling out a dilutable detergent liquid in Brazil that uses 75% less plastic packaging and is 20-30% less expensive for consumers, compared to buying its non-concentrated in a 3 litre bottle.

Apparel, footwear, and accessories

Most reuse models were focused on B2B and return from home models, with a number of signatories working on reusable hanger schemes or trialling solutions for poly-bags in their supply chain and e-commerce packaging. Examples include:

- **ASOS** is planning to run a pilot for 2,000 reusable e-commerce bags in 2020. The company calculated that for every 100 orders fulfilled with reusable packaging, it will save 2.65kg of single-use packaging and 29kg of CO_2, and if rolled out throughout the United Kingdom, 730 tonnes of plastic could be saved per year.
- **Inditex** has implemented reusable hangers in all its Zara stores across the world as part of its 'Single Hanger' project, where the same hangers are used to transport garments from the suppliers to the stores, and subsequently for display, with the hangers continuously reused through closed-loop systems.

Source: ASOS

Source: L'Oréal

Cosmetics

Cosmetics companies have indicated a relatively high ambition level regarding the exploration of reuse models in this year's reporting, with large numbers of pilots delivered and planned by signatories. All three cosmetics-focused companies were working primarily on refill on the go and refill at home reuse models:

- **L'OCCITANE en Provence** is planning to offer 25 eco-refills in 2020, more than one year in advance of its initial commitment, reducing its global plastic use by 5.2%. The company has also set a target to expand their refill options to 100% of stores by 2025.
- **NATURA COSMETICS** indicated that it has reuse models in place for 271 product lines (10% of its total) and has set a target to expand the availability of refill options to cover 50% of all product lines (a total of 1,362) by 2025.
- **L'Oréal** launched reuse solutions across 20 products in plastic packaging, including refillable at home serum bottles, and is planning to roll out 74 products in reusable packaging by 2022 for different formats, including bottles, jars, mascara, pencil, and dye kits. The company is also planning with Loop to launch return from home models for several of its brands, such as Garnier.

3 Reusable, recyclable, or compostable

IN THIS CHAPTER

Why design for reuse, recycling, or composting?

How are recyclability and compostability assessed in the Global Commitment?

What proportion of packaging is reusable, recyclable, or compostable today?

Which types of packaging are recyclable today?

What types of design changes are being implemented to improve recyclability?

What about compostable packaging?

Why do we use the term 'compostable' and not 'biodegradable' in the Global Commitment?

What are governments doing to incentivise the use of packaging that is reusable, recyclable, or compostable?

What sector-level trends are emerging in design for recyclability?

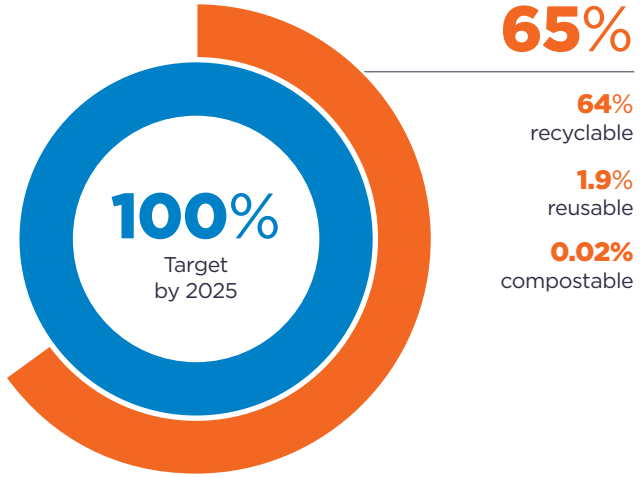
Why design for reuse, recycling, or composting?

In a circular economy, every unit of packaging should be recyclable or compostable and, where possible, also reusable. Achieving this requires a combination of redesign and innovation in business models, materials, packaging design, and reprocessing technologies. Designing packaging to be reusable, recyclable, or compostable (the focus of this chapter) is a crucial first step towards ensuring it is effectively reused, recycled, or composted in practice (the focus of Chapter 4).

FIGURE 12

Share of reusable, recyclable, or compostable packaging

% of total plastic packaging weight, for packaged goods and retail signatories



How are recyclability and compostability assessed in the Global Commitment?

The definitions used by Global Commitment signatories to assess what proportion of their portfolios are recyclable or compostable are more stringent than most other definitions.

The signatories' commitment to 100% reusable, recyclable, or compostable plastic packaging by 2025 is based on definitions that ask signatories to go beyond designing packaging for the technical possibility of recycling or composting by asking that recycling or composting is proven to work 'in practice and at scale' for any given packaging design. The suggested thresholds to prove recycling or composting works 'in practice and at scale' are: a 30% recycling/composting rate achieved across multiple regions, collectively representing at least 400 million inhabitants.

To support this year's reporting exercise, the Ellen MacArthur Foundation conducted a global survey of organisations with expertise on recycling rates with the aim of filling gaps in data required to provide evidence of where these thresholds are being met. The results of this exercise are summarised in the appendix to this document and are available to view here.

The 'in practice and at scale' requirement and suggested thresholds result in some signatories reporting low or moderate recyclability percentages today. The thresholds also mean that progress to 2025 can be expected to follow a 'lumpy' trajectory (e.g. if infrastructure to collect and recycle certain high-volume categories of packaging reaches the threshold scale requirement, recyclability scores would increase significantly). However, these definitions set a clear 2025 ambition level. Working towards this level of ambition and creating transparency on current recyclability percentages demonstrates the commitment of signatories to driving change at scale.

It should be noted that recyclability and compostability percentages reported as part of the Global Commitment are not comparable to assessments and claims of recyclability using different definitions or methodologies. The definitions of recyclability and compostability used in the context of the Global Commitment are designed to be applied at a global level and are not linked to any specific geographical area, local context, or regulations, or on-pack recyclability or compostability labels.

Full details of the definitions and suggested assessment methodology for Global Commitment signatories are available in the Global Commitment reporting guidelines document here.

To ensure full transparency, signatories were asked to explicitly confirm if they had strictly followed the suggested methodology. If they hadn't, they were asked to explain any deviations from the suggested methodology. All of this information is available on a company-by-company basis here. Overall, the quality and consistency of reporting on recyclability has increased significantly versus last year. While a number of companies deviated from the suggested methodology, and while deviations for certain individual signatories may have been significant, the impact of any deviations on aggregate data is relatively small. Based on the data available, we estimate that if all packaged goods and retail signatories had strictly followed the methodology, the share of recyclable packaging would be around 3 percentage points lower than the currently reported 64%.

What proportion of packaging is reusable, recyclable, or compostable today?

65% of plastic packaging, by weight, has been reported to be reusable, recyclable, or compostable. For packaged goods and retail signatories this breaks down into 1.9% reusable, 64% recyclable, and <0.1% compostable (with some packaging being both reusable and recyclable).

In terms of progress, for signatories reporting in both years, the increase in the overall proportion of packaging recyclable versus the prior year is estimated to be around 1%. It is important to bear in mind that improvements to the quality and consistency of reporting on recyclability across the signatory group mean this could be a slight underestimate of progress.

The current levels of reusable, recyclable, or compostable plastic packaging vary widely between signatories. Companies with a large share of bottles in their portfolio tend to have significantly higher percentages than companies with mixed or more complex packaging portfolios – for example, beverage producers had average recyclability scores of 88%, while apparel, footwear, and accessories companies had an average of 7% (see Figure 15).

Which types of packaging are recyclable today?

For the majority (29% out of 36%) of non-recyclable packaging reported by packaged goods and retail signatories, lack of recyclability is due to the packaging category itself (the basic material and format combination) for which no systems for recycling exist in practice and at scale today (i.e. 'failed' step 1 of the Global Commitment recyclability assessment process). This mainly includes flexible packaging, and to a much smaller extent packaging materials that are widely being eliminated, such as PVC, PS, and EPS (see Figure 13). Looking beyond the signatory group at the global plastic packaging market as a whole, we estimate that a staggering 71% (by weight) of packaging falls into categories for which there are no recycling systems in practice and at scale today (see Figure 14).[11]

For the remaining non-recyclable packaging – representing 7% of all plastic packaging packaging volumes reported by packaged goods and retail signatories – scaled recycling systems do exist but changes in the specific packaging design (such as to pigments, caps, or labels) are required for the packaging to fit these systems (i.e. 'passed' step 1 but 'failed' step 2 of the Global Commitment recyclability assessment process).[12]

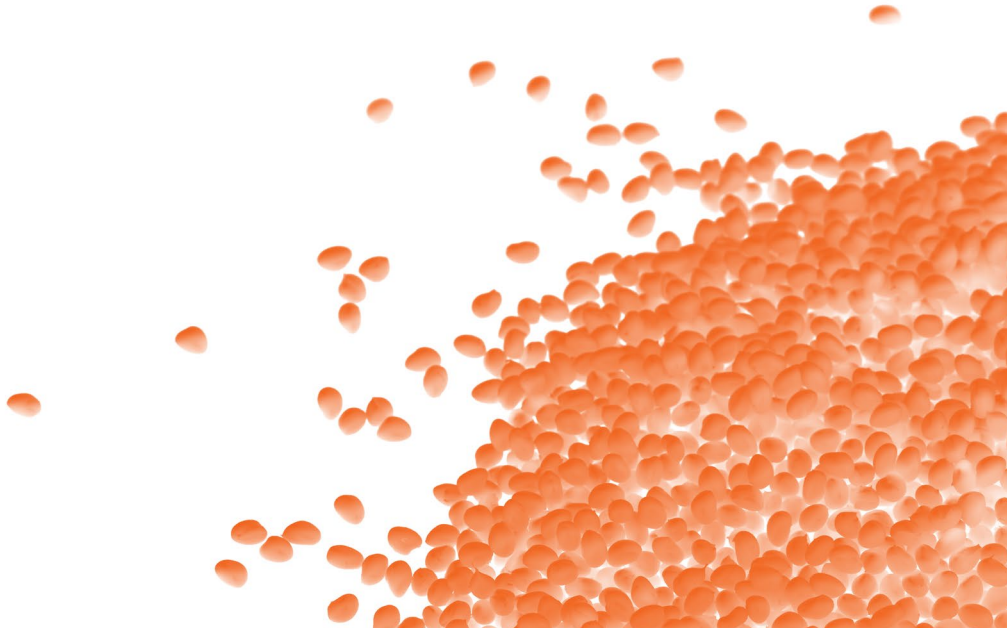
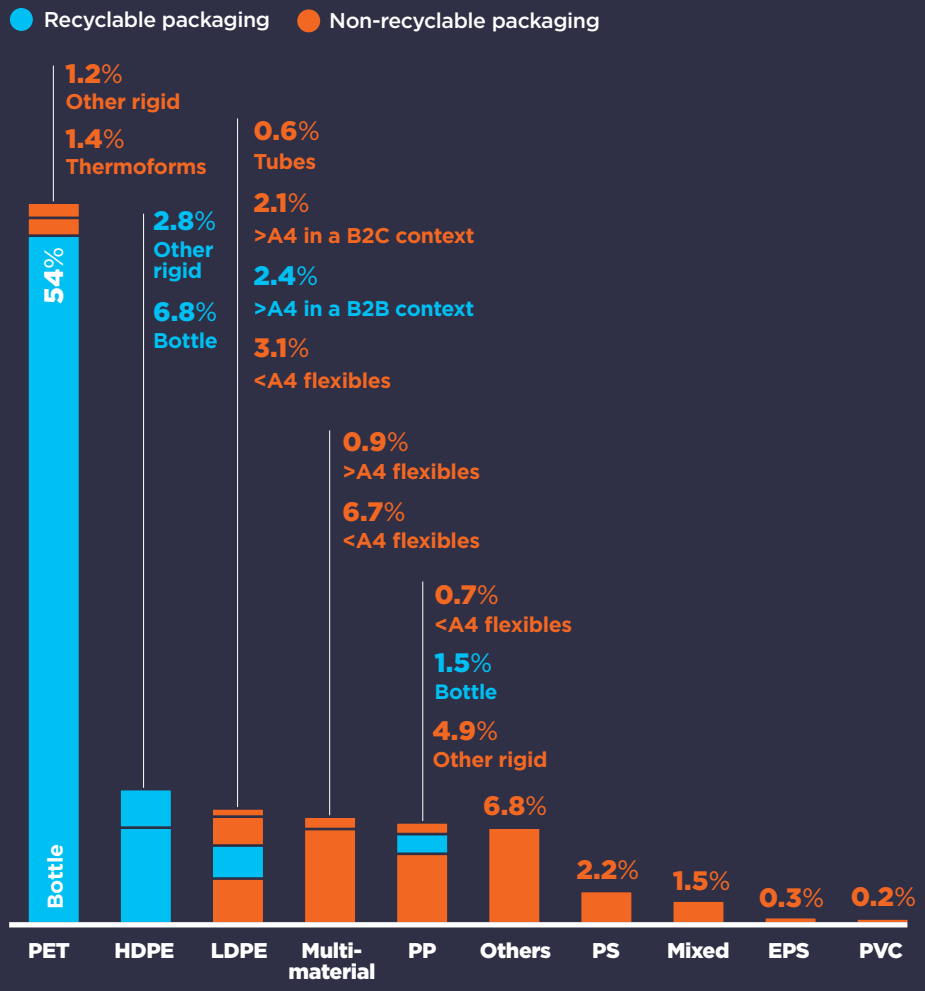


