ENVIRONMENTAL INVESTIGATION AGENCY

GREENPEACE

Checking out on plastics

A survey of UK supermarkets' plastic habits

ACKNOWLEDGEMENTS

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ABOUT EIA

We investigate and campaign against environmental crime and abuse.

Our undercover investigations expose transnational wildlife crime, with a focus on elephants, pangolins and tigers, and forest crimes such as illegal logging and deforestation for cash crops like palm oil. We work to safeguard global marine ecosystems by addressing the threats posed by plastic pollution, bycatch and commercial exploitation of whales, dolphins and porpoises. Finally, we reduce the impact of climate change by campaigning to eliminate powerful refrigerant greenhouse gases, exposing related illicit trade and improving energy efficiency in the cooling sector.

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ABOUT GREENPEACE

Greenpeace defends the natural world and promotes peace by investigating, exposing and confronting environmental abuse and championing responsible solutions for our fragile environment.

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Plastic from supermarket shelves represents a huge proportion of the total amount flooding onto the UK market each year – with even more of the material used before we place an item in our basket. Behind the scenes, plastic is endemic throughout the grocery supply chain: from the fields of plastic polytunnels used to grow fruit and vegetables through to the packaging used in transportation. All this comes at a huge environmental and social cost which we are just beginning to understand. It doesn't have to be like this.

Located at the interface between consumers and suppliers, grocery retailers occupy an almost unique position to lead the transition away from a single-use society by substantially reducing their plastic footprints and supporting brands and customers to do the same.

In this report, the Environmental Investigation Agency and Greenpeace UK present the findings of the most comprehensive survey to date on how supermarkets are addressing plastic pollution. Our survey, sent to the top 11 UK supermarkets and six grocery convenience store chains found that:

- 10 supermarkets are placing over 810,000 tonnes of single-use plastic on the market every year. This is in addition to over 1.1 billion single-use bags, 958 million bags for life and 1.2 billion plastic produce bags for fruit and vegetables
- Seven supermarkets provided data on their single-use plastic packaging footprint (branded and own brand), accounting for a combined total of over 59 billion items per year.
- Scoreboard leader Iceland has shown the most ambition in committing to eliminate own brand single-use plastic packaging. Only four other supermarkets have plastic-specific reduction targets and these equate to a reduction of just 5% per year or less
- A significant increase in reusable packaging is required for retailers to play their role in reducing plastic pollution. Currently just four companies offer (fairly limited) options for customers to bring reusable containers. Morrisons currently leads in this area, as well as in providing unpackaged produce. Waitrose will be piloting refillables in 2019
- When calculated as a percentage of their overall market share, Iceland had the highest plastic packaging footprint (own-branded and branded combined) at over 14,000 tonnes, closely followed by Aldi (12,000 tonnes), while Co-op has the lowest at under 5,000 tonnes
- In general, retailers have a greater focus on recycling than reduction. Co-op currently leads on recyclability, with 79% of plastic packaging already widely recyclable. Most others fall behind, with around a third of their plastic (by weight) not widely recyclable
- Most major supermarkets have only committed to eliminate non-recyclable plastic packaging by 2025 – an unacceptable delay. Only four have adopted more urgent timeframes. Many have made commitments to phase out polystyrene, polyvinylchloride (PVC) and black plastics within the next two years
- Despite branded goods making up around 40-60% of many companies' total plastic portfolio, it does not appear that supermarkets are systematically applying their buying power to encourage big brands to reduce their plastic footprint
- From fisheries to farming, most retailers remain in the early stages of monitoring and managing plastics used in their supply chains despite devastating environmental impacts
- Ahead of EU and UK legislation, many supermarkets have taken early action to end sales or provision of certain single-use plastic items such as straws, cutlery and cotton buds
- Around three-quarters of respondents support introduction of a Deposit Return Scheme
- In another clear signal to policy-makers, the vast majority of supermarkets called for the current microbead ban to be extended to cover other household products
- Only four companies currently publish their annual plastic footprint but all the major retailers indicated that in principle they would publish this data going forward
- Non-responders to the survey included Ocado and the convenience chains: Spar, Premier Stores, Londis, Lifestyle Express and Best-One. Generally, these convenience store chains appear to have few initiatives and commitments on plastics under way.