FIGURE 13

Breakdown of plastic packaging reported by Global Commitment signatories

% of total plastic packaging volumes (weight)
reported by packaged goods and retail signatories



Notes: Recyclability is assessed according to the Global Commitment definition - which requires that recycling is proven to work 'in practice and at scale' - and using the suggested thresholds and outputs of the 2020 New Plastics Economy Recycling Rate Survey. For more information see above 'How are recyclability and compostability assessed in the Global Commitment?' and the appendix to this document.

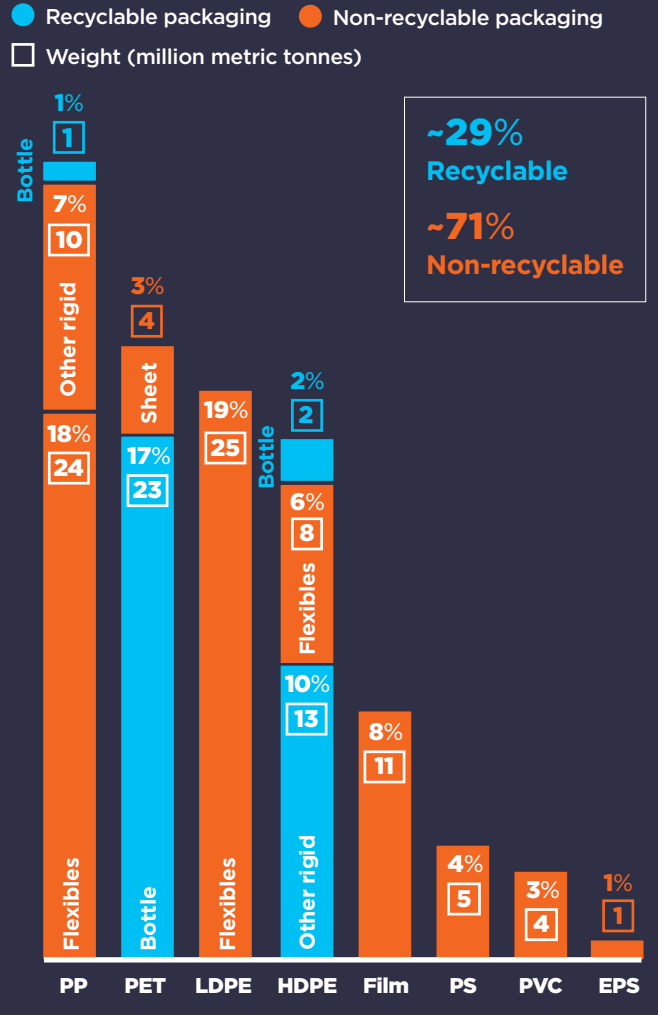
Percentages exclude 8 signatories who did not report their portfolio breakdown to the Ellen MacArthur Foundation.

The aggregate percentage recyclable in this figure differs from Figure 2 (64% recyclable) because (1) it includes the 7% for which a system for recycling exists but the actual packaging design makes the packaging unfit for the system, as this analysis only looks at packaging type, not at detailed packaging design (2) It excludes 3-4% which is not recyclable according to our assessment, but which was reported as recyclable by companies who choose to deviate from our assessment methodology. (see section 'How are recyclability and compostability assessed in the Global Commitment?')

FIGURE 14

Breakdown of global plastic packaging market

% of total global market volumes (weight)



Notes:

Source of plastic packaging volumes: Wood MacKenzie.

Recyclability is assessed according to the Global Commitment definition - which requires that recycling is proven to work 'in practice and at scale' - and using the suggested thresholds and outputs of the 2020 New Plastics Economy Recycling Rate Survey. For more information see above 'How are recyclability and compostability assessed in the Global Commitment?' and the appendix to this document.

What types of design changes are being implemented to improve recyclability?

Signatories are working to adapt their packaging portfolios to improve their recyclability scores. This activity can be broken into four categories:

Changes for packaging categories for which a system for recycling at scale currently exists:

1. **Changes to packaging to ensure it 'fits' the system for recycling that exists.** For some packaging, while systems to recycle the broad category they fit into do exist, the particular features of the packaging in question – such as the caps, fixtures, or labels – mean they do not 'fit' that system and are unable to be recycled. Some signatories have been working on re-designing these packaging types to render them recyclable. These types of design changes have driven small improvements in recyclability numbers. Examples include removal of undetectable carbon black pigment (referenced in Chapter 1 on Elimination), which does not allow packaging to be identified during sorting for recycling, and removal or redesign of components such as caps, lids, pumps, and trigger sprays that can prevent items from being processed for recycling.

2. **Changes to packaging that is already considered recyclable to increase efficiency of the sorting and recycling process or the quality of output.** Many of these efforts have been identified as part of signatories reporting on their elimination efforts, such as removal or replacement of labels to improve the ease of recycling, and a trend towards substituting coloured PET for clear PET. This also includes efforts to improve plastics sorting prior to recycling, with a number of signatories referencing Digimarc's digital watermarking technology as an area of exploration (see next chapter). While these changes do not affect recyclability scores, they are essential to increase the quantity of high-quality recycled content available, and to improve efficiency and returns for recyclers.

Changes for packaging types for which a system for recycling at scale does not currently exist:

3. **Design changes aiming to increase the suitability of packaging for recycling and facilitate the establishment or scaling of systems to recycle them.** Recycling must be proven to work 'in practice and at scale' for packaging to be considered recyclable under the Global Commitment. This means that these redesign efforts – which include changes such as substituting multi-materials for mono-materials, and other changes of the sort referenced in (1) and (2) – when applied to packaging types for which a system for recycling at scale does not currently exist, will not have an immediate impact on reported recyclability percentage. However, it is important to recognise these efforts as they are necessary steps to improve percentages over time for categories of packaging for which recycling systems are scaling up.

4. **A move away from certain formats or materials for which no system for recycling exists.** Many signatories are choosing to move away from some non-recyclable categories of packaging. Beyond phasing out of some of the most commonly identified problematic categories such as PVC, PS, and EPS (referenced in Chapter 1), examples include complete removal of some categories of flexible plastics (such as secondary films on multi-buy products), and substitution towards other packaging formats or materials. These efforts are also driving small increases in recyclability percentages.

Other efforts in this area by businesses are not addressing packaging design but are instead focussed on creating or stimulating the scaling of establishment or collection and recycling systems. These activities are covered in the next chapter.

What about compostable packaging?

A very small proportion (<0.1%) of signatories' plastic packaging has been reported to be compostable. This is both because compostable plastic packaging is mainly used by signatories for targeted applications only, and because the definition of compostability used in the Global Commitment goes beyond meeting international compostability standards to require proof that it works in practice and at scale.

For many items currently on the market, 'compostable packaging' often refers to 'industrially compostable packaging'. This means the packaging has been certified compostable under specific conditions and needs to be collected and composted in an industrial composting facility. In most countries, the required systems do not yet exist at scale. Even for home compostable materials, collection and centralised composting can still be necessary as there are many areas where composting at home may not be possible. As a result of these factors, some Global Commitment signatories are deciding not to pursue compostable solutions at this time.

The above points do not mean that compostable plastics should not be used at all. They mean that, like any material, the pros and cons of compostable plastics should be carefully evaluated before use. More information on compostability and compostable packaging applications is provided in the Upstream Innovation guide, to be published in Q4 2020.

Why do we use the term 'compostable' and not 'biodegradable' in the Global Commitment?

'Compostable', in the context of plastic, is a precisely defined term. It means that an item can break down into carbon dioxide, water, and biomass within a specific time frame and under specific, controlled conditions. 'Industrially compostable' and 'home compostable' are subsets of the term, for which internationally recognised standards have been developed.

'Biodegradable', on the other hand, is not defined as such. It indicates that a material is able to be broken down into carbon dioxide, water, and biomass by the natural action of microorganisms — but the term by itself does not define how quickly this process will occur, or a specific set of conditions that are required.

The above text is an extract from the Upstream Innovation guide, to be published in Q4 2020.

What are governments doing to incentivise the use of packaging that is reusable, recyclable, or compostable?

'Encouragement of voluntary actions' was the measure most often indicated by governments as having been used over the reporting period to incentivise the use of reusable, recyclable, or compostable packaging to date (41% of signatories), with 29% delivering awareness-raising and education campaigns, and 29% working on EPR schemes.

Looking forward, while efforts on EPR, awareness-raising, and encouragement of voluntary actions continue, the number of governments looking to develop or review regulations, standards, or guidelines (for example, standards for on-pack recyclability claims) has also increased from 0% in 2018 to 53%.

Examples include:

- The **Netherlands**' introduction of eco-modulation in its EPR scheme for packaging to incentivise recyclable and reusable packaging in January 2019.
- **Chile**'s implementation of EPR on packaging including eco-modulation of rates taking into account the complexity of carrying out the material recycling of packaging waste at the local level. Chile has also launched a public-private initiative to trial a recyclability label for packaging. The first products with the label are due to enter the market in 2020.
- As well as plans to consult on proposals to phase out hard-to-recycle plastic packaging (see chapter on Elimination), the **New Zealand** government has also indicated plans to work with sectors on improving recycling labelling.
- **Portugal** has enacted a law forcing the provision of alternatives to the use of very lightweight plastic bags and plastic packages at points of sale for bread, fruit, and vegetables. From June 2023 the law will also prohibit commercial establishments from providing these very lightweight plastic bags for primary packaging or transportation of those products, and also their sale in disposable packages containing plastic.

What sector-level trends are emerging in design for recyclability?

Food

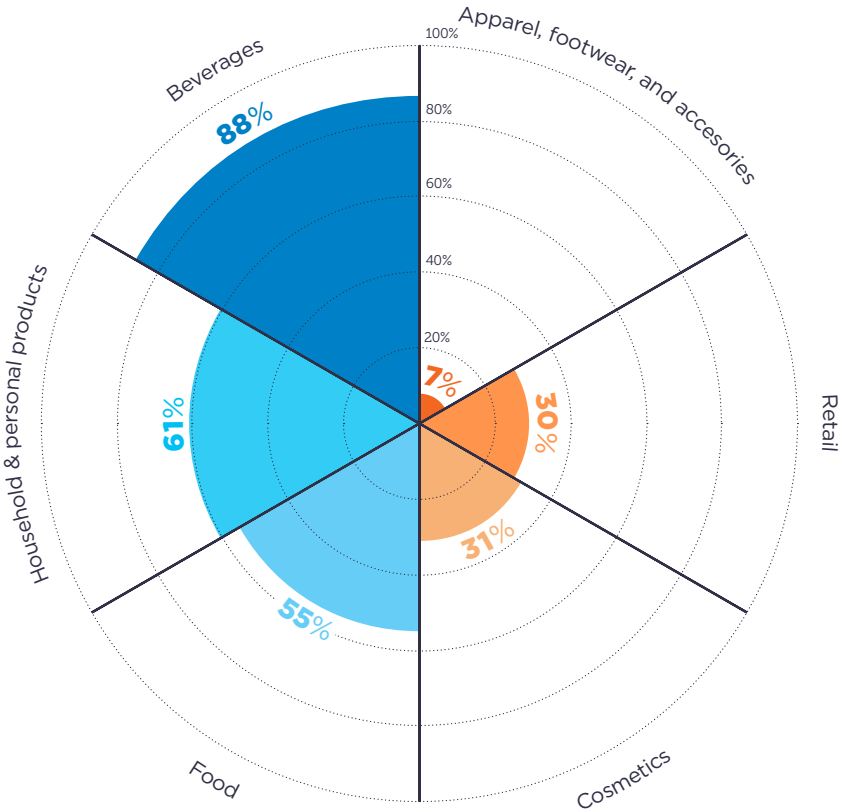
Packaged goods companies with a focus on food products reported 55% of their packaging is recyclable. As well as work to perform detailed assessments of portfolios and eliminate commonly identified problematic categories of packaging which are not recyclable, such as PVC and undetectable carbon black (see Chapter 1 on Elimination), a number were working on transitioning flexible (and to a lesser extent, rigid) packaging from multi-material to mono-material, and finding alternatives for non-recyclable formats including pouches and sachets.

- In its Albert Heijn stores, retailer **Ahold Delhaize** replaced black trays with transparent ones, substituted PS in its mushroom trays for PET, and switched its meat trays to mono-PET. The company is also planning to switch its sauce bottle to PET and remove plastic covers, making one million plastic bottles eligible for recycling.
- **Barilla G. e R. Fratelli SpA** reduced its use of multilayer materials by 29% by substituting to mono-materials in 2019, and will have eliminated 100% of remaining multilayer packaging by 2021.
- **Danone S.A.** delivered improvements to its recyclability percentage through reducing use of polystyrene (which it will phase out worldwide by 2025), and highlighted that its recyclability score will sharply increase when it phases out PVC by 2021. The company will shift some non-recyclable packaging to paper in order to achieve its target for 100% reusable, recyclable, or compostable by 2025.
- **Mars, Incorporated** has assessed the waste management infrastructure and likelihood of being able to scale up different technologies over the next 5–10 years for its major markets to inform its packaging strategy. In R&D it is exploring and testing options for shifting materials and redesigning formats including coated paper materials and compostable wrappers.
- During 2019 **Mondelez International** mapped its global packaging portfolio and identified about 4,000 packaging components requiring elimination or change in design to be recyclable. The company has set up over 130 work tracks against 18 technical challenges and started development work for about 100 of the work tracks.

FIGURE 15

Recyclability of plastic packaging by sector

% of total plastic packaging weight, for packaged goods and retail signatories



Source: The Coca-Cola Company

Beverages

Given the prominence of PET bottles in the portfolios of signatories in the beverage industry, there is a relatively high level of recyclability for the sector, with 88% of beverage signatories' packaging reported as recyclable. Most companies were focused on removing pigments from their bottles and adapting label materials to further increase recyclability of their packaging:

- **Keurig Dr Pepper** reported that they have moved their A&W brand PET bottles from amber to clear PET.
- **The Coca-Cola Company** and bottlers including **Swire Coca-Cola Ltd.** are continuing to transition Sprite PET bottles from green to clear PET to boost recycling of the bottles, with the initiative now rolled out globally.
- **PepsiCo** is planning to complete removal of impediments to recycling (such as non-recyclable labels, PVC, and colourants) by 2025. This work has included replacing PVC shrink sleeves to recycling-compatible ones and using metallic inks to enable it to eliminate metalised labels by the end of 2021.

Household and personal care

Almost half of packaging reported by signatories in the household and personal care sector was made up of PET or HDPE bottles and containers, with 61% reported as being recyclable. Efforts to increase the proportion of packaging recyclable were largely focused on removing or substituting away from commonly identified problematic categories such as PVC, PS, and undetectable carbon black pigment (see Chapter 1 on Elimination), however a number were also looking to remove other pigments or fixtures to enable easy recycling of packaging:

- **Johnson & Johnson Consumer Health** is working to exit opaque PET bottles across its global personal care portfolio, with efforts underway to remove opaque and colored PET structures and metallic inks in adult and baby skincare, oral care, and hair care products, beginning in Europe in 2021 and expanding to North America and Asia-Pacific. **Henkel AG & Co. KGaA** shifted 600 metric tonnes of opaque PET bottles to transparent bottles over the reporting period.
- **RB** has removed non-recyclable pumps from some bottles altogether, replacing them with a cap to make the bottle fully recyclable, and has also designed a metal-free spray trigger.
- **SC Johnson** is working to remove components which can impede or prevent recycling, including through redesigning PET trigger bottles, aerosol caps, and closures.
- **Unilever** has been working on developing a new detectable black pigment for its HDPE bottles so that they can be detected during sorting.

Apparel, footwear, and accessories

Signatories in the apparel, footwear, and accessories sector reported that 7% of its packaging as being recyclable. With a large proportion of signatories' portfolios composed of non-recyclable categories of flexible packaging (mainly LDPE), the majority of actions by companies focused on removing or substituting these types of packaging for recyclable alternatives (see actions on Elimination, chapter 1) or on creating or improving closed-loop systems to recycle this packaging in B2B applications.

- **Inditex** is working with its suppliers to improve traceability and ensure that packaging is recyclable. The company is working on recycling and reuse channels for its headquarters, factories, logistics centres, and stores. In 2019, 893 metric tonnes of plastic from these channels were sent to recycling.
- **Superdry Plc** developed a process for garment poly bags to be removed at its distribution centres so that they can be collected in bulk and returned to the manufacturer for recycling.

Cosmetics

31% of packaging for cosmetics-focused signatories was reported as recyclable. Barriers to recyclability for the sector include relatively high use of small-format items (**L'Oreal** highlighted that 20% of their products are too small to be captured by sorting infrastructure for recycling), tube formats (for which scaled recycling does not currently exist), and more complex fixtures which act as disruptors to recycling, such as pumps and sprays. As a result, alongside significant efforts on testing reuse models, cosmetics companies were focusing on increasing recyclability by removing disruptors to recycling and innovating to allow substitution with recyclable materials.

- **L'Oréal** has an ongoing project to remove pumps with metallic springs for PET packaging, has removed metallised labels from its ELSEVE shampoo and conditioner packaging and has also established specific task forces to work on flexibles and laminated tubes.
- **L'OCCITANE en Provence** has identified and is testing solutions to enable the removal of multilayer materials used for its eco-refills and tubes, and is also working to improve the separability of packaging for its B2B products.

4 Reuse, recycling, and composting in practice

IN THIS CHAPTER

Why reuse, recycling, or composting in practice?

How quickly is recycling capacity of signatories increasing?

What developments have been seen in collection and sorting technologies?

How are producers and users of packaging working to increase collection, sorting, and recycling rates?

What are governments doing to increase collection, recycling, and composting rates?

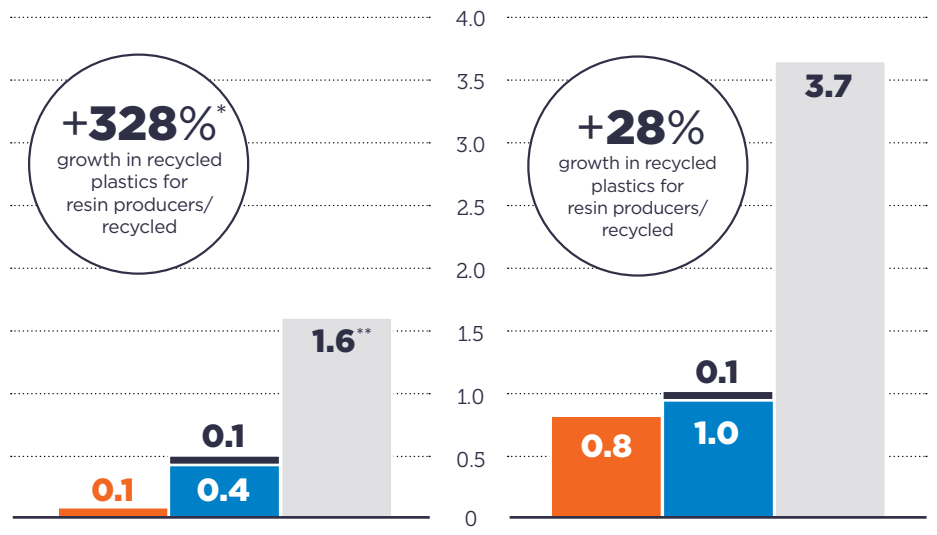
Why reuse, recycling, or composting in practice?

Designing all packaging to be reusable, recyclable, or compostable (the focus of the previous section) is a necessary first step, but a circular economy is only realised if packaging is actually reused, recycled, or composted in practice. Next to circular packaging design, this requires the necessary systems to be in place to collect, sort, and effectively reuse, recycle, or compost the packaging. This section focuses on signatories' efforts and commitments to put these systems in place.