2. Introduction

Unprecedented growth in the production and sale of plastics is triggering disastrous environmental consequences. Plastic production has increased twentyfold in the past half-century and is expected to double again in the next 20 years.[1] Each year, up to 12 million tonnes of plastics leak into the oceans. This will quadruple by 2050 unless significant sectoral changes are implemented.[2] Microplastics (small plastic pieces less than 5mm in size) have been documented in all marine habitats – from the ocean surface and sea ice to the seabed – and can be ingested by species throughout the marine food chain. They have been detected in the air we breathe, the water we drink and the food we eat.

In the 60 years since large-scale production of plastics began, 79% of plastic waste globally has been disposed of in landfills or the natural environment, 12% has been incinerated and a mere 9% recycled. Even in the UK, recycling rates of consumer plastic packaging only reach 30-34%.[3] Unlike materials such as glass, steel and aluminium, plastics can only be recycled a finite number of times. Thus, all plastic produced will ultimately have to be disposed of, generating ever-growing mountains of plastic waste. When landfilled, or when it escapes collection and enters the environment, plastic waste accumulates rather than decomposes, causing near-permanent pollution of the marine, freshwater and terrestrial environments .[4]

China's ban on foreign waste imports has cast a much-needed spotlight on a global plastic waste crisis. The UK's recycling record to date (averaging 30-34% of consumer plastic packaging[5]) has largely relied on the export of plastic waste to countries with lower labour and energy costs, and increasingly to countries with the highest levels of ocean plastic pollution[6], without any oversight of how much is ultimately recycled or the working conditions involved.[7]

With no long-term end-of-life solution to the ever-growing quantities of plastic waste, it is time for businesses to commit to substantially reducing their plastic footprint, phasing out all but the most essential single-use plastics.

The role of supermarkets in the current plastic crisis

In the UK, the grocery retail sector is the largest user of plastic packaging[8] and over half of the 1.5 million tonnes of consumer plastic packaging used in retail every year.[9] The impact on marine life is clear, with many items frequently reported on beach cleans originating from supermarket aisles.[10] With estimates that the grocery market will grow by 15% by 2022,[11] these figures could rise if a significant turnaround is not seen in the sector's approach to plastics.

Occupying a pivotal position at the centre of the value chain, grocery retailers have a critical role to play in transforming society's approach to plastics. Not only can they enable consumers to reduce their plastic footprint, but they can demonstrate leadership in reducing their own brand plastic footprint and also engage with brands and suppliers, influencing practices further up the value chain. Their power to impact consumer behaviour was seen with the recent 80% reduction in plastic bags following the introduction of the 5p charge.[12] This has already reduced the number of plastic bags entering the ocean by up to 30% in some areas.[13] However, despite a growing public appetite for refillable and reusable packaging,[14] customers remain faced with aisles of plastic packaging designed to be used once and discarded. Higher up the supply chain, plastics unseen by consumers are causing significant environmental problems, including the fields of plastics used in farming and 'ghost' fishing gear lost at sea.

Plastic pollution has recently captured the UK public's attention, quickly rising up the political agenda. This poses risks and opportunities for the grocery retail sector. Legislative changes are on the horizon, including the introduction of taxes and item bans. There are clear benefits for businesses who are ahead of the curve in reducing their plastic footprint, and reputational risks for those associated with perpetuating pointless plastics.