FIGURE 16

Recycled plastics production

Volumes for plastics producers and recyclers (millions of metric tonnes)



Notes:

* By increasing recycled content from 27,500 metric tonnes in 2018, to 330,000 in 2019, Indorama Ventures Public Company Limited was the main signatory contributing to the increase shown.

** 2025 recycled plastics target for plastics producers were calculated based on estimated growth from their 2019 baseline plastics volumes when data was not provided by signatories.

How quickly is recycling capacity of signatories increasing?

Signatories with recycling activities have shown significant collective growth in recycling capacity. Recycling capacity from recycler signatories equated to nearly 1.1 million tonnes in 2019, with signatories reporting both years increasing their output by 28% from 2018 to 2019. (see Figure 16)

This growth came from a combination of acquisitions of existing facilities and build of new ones. Investments in sorting and recycling facility building included: **INCOM RECYCLE Co., Ltd. Beijing's** facility and sorting center in Tianjin, with an annual output of 50,000 tons (~45,000 metric tonnes) of food-grade PET polyester chips (the company has plans to build three more RPET plants in China with a capacity of 350,000 tons (~318k metric tonnes) each); **IMER's** increase of its sorting capacity by four sorting plants in the Mexico City area; and **Suez's** opening of new sorting centers in Germany and Belgium as well as a plastics recycling plant in Thailand, due to start operating before the end of 2020.

Besides recycling and after use specialists, businesses from across the plastics value chain – including those engaged in plastics production, packaging production, and even retail – are investing in their own recycling facilities. Examples include:

- Packaging producer **Envases Universales de México** has installed a recycling plant in México, with an output capacity of 60,000 metric tonnes of food grade PET resin per year.
- Retailer **Schwarz Group**, which has recently begun to invest in its own sorting and recycling facilities, built a lightweight packaging sorting plant with 90,000 tons (~82,000 metric tonnes) annual capacity in The Netherlands in 2019, and began the construction of two recycling plants in the United States which will be put into service in 2020. Schwarz reported further plans to set up a lightweight packaging plant in Belgium with a sorting capacity of more than 100,000 tons (~91,000 metric tonnes), and to work to produce and sell retail products with up to 100% of Schwarz Group's self-recycled plastic resin.
- Packaging producer and recycler **ValGroup** has established a pilot plant to sort Municipal Solid Waste at a landfill site, with a recycling facility able to process different types of plastic currently under construction at the same location. The company is also looking into opportunities to invest in innovative mixed-waste processing facilities, able to sort up to 1,000 tonnes of mixed solid waste per day, with potential to reduce landfill disposal and prevent waste from leaking into the environment.
- Resin producers have committed to produce at least 1.7 million tonnes of recycled plastic output by 2025, with **Indorama Ventures Public Company Limited** increasing its post-consumer recycling production capacity by 128,000 tonnes, to 330,000 tonnes over the reporting period through organic projects and acquisitions across the globe, including in the Americas, South East Asia, and Europe.

What developments have been seen in collection and sorting technologies?

A number of packaged goods and packaging producer signatories are exploring digital watermarking technology .The potential of the technology is also being picked up by policymakers, with a European Commission report proposing a review to assess the feasibility of digital watermarking with a view to adopting a legal requirement for its use by 2030.[13]

In cooperation with project HolyGrail, **Digimarc Corporation** has continued work on its digital watermarking solution for sorting plastics in mixed waste streams.[14] The company reported that it is now working with two sortation equipment manufacturers – with an estimated 80% global market share – and a number of Fortune 500 brands on implementation of their barcode solution for recycling and reuse applications. They are also exploring the use of lasers, in addition to molds, to convey Digimarc Barcode into 3D objects.

Another example of use of digital technologies to optimise collection and sorting operations to improve the quality of collected waste has come from Italy-based waste management company **Hera Group**. The company's digitisation project created a dashboard to track information on garbage truck journeys, waste quality, and anomalies during collection. This enabled insights on waste quality by geographical area, enabling the company to target communications to improve separation of waste by citizens in districts where quality was lower, and to optimise efficiency of plant operations based on the quality of waste collected. The group is also evaluating adoption of AI technology during the bin emptying phase to deliver more detailed insights, down to the level of individual roadside bins.

How are producers and users of packaging working to increase collection, sorting, and recycling rates?

Packaging producers, packaged goods companies, and retailers reported their collaborations with other organisations to improve collection, sorting, and recycling systems for the packaging they put on the market. Many signatories referenced participation in industry recycling groups, partnerships to establish or support recycling systems, store take-back schemes, or research projects to understand recycling of specific types of packaging. A number reported efforts to increase collection and recycling rates which were tailored to the market context in key geographies:

- In Greece, retailer **Ahold Delhaize's** brand AB Vassilopoulos has collaborated with TEXAN to implement a system that allows consumers to recycle up to six different materials including plastic bottles, plastic bags, and plastic containers. 89 recycling centres recycled 6,755 tonnes of plastic packaging in 2019.
- **Bell Holding** is investing to deliver recycling at scale in Turkey. It is particularly focused on producing good-quality recycled PP and HDPE. The packaging producer has initiated a trial with a large multinational customer to develop a reverse vending machine collection system for home, personal care, and, potentially, food packaging that is mainly uncollected in Turkey at present.
- **Danone S.A.** is working with local stakeholders to increase collection and recycling in emerging markets, for example through the Danone Ecosystem Fund which is supporting waste pickers in seven countries. As of 2019 they have empowered 6,500 waste pickers and recycled ~50,000 tons (~45,000 metric tonnes) of waste per year through the initiative.
- **NATURA COSMETICS** reported that its reverse logistics programmes in Brazil and Latin America ensured 39% of all packaging waste generated in 2019 was re-collected. The programmes aim to raise re-collection and separation capacity in cooperatives.
- **Nestlé** referenced its aim to improve recycling rates and infrastructure in 20 countries that account for 50% of its plastic usage. The company reported it is currently focusing on increasing collection and recycling in 12 countries – that it has identified as accounting for over 10% of its plastic usage – where waste is leaking into the waterways.
- **The Coca-Cola Company** referenced its market-by-market approach, exemplified by its partnership with 250 recycling cooperatives across Brazil through Reciclar pelo Brazil (Recycle for Brazil). In 2019, the volume of recycled materials processed across all 233 co-ops grew from 51,000 tons (~46,000 metric tonnes) to more than 106,000 tons (~96,000 metric tonnes).

It was notable that this year, as part of their Global Commitment reporting, a number of major packaged goods signatories indicated their support for EPR schemes, referencing their participation in them as part of their work to deliver on commitments to take more responsibility for the after use of packaging they put on the market:

- **Nestlé** stated its support for "effective mandatory EPR schemes", while **Danone S.A.** stated its support for "the EPR principle", including deposit return schemes for beverage bottles.
- **Unilever** stated that participation in EPR schemes, alongside investment and partnerships to improve waste management infrastructure, and purchasing and use of recycled plastics, will help them deliver on their goal to collect and process more plastic packaging than they sell.
- **PepsiCo** referenced its collaboration to establish producer responsibility organisations (PROs) to improve collection infrastructure in Vietnam, Thailand, and Malaysia.

There is also evidence that the recycled content targets set by producers and users of packaging are helping to drive investment in recycling infrastructure. Sven Saura, VP for Recycling at **Veolia** shared that: "The recycled content commitments by brands and retailers and the resulting off-take agreements we set up with them have been very helpful to support Veolia's commitment to invest in new recycling plants and to achieve our 2025 target of multiplying our plastic processing activity 5-fold by 2025."

What are governments doing to increase collection, recycling, and composting rates?

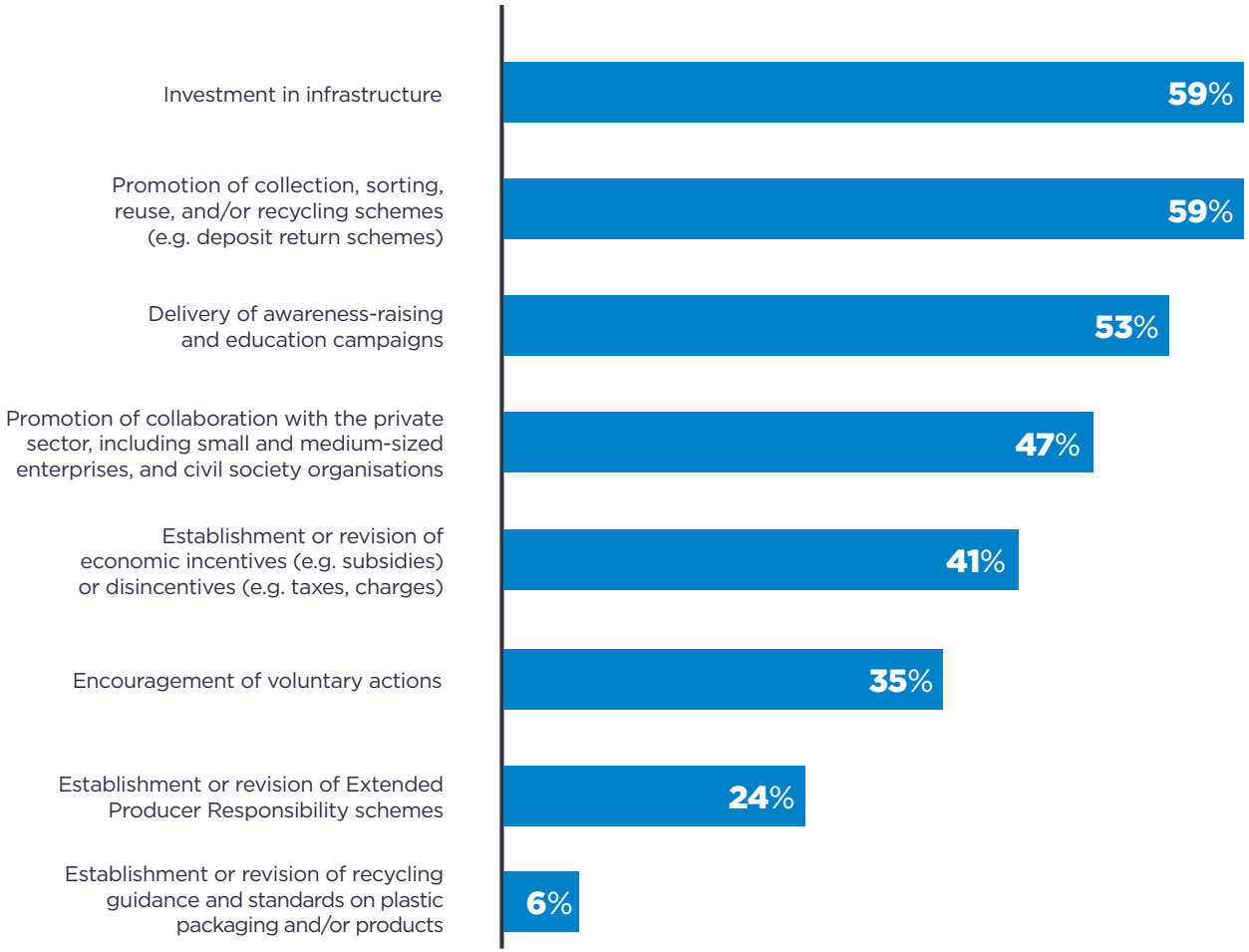
Governments are attempting to drive up collection and recycling rates with most focusing on the promotion of various collection schemes including deposit return systems (59% of governments indicated they were working on this) and on infrastructure investment. Other measures being used to drive funding for and improvements in collection and recycling of plastics included promotion of private sector collaboration, awareness-raising campaigns and use of economic incentives, such as increasing taxes on landfill and incineration of plastics (see Figure 17).