In May 2018, the Environmental Investigation Agency (EIA) and Greenpeace UK sent a survey to the country's 11 largest supermarkets by market share, and grocery retail chains with over 1,000 stores under their brand (based on 2017 figures). The aim of the survey is to understand how the UK grocery retail sector is working to tackle plastic pollution, benchmark current performance and encourage year-on-year improvement. In a letter accompanying the survey, we set out our key requests for retailers to:

- Set year-on-year targets to reduce their single-use plastic footprint
- Urgently eliminate unnecessary and non-recyclable plastic packaging by the end of 2019
- Introduce transparency by publishing yearly audits of single-use plastic use

Our survey included four areas key to unlocking the potential for the grocery sector to address plastic pollution: single-use packaging, single-use plastic items, working with the supply chain, and engagement with staff, customers and policy makers. Retailers' survey responses were scored and ranked against their commitment to reduce single-use plastics, to eliminate non-recyclable plastics, their supply chain engagement and commitment to transparency.

3. Impacts of plastics on the environment and society

Current plastic consumption trends pose threats to natural habitats around the globe, with serious socio-economic implications for a wide variety of sectors and stakeholders.

The impacts of marine pollution were first documented in the 1960s. As plastic usage and quantities of plastic pollution have significantly increased in subsequent decades, the severity of impacts on marine ecosystem has escalated and intensified. Plastic pollution is now deemed a major threat to marine biodiversity and is known to negatively impact more than 800 animal species including birds, marine mammals and turtles.[15]

Marine pollution is transboundary in nature, with ocean currents carrying macro- and micro-plastics far from the place of origin. Recent research shows that plastic rubbish from the UK accumulates in the Arctic, damaging one of the most fragile and remote ecosystems on earth.[16]

Microplastics (particles <5mm) are a cause for concern because their small size means that they can be ingested by organisms throughout the marine food chain, including those at the base of the food web. In recent surveys they were found in two-thirds of samples in Scottish waters.[17] Microplastics are also an emerging threat to terrestrial ecosystems, posing risks to organisms that perform essential ecosystem services such as soil-dwelling invertebrates, fungi and plant-pollinators.[18] Terrestrial wildlife is also at risk from macroplastics; recent research documented that waste pollution in the UK kills up to 3.2 million shrews, voles and mice every year.[19]

Further environmental concerns arise from the climate impacts of plastics. The raw materials used to produce virtually all plastics are derived from fossil fuels, with carbon emissions throughout their lifecycle, including during extraction, pipeline and refinery operations, production and conversion, through to end-of-life treatment, such as incineration.[20]

All this comes with socio-economic impacts for sectors including tourism, fisheries and agriculture. Recent studies showed 5.5% of investigated fish in the North Sea and Baltic Sea had ingested plastic[21] and European consumers of shellfish potentially ingest up to 11,000 microplastics per year.[22] Plastic pollution in soil could have negative impacts on crop yield, putting pressure on agricultural revenues.[23]

There are also mounting concerns regarding the potential impacts on human health, with plastic documented in drinking water and the human food chain. Although understandings of the fate and toxicity of microplastics in humans remains at an early stage[24] this is a fast-growing area of scientific research, with the World Health Organisation launching a review of the potential health risks of plastic in drinking water.[25]

The environmental and socio-economic impacts of UK waste are not restricted to our shores. Large volumes of waste were previously shipped to China to be processed, coming to a halt in January 2018 when China enacted an import ban on foreign waste, citing problems of polluted waterways, fears for public health and dangerous working conditions. UK waste shipments are now increasingly being sent to other south-east Asian countries that have been identified as having the highest levels of plastic leakage to the ocean.[26] Concerns have been raised regarding fraud within the export system[27] and that, due to inadequate checks, a large amount of the UK's exported waste may be sent to landfill or incinerated, rather than recycled[28], or even illegally dumped[29]. Moreover, there are serious concerns around working conditions, health and safety and child labour in the sorting and processing of our waste overseas.[30]

UK citizens are increasingly aware of the devastating impacts of plastic pollution and are beginning to reassess their relationship with plastic. Recent polling found that the top concern for British shoppers in the next decade is to reduce packaging and use more recyclable material, ranking the issue even higher than price considerations.[31] Populus polling showed that nine out of 10 people (89%) are concerned about ocean plastic pollution, and 72% feel supermarkets are not doing enough about plastic packaging to tackle the problem of plastic pollution. 91% believe supermarkets should be working to reduce the amount of overall packaging they use and 86% support the idea of supermarkets moving towards using more refillable and reusable packaging instead of using single-use packaging.[32]

These numbers highlight the need for supermarkets to take more action to reduce their plastic footprint and enable their customers to do the same. There will be competitive advantages for retailers who are able to respond to this concern and a potential loss of custom for those that do not act. Nearly a fifth of respondents to a recent survey conducted by Ipsos said they would stop going to supermarkets and shops which use a lot of packaging that cannot be recycled[33] and over half (55%) of people in the Populus polling said they would choose to shop at a supermarket which doesn't over-package products.[34] These changing consumer attitudes appear to be already impacting sales. In a recent poll of nearly 300 small retailers, the majority (54%) said that they had seen sales of plastic packaged goods fall, with a third reporting that consumers are buying more unwrapped goods and bringing their own bags and containers.[35]

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Above: UK plastic waste in Malaysia

4. Methodology

In May 2018, EIA and Greenpeace UK sent a survey to 18 UK grocery retailers regarding actions to tackle plastic pollution. The purpose of the survey is to:

- collect data and enhance understanding of how grocery retailers plan to reduce their plastic footprint
- showcase best practices and highlight where further improvement and innovation is needed
- benchmark current commitments and actions to encourage year-on-year improvement.

Selection methodology

The survey was sent to the top 11 UK supermarkets by market share and convenience store chains with over 1,000 stores operating under a single brand name.[36]

Table 1: List of survey recipients

Top 11 supermarkets by market share (2018) [37]	**Grocery retail chains with 1,000+ stores (2017)** [38]
Tesco (27.4%)	Best-one
Sainsbury's (15.4%)	Booker (parent company of Premier, Premier Express Family Shopper, Londis, Budgens)
Asda (15.3%)	Costcutter Supermarkets Group
Morrisons (10.2%)	Landmark Wholesale (Lifestyle Express)
Aldi (7.6%)	McColl's
Co-op (6.6%)	Nisa (subsidiary of the Co-op)
Lidl (5.5%)	Spar UK
Waitrose (5.1%)	
M&S (3.3%)	
Iceland (2.1%)	
Ocado (1.2%)	

Grocery market share data for all supermarket retailers, except Marks & Spencer (hereafter referred to as M&S), is derived from Kantar Worldpanel research. This market share data is used as the best available metric to compare packaging footprints across retailers, but it should be noted that this represents value of items purchased rather than unit sales volume. As such there is not a direct relationship between market share and packaging volume, given that discounters would be expected to sell a greater number of (packaged) units for a given value than premium outlets.

Areas covered in survey

The survey was split into four key areas:

1. **Single-use packaging:** Questions included those related to amount of plastic placed on the market; reduction targets; refillable and reusable packaging ranges; online shopping; recycling and recyclability and approach to non-conventional plastics. Single-use packaging is defined as that which is designed to be used over a short time span, without multiple refill or reuse trips or rotations to a producer, before it is discarded, regardless of its recyclability
2. **Single-use plastic items:** Questions included those related to the amount of specific plastic items placed on the market and actions to address the impact of items that are commonly found on beaches and in the marine environment
3. **Working with the supply chain:** Questions included those on engagement with brand suppliers; reduction and responsible management of agriplastics and fisheries-related plastic waste; packaging used for transportation and plastic pellets
4. **Engagement with staff, customers and policy makers**: Questions included those regarding engagement strategies with customers and staff about reducing plastic waste; policy positions on Deposit Return Schemes and other legislative reforms; and commitment to transparent reporting.