A number of national governments are working to incentivise packaging return through deposit return schemes for drinks bottles: the **Netherlands**' deposit return system for small plastic bottles will come into effect in 2021; **Scotland**'s deposit return scheme for drinks bottles and cans will be available across all of Scotland from July 2022; **Portugal**'s mandatory deposit return system for non-reusable beverage containers is expected to be in operation from 2022; and the Government of the **United Kingdom** will be introducing deposit return schemes for single-use drinks containers, expected by 2023.

FIGURE 17

Government measures to encourage collection, sorting, reuse, and recycling of packaging

% of government signatories reporting each measure



Many governments at national and city level referenced different programmes aimed at improving collection systems and infrastructure:

- The city of **Copenhagen** has been securing bins to enable every single household in the city to recycle and is doubling the frequency for emptying the bins. In a one-year period the amount of plastic that was separated at its source increased about 17% by weight.
- The city of **Sao Paulo**, which aims to achieve 100% household collection by 2020, is expanding selective collection and availability of its "Voluntary Delivery Points" for recyclable waste. Its "Cooperative Support Center" initiative aims to provide legal, accounting, and general support for waste picker cooperatives.
- **Peru** has approved legislation to make it mandatory to implement waste segregation programmes at source to facilitate recycling. The government also incentivises local governments to increase collection by releasing extra funds to those achieving goals on collection.
- The City of **Buenos Aires** is incentivising packaging return by collaborating with **Unilever** to drive recyclable collection in exchange for one dollar coupons for buying Unilever's products in selected stores.

Some governments are also developing EPR schemes to ensure financing for after-use systems and improve collection rates. The **United Kingdom** government is working towards an EPR scheme to ensure producers pay the full net costs of managing packaging waste at end-of-life (expected to be introduced in 2023), while the **Peru government's** EPR scheme will set a mandatory waste collection goal for industries.

In **New Zealand** and the **Netherlands** taxes on landfill, incineration, and export of unsorted plastics have been increased to further disincentivise their use. **New Zealand** agreed in June 2020 to progressively increase the levy rate for landfills that take household waste from the current USD 10 per tonne to USD 60 per tonne. The levy will also be expanded to cover additional landfill types, with revenue gathered from it to help fund more recycling and waste minimisation initiatives. the **Netherlands**, which has a target to recycle 47% of all plastic packaging put on the market in 2024, has also imposed higher taxes for incineration, landfilling, and export of unsorted plastics.

Additional investments in after use infrastructure technologies by governments included: **New Zealand**'s allocation of USD 124 million funding to waste and resource efficiency projects, including projects to improve onshore recycling systems and capacity for reprocessing high-value plastics like HDPE and PP, through its Covid-19 Response and Recovery Fund; and the **Netherlands**' EUR 10 million subsidies for innovative sorting and recycling technologies.

5 Decoupling from the consumption of finite resources

IN THIS CHAPTER

Why decoupling?

What progress is being made on reducing the overall use of plastic packaging?

What progress is being made on reducing the overall use of virgin plastic in packaging?

What progress is being made on increasing the proportion of recycled content in plastic packaging?

What progress is being made by producers of (non-compostable) plastics?

What progress is being made on increasing the proportion of renewable content from responsibly managed sources?

What government actions are being taken to drive decoupling?

What sector-based trends are emerging in decoupling?

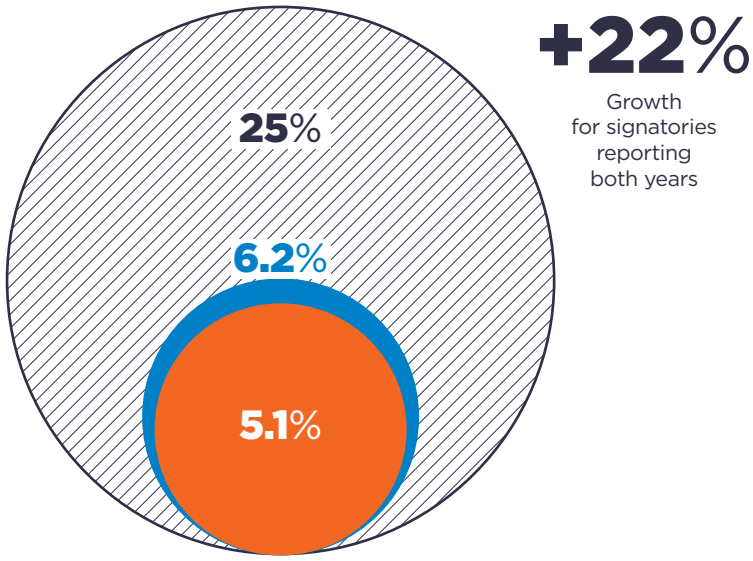
Why decoupling?

Moving towards a circular economy for plastic packaging includes, over time, decoupling from finite (fossil) resources. This is achieved first and foremost by drastically reducing the need for virgin plastics through elimination, reuse, and use of recycled content, and then, over time, by switching any remaining virgin inputs to renewable feedstocks that are proven to come from responsibly managed sources and to be environmentally beneficial.

FIGURE 18

Post-consumer recycled content in plastic packaging

Weighted average of post-consumer recycled content for packaged goods and retail signatories



Notes:
The 2018 average does not include data from signatories reporting for the first time in the 2020 reporting cycle. The percentage growth highlighted refers to the trajectory seen for average recycled content for signatories reporting in both years, for which there was an increase from 5.1 % to 6.3%.

What progress is being made on reducing the overall use of plastic packaging?

The volume of plastic packaging reported by packaged goods and retail signatories increased 0.6% for signatories that reported both this year and last year. This is below the estimated 3% growth rate for the global plastic packaging market as a whole.[15]

Some signatories have set and are already making progress on targets to reduce their overall use of plastic packaging. For example, **Apple** has a target to fully eliminate plastic in its packaging by 2025 and has reduced plastic in its product packaging by 58% in four years, equivalent to avoiding nearly 21,000 tonnes over that period.

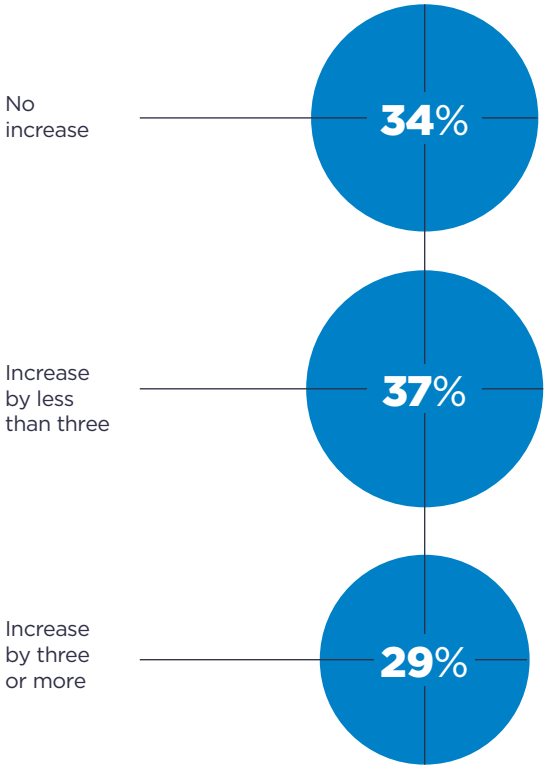
What progress is being made on reducing the overall use of virgin plastic in packaging?

The volume of virgin plastic packaging reported by packaged goods and retail signatories decreased by 0.1% for signatories that reported both this year and last year. This slight downward trajectory is positive, and increasing adoption of virgin reduction targets by some of the biggest users of plastic packaging point to further reductions in future. However, particularly with the impact of the Covid-19 pandemic on 2020 numbers yet to be seen, it remains too early to say whether this downward trend will be sustained consistently in the coming years.

FIGURE 19

Distribution of progress on recycled content in packaging

PCR growth in percentage points for packaged goods and retail signatories:



Notes:
Where there were known significant changes in a signatory's data quality or the scope of their reporting between the two years affecting the comparability of data provided in each year, data for the relevant signatories were not included in this chart.

Spread of percentage point increases in the share of post-consumer recycled content in plastic packaging for packaged goods and retail signatories reporting in 2019 and 2020

What progress is being made on increasing the proportion of recycled content in plastic packaging?

The use of recycled plastics increased by a substantial 22% for packaged goods and retail signatories that reported both this year and last year, with the group as a whole now at 6.2%. This increase for the group as a whole contributed to the above referenced marginal decrease in the use of virgin plastics in packaging year on year.

While this increase is significant – and represents a positive start towards signatories' combined 2025 target of 25% – reaching the target level of recycled content at the group level will require a further acceleration in progress over the next few years.

Looking beyond averages to the progress of individual packaged goods and retail signatories, progress was mixed. Some signatories made significant jumps, with **Danone S.A.**, **SC Johnson**, **Unilever**, **NATURA COSMETICS**, **L'OCCITANE en Provence**, **Burberry Group plc**, **Selfridges**, **Werner & Mertz GmbH**, **Pernod Ricard**, and **Superdry Plc**, all increasing by four or more percentage points. However, 34% of signatories did not increase their level of recycled content at all vs the prior year (see Figure 19).

Looking at the types of recycled content and packaging that signatories were working on, there was a clear focus on PET and HDPE bottle-based applications for many signatories, as might be expected given that these categories are the most widely recycled today.

What progress is being made on increasing the proportion of renewable content from responsibly managed sources?

Three compostable plastic producer signatories reported on their work to increase the proportion of renewable content from responsibly managed sources in their plastics. Their actions included efforts to obtain certification for responsible management of feedstocks, as well identification of new feedstock sources.

As part of its commitment to identifying sustainable sources of sugars and vegetable oils as raw materials for its monomers, **Novamont SpA** reported that it has developed a process at lab level to obtain sugars from wasted cellulose of different sources (water treatment plants, wasted diapers, etc.) which is to be scaled-up. In 2020 the company obtained the Platinum Recognition Level in the Ecovadis assessment, focused on supply-chain sustainability, gained by the 1% top sectorial performers.

NatureWorks reported increasing the proportion of its corn feedstocks certified by ISCC PLUS from 46% to 64% between 2018 and 2019, with every farm entering the programme receiving training in adhering to the ISCC PLUS scheme's principles, including protecting biodiversity, implementing best agricultural practices, ensuring safe working conditions, and complying with human, labour, and land rights, laws and treaties.

What progress is being made by producers of (non-compostable) plastics?