Scoring methodology

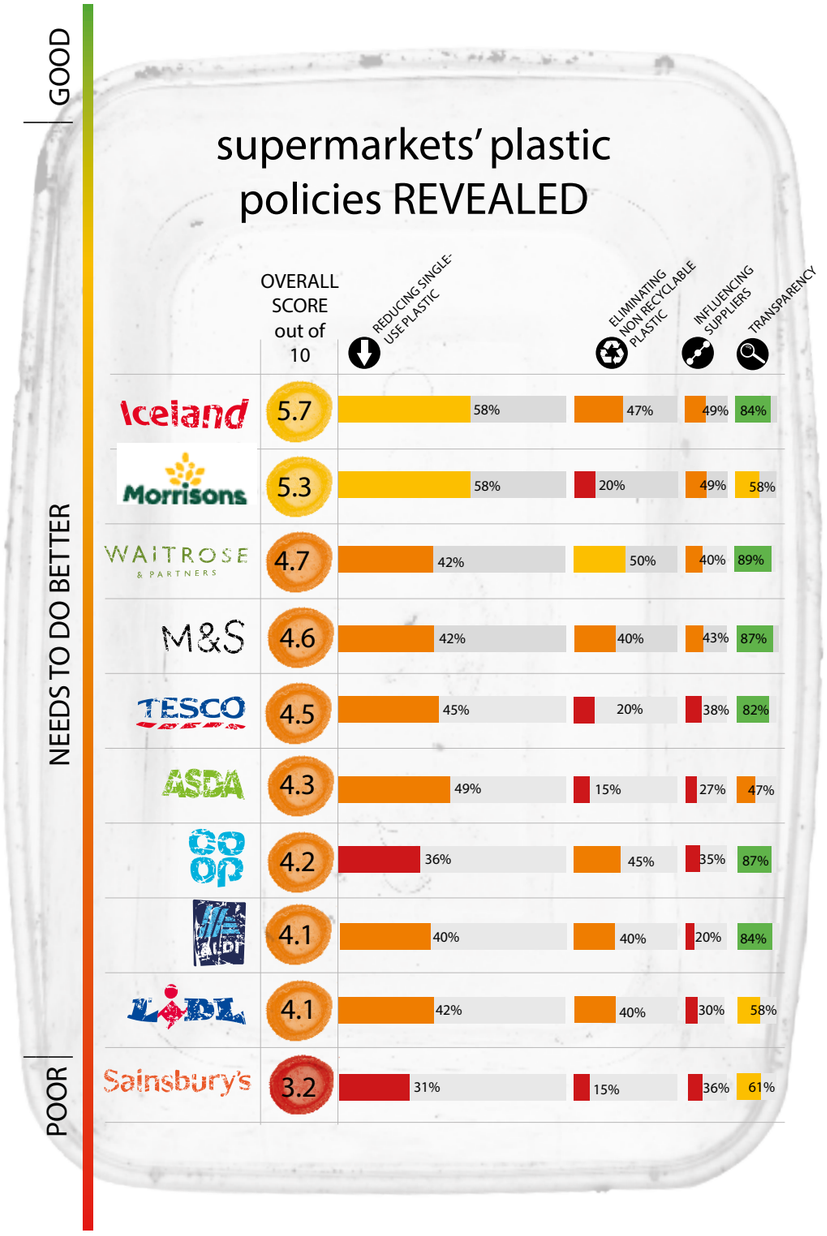
Retailers were sent a questionnaire with 22 questions related to their use, management, targets and reduction plans for single-use plastic. Responses were reviewed against objective criteria to determine a numerical score for each question depending upon how ambitious the retailer's actions or commitments are. Questions that were not relevant for particular retailers were removed from their scoring criteria (e.g. if it did not offer online shopping). Each question was grouped into four categories– commitment to reduce single-use plastics, commitment to eliminate non-recyclable plastics, supply chain actions and transparency. These categories were weighted to place a greater emphasis on actions that demonstrate a commitment to reducing single-use plastic. Total scores were calculated for each retailer and ranked from highest to lowest to produce the overall league table.

Of the leading UK grocery retailers, the only non-respondent was Ocado. The response rate for convenience chain stores was generally poor, with just Costcutter Supermarkets, McColl's Retail Group and Nisa Retail providing responses to the survey. Through the report, we have included analysis of convenience chains' responses where data has been provided. However, there remains a large data gap on the plastic habits of some of the UK's convenience chains, including those owned by Booker Group (such as Premier, Londis and Budgens), Spar UK and Best-One.

5. Results of scorecard ranking

The scorecard shows a mixed performance among the UK's largest supermarkets and even among the leaders there is scope for further improvement. Those at the top have shown ambition in certain areas - Iceland in taking a bold approach for committing to eliminate own brand single-use plastic packaging and Morrisons in pushing forward on loose produce ranges and refillable options. Poor performers tended to have vague or unambitious targets and timelines for reducing single-use plastics and eliminating non-recyclable plastic polymers and formats and were often less transparent in providing data. Further details on individual company performance on specific questions is provided throughout the report along with awards for high and low performance in particular fields.

Table 2: Scorecard ranking of UK supermarkets' approach to addressing plastic pollution



6.1 Summary of survey responses - Single-use plastic packaging

Packaging is among the most ubiquitous – and often avoidable – of single-use plastics. Ten of the UK's leading supermarkets are putting more than 810,000 tonnes[39] of single-use plastic packaging on the market every year, making this the priority area to be addressed. A total of 537,000 tonnes of this is for own brand products. The survey sought to gain an enhanced understanding of the scale of the issue and the steps that grocery retailers are taking to address it by requesting information on:

- the amount of plastic packaging and plastic bags placed on the market each year
- whether the company has phase-out or reduction targets in place
- plans to introduce or expand reusable and refillable packaging ranges
- recyclability and recycled content of packaging and associated targets
- approach to non-conventional plastics, such as bio-based and biodegradable plastics
- sustainable packaging guidelines

The responses indicate over 59 billion units of single-use plastic packaging leave supermarkets shelves each year, along with more than 1.1 billion single-use bags, 958 million bags for life and 1.2 billion produce bags. The number of units refers to the number of individual packaged items sold. However, a single unit may consist of multiple polymers and formats - for example, a ready meal may include the tray, a lining and a film lid along with an outer sleeve.

In general, plastic reduction targets were underwhelming, with very few companies setting bold quantitative targets with ambitious timelines. Respondents tended to perform better on targets for recyclability and recycled content.

Amount of single-use packaging put on the market

The total amount of plastic packaging companies place on the market tends to reflect their market size. Market leader Tesco reported the highest amount, accountable for 261,204 tonnes of single-use plastic packaging (own brand and branded), Sainsbury's second with 119,764 tonnes and Morrisons third with 100,155 tonnes (see Figure 1). Tesco occupies nearly a third of the market (27.4%), Sainsbury's 15.4% and Morrisons 10.2%.

To better understand which companies have the largest plastic packaging footprint proportionate to their size, our analysis considered how many tonnes (own-brand and branded) they use relative to their market share (see Figure 2). Iceland had the highest footprint with over 14,000 tonnes per 1% market share and Aldi the second highest, with just under 12,000 tonnes. At the other end of the scale, Co-op's footprint was lowest at around 4,700 tonnes, followed by Waitrose with 6,280 tonnes. However, it should be noted that as market share data is based on value of items purchased rather than unit sales volume, this may slightly skew the comparison as discounters would be expected to sell more (packaged) units for a given cost than premium retailers.