For producers of non-compostable plastics to become part of the circular economy and decouple from the use of finite resources, it is crucial that they shift their business model from one based on extraction of finite resources to one based on the circulation of materials.

So far just seven producers, covering 4.4% of global plastic production, have committed through the Global Commitment to start making that shift by setting quantitative targets to increase the share of recycled plastics in their total plastics sales by 2025 (see Figure 20).

FIGURE 20

Plastic producer signatory volumes as a share of global production

% of plastic resin production by weight

Plastic producers that signed the Global Commitment	2025 postconsumer recycled content target	
	thousands of metric tonnes per annum	% of total annual sales volumes
BASF SE*	**>160****	n/a
Borealis AG	**350**	n/a
Eastman*	n/a	**15**%
Indorama Ventures Public Company Limited	n/a	>**12**%
Kingfa Sci. & Tech. Co., Ltd	n/a	**25**%
NOVAPET	n/a	**15**%
Plasticos Compuestos S.A.,	n/a	**5**%

Notes:
*Signatories joined the Global Commitment after the reporting period and will start reporting in 2021

**Most conservative estimate, based on 250kt recycled- and waste-based feedstock

What government actions are being taken to drive decoupling?

At the same time as an increasing number of businesses are setting plastic or virgin plastic reduction targets for packaging, through Plastics Pacts, a number of governments in Europe have also begun to set these types of targets. In the **Netherlands**, as part of the Plastics Pact NL,the givernment has set a target for the Pact participants to use 20% less plastics by 2025, and, as part of the European Plastics Pact, 18 national governments (including Germany, France, Italy, and Spain) have signed up to reduce virgin plastic products and packaging by at least 20% (by weight) by 2025, with half of that reduction coming from an absolute reduction of plastics.

A number of governments are also beginning to set mandatory minimum thresholds or targets — some in collaboration with Plastics Pacts or industry groups — to achieve a certain percentage of recycled content in plastic packaging, or specific categories of plastic packaging. For example:

- The **United Kingdom** is planning to introduce a new tax on plastic packaging that contains less than 30% recycled content, applying to businesses producing or importing plastic packaging, from April 2022.
- As of December 2021, in **Peru** it will be mandatory to use at least 15% post-consumer recycled content in PET bottles for drink and personal care products.
- In the **Netherlands**, Plastics Pact NL set a target of at least 35% recycled content in new products and packaging by 2025.
- In October 2019, the Government of **Catalonia** signed a voluntary agreement with the Catalan Association of Water Packers establishing targets to reach 20% recycled PET in bottles by 2020, 30% by 2025, and 50% by 2030. It is also supporting industry to increase the use of recycled materials, through research and demonstration projects, subsidised through the landfill and incineration tax for municipal and industrial waste.
- **Portugal** is looking into creating minimum rates for the incorporation of recycled materials in packaging as part of the revision process of its EPR scheme legislation.

What sector-based trends are emerging in decoupling?

Beverages

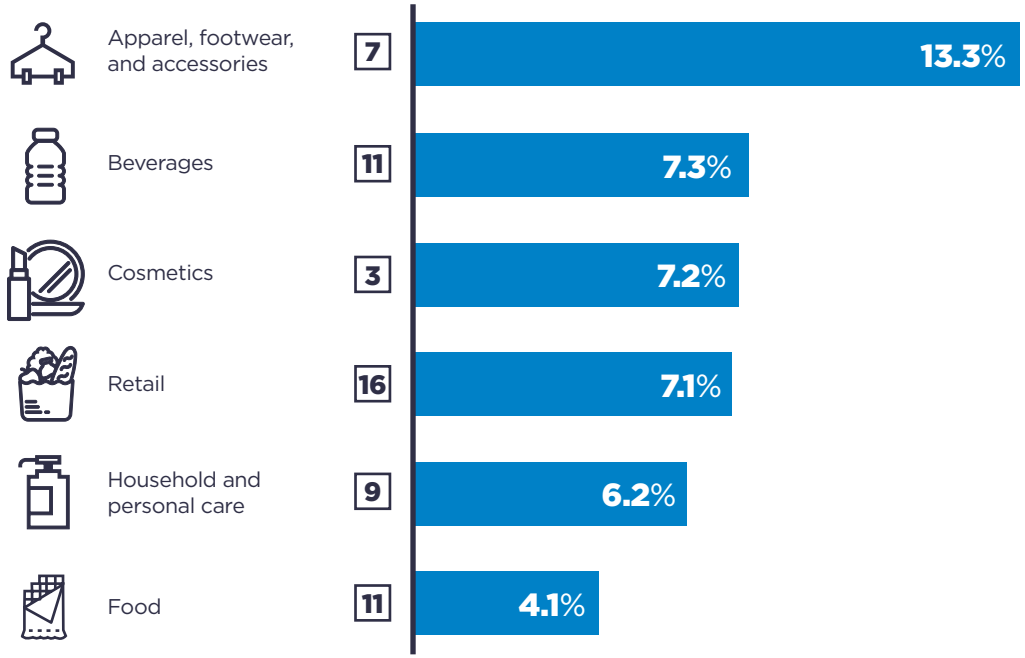
Beverage-focused signatories reported an average of 7.3% post-consumer recycled content (weighted average) in their packaging in 2019. Due to their high use of PET (~88% of signatories' portfolios, on average), most beverage companies are working on sourcing and increasing the proportion of recycled PET within their bottles with a few launching or expanding their use of 100% rPET bottles for certain geographies and brands. Some signatories also reported work to increase recycled content in secondary packaging such as shrink films:

- **Danone S.A.** increased its recycled content target from 25% to 50% by 2025, most of it coming from its water division, for which it plans to reach 100% recycled PET across Europe in 2025. In 2019, the company launched several bottles made from 100% recycled PET for brands in France, Spain, and Indonesia.
- **Molson Coors Brewing Company** is planning to introduce 25% PCR in its PET bottles in the US, which will result in a reduction of approximately 900 tonnes of virgin PET in 2021.
- In June 2020 **Pernod Ricard** introduced 30% PCR content into PET bottles produced in North America, and is working towards increasing this to 50–60% PCR by 2025.
- **Spadel** is now using secondary shrink film made of 100% recycled material for its Wattwiller brand and plans to roll this out to other brands into 2021, with approval to move to 25% rPET in its bottles in 2021.
- **The Coca-Cola Company** reported that local water brands in Australia, Austria, Belgium, Croatia, Hong Kong, Ireland, Japan, Mexico, The Netherlands, New Zealand, Peru, the Philippines, Romania, South Africa, Sweden, Switzerland, and Uruguay were making bottles from 100% rPET.

FIGURE 21

Average post-consumer recycled content in plastic packaging by sector

Weighted average of packaged goods company and retail signatories



Food

Signatories in the food sector reported the lowest proportion of PCR content of the sectors, with 4.1% PCR content across their portfolios. Sourcing recycled content of sufficient quality for food contact applications was a challenge highlighted by a number of these companies. Most efforts focused on increasing recycled content in rigid PET packaging (such as bottles and trays) or shrink films, with a few signatories looking into chemical recycling.

- **Ferrero** has increased recycled content in its PET bottles and trays, and is working with suppliers of PE films to introduce at least 30% of recycled polyolefins in its tertiary packaging.
- **Nestlé** is looking to source 2 million tonnes of food-grade recycled plastics and has allocated more than CHF 1.5 billion to pay a premium for these materials by 2025. By the end of 2020, the company plans to have on average 13% rPET globally in its water bottles and 50% rPE for 40% of its shrink film volumes in Europe.
- **Mars, Incorporated** is developing a path to buy recycled content from both mechanical and chemical recycling (CR). It plans to purchase small volumes of recycled content through CR in 2020, with plans to scale up as infrastructure develops. Mars Wrigley is evaluating converting rigid plastic packs to PET and adding rPET where regulation allows, and Mars Food is assessing options to include 30% recycled content into all EU pouches by 2025.
- **McCormick & Company Inc.** reported that it is planning to introduce PCR material into HDPE and PP packaging by 2025.

Apparel, footwear, and accessories

Companies within this sector had the highest PCR content average of the sectors – at 13.3% – due to their high concentration of packaging types such as poly-bags and hangers in their portfolio, which, while not necessarily recyclable themselves, are used in applications which mean they can accommodate high levels of recycled content.

Examples of efforts to increase recycled content in these packaging types include:

- **Superdry Plc**, which is aiming for a minimum of 70% recycled content in all remaining plastic packaging by 2025, has partnered with a poly-bag manufacturer who collects poly-bags, recycles them and uses them for the production of new poly-bags. This enabled the company to switch from 100% virgin LDPE to 30% recycled content for this packaging, saving 96 metric tonnes of virgin plastic each year.
- **LPP** is using plastic bags made with 80% recycled LDPE for e-commerce activities. The company is also looking into using 100% recycled hangers in its stores and to have all remaining plastic packaging (i.e. perfumes, watches, etc.) used in stores made from recycled plastic by 2023.

Cosmetics

Cosmetics-focused signatories reported an average of 7.2% post-consumer recycled content (weighted average) in their packaging in 2019. They reported work to increase PCR content in particular in bottles and tubes, with a focus on PET and PP resins:

- **L'OCCITANE en Provence** plans to reach 100% recycled PET in all its bottles by 2025. The company is also planning to increase PCR content in its tubes and work on PP resin.
- **L'Oréal** increased its PCR content from 5% in 2018 to 6.9% in 2019 and expects to double this amount by 2020. The company is aiming to reach 50% PCR content by 2025, with no plastic packaging content from virgin fossil sources by 2030.

Source: Unilever

Household and personal care

With a large proportion of PET, HDPE and PP bottles in their portfolio, most efforts from signatories in the household and personal care sector focused on increasing recycled content in these applications. Notable examples include:

- In 2019, **RB** partnered with Veolia through which it developed a new Finish tub with 30% PCR content from recycled PP. The company also launched its Finish Rinse Aid with a 50% HDPE PCR content in Germany and is planning to roll out the product across its entire EU Finish portfolio by 2021. Its Hygiene business in the USA has 25% PCR in its plastic bottles.
- **Johnson & Johnson Consumer Health** consumer health set specific PCR targets for HDPE and PET packaging materials for leadership brands, and in 2020 will launch facial care products with PCR content in the US.
- **Unilever**, which has a target for 25% recycled content, has switched to 100% recycled plastic bottles, where technically feasible, in North America and Europe for its Dove brand. The company, which increased its use of recycled content fivefold year on year – from 1% to 5% – expects its use of post-consumer recycled materials will accelerate over the next few years as design processes "begin to deliver at scale".

6 Transparency

IN THIS CHAPTER

Why transparency?

What progress is being made on increasing the availability and visibility of data on efforts on plastics?

What progress is being made on increasing consistency of definitions and reporting on plastics?

What about data on where plastic packaging ends up?

Why transparency?

Promoting transparency on signatories' commitments, as well as the actions they take and their progress towards achieving them, sits at the heart of the Global Commitment. This is achieved not just through the public disclosure of targets — both qualitative and quantitative — and progress towards them, but also through providing common definitions and clear and consistent presentations of data.

FIGURE 22

Signatories reporting in 2020

Business signatories

98%

businesses reporting as a % of all business signatories eligible to report

Government signatories

85%

governments reporting as a % of all government signatories eligible to report

What progress is being made on increasing the availability and visibility of data on efforts on plastics?

This second annual progress report of the Global Commitment creates unprecedented transparency on the plastic packaging industry and its progress towards a circular economy for plastics. With two years of data, we have, for the very first time, the opportunity to quantitatively measure the progress for a substantial proportion of the plastic packaging industry against the baseline set in the previous report.

The reporting metrics and the data that come out of it have received high levels of interest in the industry and beyond, with the 2019 progress report receiving in excess of 50,000 downloads in the year since its publication. In particular, the investment community started using this data to support their engagement with portfolio companies. This year the accessibility of data submitted by individual companies and governments has been improved through the delivery of a new online data platform providing easy access to all individual progress reports.

A notable area of progress we have seen in the 2020 reporting cycle has been the increase in the number of businesses choosing to publicly disclose their volumes by weight, with 47% of packaged goods and retail signatories disclosing their packaging volumes in 2020, up from 37% in 2019. Those disclosing volumes publicly represent more than 80% of total volumes (by weight) reported by all packaged goods companies and retailers in the Global Commitment.

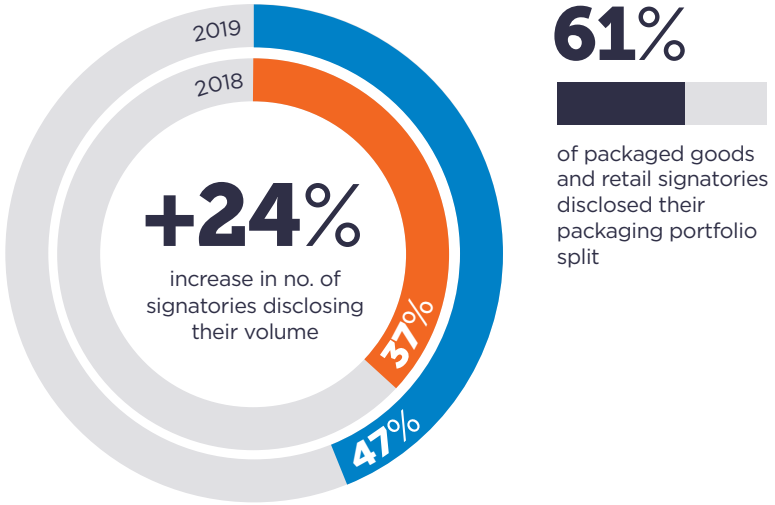
Many signatories also responded to a new question in the 2020 reporting questionnaire which asked them to indicate which categories of packaging they had in their portfolio and, optionally, provide a breakdown by weight. 61% of packaged goods and retail signatories provided full details in their responses.

Business signatories have also been working to improve quality and internal visibility on their own data (for example, on how much and what types they are using, and for what applications) to support their planning, measurement, and decision-making. A number who were unable to report metrics in 2019 were able to do so for the first time in 2020, and 11% indicated plans to introduce or expand third-party verification of reported data.

FIGURE 23

Disclosure of plastic packaging volumes

% of packaged goods and retail signatories



Notes:
The 2018 percentage of signatories reporting their volume does not include data from those reporting for the first time in the 2020 reporting cycle. The percentage growth highlighted refers to the increase seen for signatories reporting in both years.

What progress is being made on increasing consistency of definitions and reporting on plastics?

Outside of the Global Commitment, inconsistency and lack of clarity on terms and metrics used to reference the use and after-use of plastics has made it difficult to understand and compare claims of performance and progress made by different organisations about their use of plastics.

Central to the reporting and commitment-setting processes in the Global Commitment is the consistent framework and set of definitions that underpin them. Businesses representing more than 20% of the global plastic packaging industry now report annually against a set of guidelines and metrics through the Global Commitment. These definitions are also being used more widely through the expanding New Plastics Economy Plastics Pacts network and the Global Tourism Plastics Initiative (launched in 2020).

The definitions are also being incorporated into measurement systems led by other organisations. Reflecting the increasing interest from the investor community in progress on plastics and relevant data, this year key definitions and metrics from the Global Commitment have been incorporated into the packaging criterion of the S&P Global Corporate Sustainability Assessment, through which more than 10,000 companies will be assessed. WWF ReSource's Footprint Tracker tool has also incorporated the definitions to drive consistency in data collection and reporting from its member organisations.

What about data on where plastic packaging ends up?

Despite improvements in tracking, measurements, and transparency at the level of individual businesses, there remains a lack of consistent, publicly available data on recycling rates (and other 'fates' of plastic after use), and, in particular, data for different categories of plastic packaging.

This lack of data presents challenges for tracking plastic flows and progress towards a circular economy for plastics on a macro level. It is also challenging for businesses trying to assess and report on the 'recyclability in practice and at scale' of their plastic packaging portfolio, and as part of the annual Global Commitment reporting process.

In response to this challenge and feedback from Global Commitment signatories, in 2020 the Ellen MacArthur Foundation conducted a survey of organisations with expertise in plastic recycling, intended to be repeated annually, to collate data on recycling rates by packaging category across a broad range of geographies. In doing so, the survey has aimed to go some way to filing the data gap on plastic recycling rates globally, and to drive alignment on recyclability assessments across the Global Commitment signatory group.

The results of the survey are provided in the appendix to this document. More information on recyclability assessments in the Global Commitment is provided in Chapter 3.

Further reading

Accessing Global Commitment reporting data for individual signatories

- Online individual reports

Communicating about this report

- Media enquiries

Understanding Global Commitment reporting

- Global Commitment 2020 reporting guidelines, including recyclability assessment methodology
- New Plastics Economy 2020 Recycling Rate Survey outputs

More about the Global Commitment

- The Common Vision
- Global Commitment website
- The signatory group
- Definitions of key terms and the commitment framework
- Register your interest in joining the Global Commitment

More from the Ellen MacArthur Foundation

- Ellen MacArthur Foundation Plastics homepage
- The Business Case for a UN Treaty on Plastics Pollution (joint report from WWF, the Ellen MacArthur Foundation and Boston Consulting Group)
- Upstream Innovation guide
- REUSE book
- More about the Plastics Pacts network
- The Ellen MacArthur Foundation's Perspective on the Breaking the Plastics Wave study
- Plastics Learning Hub
- Other New Plastics Economy publications

More from UN Environment Programme

- UNEP (2020). National guidance for plastic pollution hotspotting and shaping action - introduction report
- UNEP (2020). Single-use plastic bags and their alternatives: Recommendations from life cycle assessments
- UNEP (2020). Single-use plastic bottles and their alternatives: recommendations from life cycle assessments
- UNEP (2020). Single-use plastic take-away food packaging and its alternatives: recommendations from life cycle assessments
- UNEP & Consumers International (2020). "Can I recycle this?" A global mapping and assessment of standards, labels and claims on plastic packaging
- UNEP (2019). Addressing marine plastics: a systemic approach – recommendations for actions
- UNEP (2019). Addressing marine plastics. a roadmap to a circular economy
- UNEP (2018). Legal limits on single-use plastics and microplastics
- UNEP (2018). Building circularity into our economies through sustainable procurement
- UNEP (2018). Single-use plastics: a roadmap for sustainability
- Clean Seas
- UNEP's Beat pollution website

The Global Tourism Plastics Initiative

- The Global Tourism Plastics Initiative

Appendix — 2020 recycling rate survey output

1. Objectives of the survey

The survey, intended to be repeated annually, has been designed to help in the assessment of whether the recyclability of a given category of plastic packaging is proven 'in practice and at scale' by gathering and collating data on recycling rates by packaging category across a broad range of geographies. In doing so, it aims to go some way to filing the data gap on plastic recycling rates globally, and to driving alignment of assessments of recyclability across the Global Commitment signatory group.

More practically, the survey outputs, as presented in this document, aim to help signatories of the Global Commitment assess (through step 1 of the recyclability assessment tool) and report on their recyclability rate by indicating, across a list of common plastic packaging categories, in which categories survey contributors reach a 30% recycling rate in regions covering at least 400 million inhabitants.

Beyond that, through the public release of the survey outputs, we hope for the annual Recycling Rate Survey to serve as a first step towards better data availability and transparency overall – contributing to the development of a more comprehensive, global open-source database over time.

2. Contributors

To help assess if the recyclability of a packaging design is proven 'in practice and at scale', an online survey was shared with organisations from the Ellen MacArthur Foundation and UNEP's combined network. These organisations were selected because we believed they might have access to the best available data or informed opinions for the regions in which they are active and include, for example, Extended Producer Responsibility organisations, governmental organisations, waste management companies, and recycling associations.

The survey received a total of 30 responses from 33 organisations, some of whom responded on a joint basis, and some of whom responded anonymously. A list of contributors can be seen in section 5 below.

3. Methodology

The survey was shared in February 2020, with a four-week window for responses. Respondents were asked to select the geographies they wanted to provide data/input for, and were then asked for the following data, for each geography selected:

- A 'best estimate' of the overall recycling rate for all plastic packaging.
- For each of a series of 17 common plastic packaging categories:
  - Does it currently achieve a recycling rate of 30% or higher, or not?
  - Whether above answer was supported by evidence
  - A best estimate of the actual recycling rate
- To provide information about any data sources used as evidence to support their answers.

The survey outputs have been compiled using the data provided by contributors on an 'as is' basis. Information about how and which data has been presented in the summary table is provided in section 4 below.

4. Survey outputs

33 organisations contributed to the survey, a number of whom provided responses for multiple geographies. As a result, between one and five responses were received for each of the 33 geographies covered. The responses provided 378 data points on recycling rates for different categories of plastic packaging across a broad range of geographies.[16] These included 27 countries, two supra-national regions and four sub-national regions – covering four billion inhabitants.

Table 1 provides a summary of the output of the survey. It details the categories of plastic packaging for which the survey results indicated that a system for recycling exists in practice and at scale, i.e. for which of these the survey found evidence that a 30% recycling rate for one or more regions, collectively covering at least 400 million inhabitants, is being met.

- For each packaging category, the table indicates in which geographies survey contributors indicated (by unanimous or majority view in the case of multiple responses being received for that geography) that, in their view, or based on data available to them, the rate of recycling of the packaging category is 30% or higher.[17]
- If the total population covered by these countries exceeds 400 million, it has been indicated in the table that for that packaging category a system for recycling is considered to exist in practice and at scale.

There were 15 instances (out of 378 packaging category-geography combinations in total) where a packaging category for a given geography received a 'mixed response' – that is, where there were only two contributors, and one respondent offered a view in favour of a 30% recycling rate being met while the other offered a view against. In these cases, the survey is not considered to have provided evidence that the 30% threshold is met in the given geography for the relevant packaging category.[18] It is important to note that the inclusion of those data points in the summary table findings would not change the indication on whether or not there is a system for recycling for any of the relevant packaging categories (i.e. for the packaging categories not yet reaching the the 400 million inhabitants threshold, this threshold would still not be met when adding the countries with mixed opinions).

Table 1: Summary of output

Packaging category	Evidence found that a 'system for recycling' exist in practice and at scale today[19]	Countries/Regions where responses provide evidence for a 30% recycling rate being achieved[20]	Total population for which survey responses provide evidence of a 30% recycling rate being achieved[21]
PET bottles	**Yes**	**Regions:** Europe (4 – majority) **Countries:** Australia; Austria; Belgium; China; Denmark; France (3 – unanimous); Germany (3 – unanimous); India; Japan (3 – unanimous); Netherlands; Norway; Poland (2 – unanimous); Russia; South Africa; South Korea; Spain*; Sweden; Switzerland; United Kingdom (2 – unanimous) **Sub-national regions:** Province of British Columbia (Canada)	**3.7 billion**
PET Thermoforms	**No**	Australia; Spain*	**72 million**
Other PET rigids	**No**	Australia; Spain*	**72 million**
HDPE bottle	**Yes**	**Regions:** Europe (3 – unanimous) **Countries:** Belgium; France (3 – majority); Germany (2 – unanimous); Greece (2 – unanimous); India; Netherlands; Poland (2 – unanimous); Russia; South Africa; Spain*; United Kingdom (3 – unanimous); United States (3 – majority)	**2.4 billion**
HDPE other rigids	**Yes**	Germany (2 – unanimous); Netherlands; Spain; United States (3 – majority)	**474 million**
PP Bottle	**Yes**	**Regions:** Europe (3 – majority); **Countries:** Germany (2 – unanimous); Netherlands; Poland (2 – unanimous); Russia; Spain*; United Kingdom (3 – majority)	**671 million**

PP other rigids	**No**	Netherlands; Spain*	**64 million**
LDPE tubes	**No**	Spain*	**47 million**
PS rigids	**No**	Spain*	**47 million**
EPS rigids	**No**	Japan; South Korea; Spain*	**225 million**
PVC rigids	**No**	Spain*	**47 million**
>A4 mono-material LDPE flexibles in B2B context	**Yes**	Austria; Germany; Greece; Poland (2 – unanimous); Spain*; United States	**514 million**
>A4 mono-material LDPE flexibles in B2C context	**No**	Spain*	**47 million**
Other >A4 flexibles	**No**	Spain*	**47 million**
<A4 LDPE flexibles	**No**	Spain*	**47 million**
<A4 PP flexibles	**No**	Spain*	**47 million**
<A4 multi-material flexibles	**No**	Spain*	**47 million**

*The data provided for Spain relates to facility input volumes vs output volumes which were specified in the survey guidelines.

Notes on Table 1

Please keep in mind that:

- While this table presents information on recycling rates for common plastic packaging categories across a wide range of geographies, we are aware that data is still lacking for a number of geographies. Notable gaps in country-level data (based on the number of inhabitants) in this survey include Pakistan, Nigeria, Bangladesh, Mexico and Ethiopia.
- Some responses covered only a minority of plastic packaging categories for the relevant geography (e.g. China, Brazil).
- If your organisation only puts packaging on the market in one or a few countries, and if you have evidence that a 30% post-consumer recycling rate is achieved for a given packaging category in all those markets, your assessment of recyclability of your packaging may be different.

While we encourage consistency in reporting amongst Global Commitment signatories, your organisation might decide to deviate from this table if your own investigation and assessment leads to different results. If you believe the data or aggregated opinions in the table are incorrect or you have additional data leading to different conclusions, you can continue to report based on your own assessment, while being transparent about the assumptions and data used for the reporting. If you find more data points (either in line with or contradicting the survey contributors' opinion), we invite you to share these data points with us, indicating if they can be shared with other Global Commitment signatories or not. This will help to improve data availability for future reporting cycles.

Additional notes to interpret the table (based on frequently asked questions)

The table is aimed at reporting progress to date and as such it is a point-in-time assessment of the current situation. In other words, the table does NOT, and does NOT aim to:

- make any judgement on recyclability in the future (what is not recycled in practice and at scale today could be in the future)
- make any judgement on what is the most appropriate way forward (scale up recycling system, innovate recycling technology, change packaging design, eliminate, substitute, …)
- claim that, if a system for recycling exists in practice and at scale for a certain category, that all packaging in that category is recycled, or that this category is recycled in all countries globally
- claim that, if no system for recycling exists in practice and at scale for a certain category, that no single packaging in that category is recycled.

This analysis at 'packaging category'-level is step one of a two-step process (outlined in the appendix to this document of the Global Commitment Reporting Guidelines document provided to all Global Commitment signatories) and should always be seen in that context. For those categories that have a system for recycling in place in practice and at scale, step 2 of the assessment looks at how any specific packaging design (considering labels, glues, inks, caps, additives, etc.) fits into that system.

The table includes aggregated information from organisations we believe might have access to the best available data or informed opinions for the regions in which they are active. The Foundation is not responsible for any errors or omissions, or for the results obtained from the use of this information and the Foundation disclaims all liability in relation to this document to the fullest extent permitted by law. All information in the table is provided 'as is', with no guarantee of completeness, accuracy, timeliness or of the results obtained from the use of this information. It should not be considered a substitute for the independent investigations and the sound technical and business judgement of the reader.

5. List of contributors to the 2020 Recycling Rate Survey

Note: this table excludes six contributors who elected to contribute anonymously

Contributors	Geographies for which responses were provided
Association of Plastics Recyclers	United States
Australian Packaging Covenant Organisation (APCO)	Australia
CICLOPLAST	Spain
Adame, Citeo, Elipso, Government of France	France
CRRA (China National Resource Recycling Association)	China
Ghana National Plastic Action Partnership (GH-NPAP)	Ghana
Government of the United Kingdom	United Kingdom
National Institute of Advanced Industrial Science & Technology (AIST), Japan	Japan
PETCORE Europe	Europe
Plastic Change	Denmark
Rekopol Organizacja Odzysku Opakowań SA	Poland

Smart Waste Portugal	Portugal
SUEZ	Belgium, France, Germany, Greece, Netherlands
SYSTEMIQ for Indonesia NPAP	Indonesia
The Recycling Partnership	United States
The University of Tokyo	Japan
Tomra	Austria, Germany, Greece, Norway, Poland, Russian Federation, Switzerland, United Kingdom, United States,
Veolia	Japan, South Korea, France, Germany, Netherlands, Sweden, United Kingdom
WasteAid	Africa, Europe
WWF-Philippines	Philippines
WWF-South Africa	South Africa
WWF-Kenya	Mombasa and Kwale (Kenya)
WWF-Turkey	Turkey
WWF-UK	United Kingdom

Packaging category	Countries	Population
PET bottles	Greece	10,727,668
Other PET rigids	Switzerland	8,516,543
PET Thermoforms	United Kingdom	67,530,172
HDPE bottles	Switzerland	8,516,543
HDPE other rigids	Poland	37,887,768
	France	65,129,728
PP bottles	Greece	10,473,455
	Switzerland	8,516,543
PP other rigids	Poland	37,887,768
	Germany	82,927,922
LDPE tubes	Switzerland	8,516,543
PS rigids	Greece	10,473,455
EPS rigids	Greece	10,473,455
>A4 mono-material LDPE flexibles in B2B context	United Kingdom	67,530,172
>A4 mono-material LDPE flexibles in B2C context	Greece	10,473,455

6. List of mixed responses

We have provided left a list of countries where we received 'mixed responses' (i.e. two contributors, each providing conflicting opinions) on whether the respective packaging category meets the 30% recycling rate threshold.

It is important to note that the inclusion of those data points in the summary table findings would not change the indication on whether there is a system for recycling for the relevant packaging category (i.e. for the packaging categories not yet reaching the 400 million inhabitants threshold, this threshold would still not be met when adding the countries with mixed opinions).

Endnotes

1 Business signatories with annual plastic (packaging) volumes in excess of 10,000 metric tonnes or revenues in excess of USD 500 million were eligible to report through the Ellen MacArthur Foundation in the 2020 reporting cycle. These businesses represent more than 99% of plastic packaging volumes covered by the full Global Commitment signatory group. Signatories below both thresholds were asked to report progress publicly through their own channels.

2 Progress reports from business signatories Nuceria Group and Re-Poly, and from government signatories Government of France, the Walloon Government and Environment Department, Republic of Seychelles Ministry of Environment, Energy and Climate Change were not received at the time of completion of the 2020 reporting cycle.

3 While some qualitative data reported might cover 2020 actions, the vast majority of quantitative data reported by signatories relates to the calendar year 2019.

4 Based on the findings of the recent *Breaking the Plastics Wave* study by The PEW Charitable Trusts and SYSTEMIQ, with the Ellen MacArthur Foundation as Thought Partner.

5 Ibid.

6 Ibid.

7 Ibid.

8 18 governments including national and sub-national governments. Countries signed up include: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Latvia, Lithuania, The Netherlands, Portugal, Slovenia, Spain, and Sweden.

9 Reusable packaging: packaging which has been designed to accomplish, or has proven its ability to accomplish, a minimum number of trips or rotations in a system for reuse.

10 Due to their falling below the specified volume and revenue thresholds for reporting through the Ellen MacArthur Foundation, these companies do not have individual progress reports published on the Ellen MacArthur Foundation website but have published progress on their commitments through their own channels.

11 See Figure 14. Analysis of data on 2019 global plastic packaging volumes (based on weight), provided by type of packaging, from Wood Mackenzie. Data on packaging types was mapped to the categorisation of packaging provided in the appendix to this document, Table 1, to assess whether there is evidence for the existence of a recycling system in practice and at scale today (i.e. 'step 1' of the Ellen MacArthur Foundation's suggested recyclability assessment methodology). If the same analysis was done on the basis of unit volumes and not weight, the percentage recyclable would be significantly lower, as the more heavy rigid packaging is often more recyclable than lightweight flexible packaging.

12 Full details of the definitions and suggested assessment methodology for Global Commitment signatories are available in the Global Commitment reporting guidelines here.

13 Effectiveness of the Essential Requirements for Packaging and Packaging Waste and Proposals for Enforcement (April 2020),

14 Project Holy Grail is a cross value chain collaboration project under the Ellen MacArthur Foundation's New Plastics Economy initiative.

15 Market growth estimate provided by Wood Mackenzie, 2020.

16 73% of the geographies for which responses were received were covered by one response, 9% with two responses, 12% with three responses, 3% with four responses, and 3% with five responses.

17 Countries were listed where there was a single response for that packaging category indicating a 30% or higher recycling rate (with none opposing that view), or in the case of multiple responses where there was a unanimous or majority view that the 30% rate is being achieved.

18 These geographies are not included for the relevant packaging category and population totals in the summary table, but are presented in a separate table in section 6 "list of mixed responses".

19 The question 'Does a system for recycling exist in practice and at scale today?' is answered 'yes' for a specific packaging category if for this category the recycling rate is indicated as reaching 30% or higher in geographies together covering more than 400mln inhabitants on the basis of the data in the third and fourth columns of the table.

20 Content in brackets: (# responses, if >1 - alignment between responses).

21 This is an aggregate number based on the countries' population estimates from the World Bank's database 2018. For the purpose of population calculations 'Europe' is taken as the European Union, Norway, Switzerland, and the United Kingdom.

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