Eight supermarkets (Aldi, Co-op, Iceland, Lidl, M&S, Sainsbury's, Tesco and Waitrose) provided information on the number of units of own-brand packaging and seven provided information on all packaging, with an aggregate total of 59 billion units across these seven supermarket chains that account for 66% market share.

Recent research by WRAP provides an insight into the composition of this plastic footprint. Drink products (milk, water and soft drinks) represent the largest tonnage of plastic packaging in the grocery sector (256,000 tonnes), followed by fruit and vegetables (38,000 tonnes), cleaning and washing products (52,000 tonnes) and toiletries (32,000 tonnes). Lightweight materials, such as film and wrappers, may make up a smaller proportion of tonnage figures, but may account for a significant proportion of the total number of plastic packaging items being placed on the market.

Figure 1: UK supermarkets' annual single-use plastic packaging footprint (tonnes)

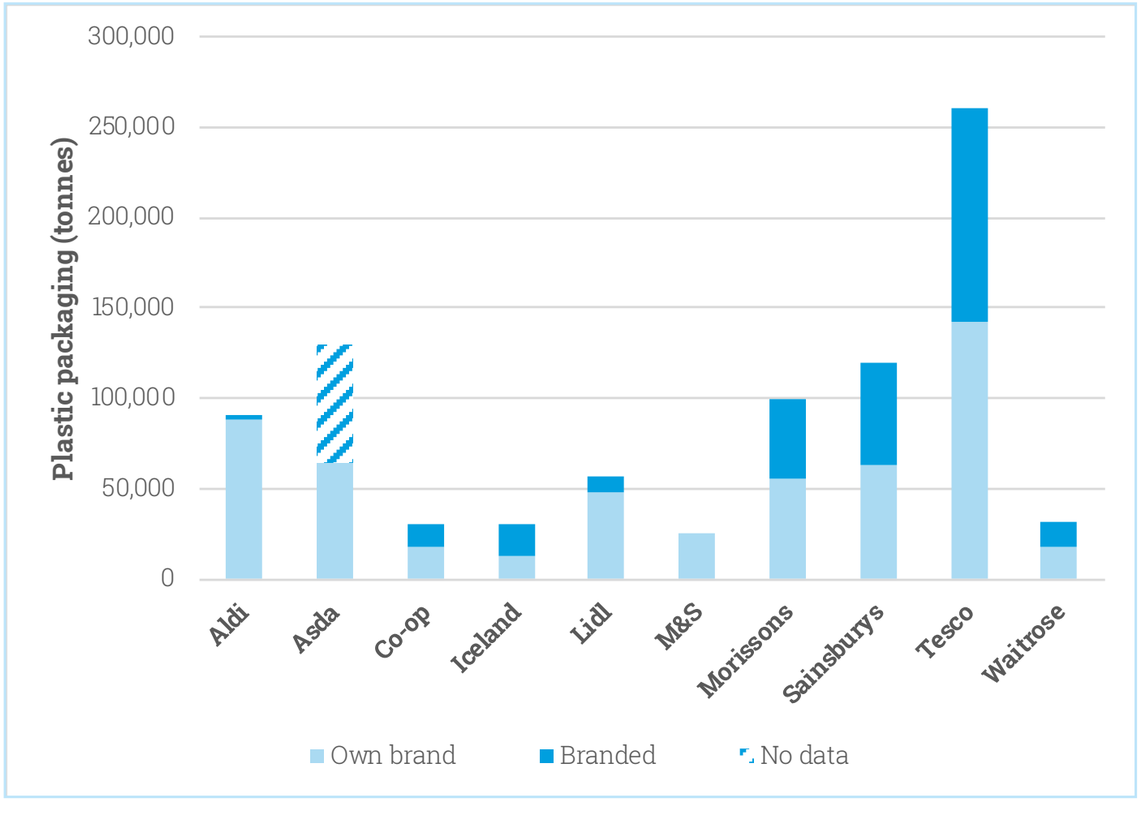
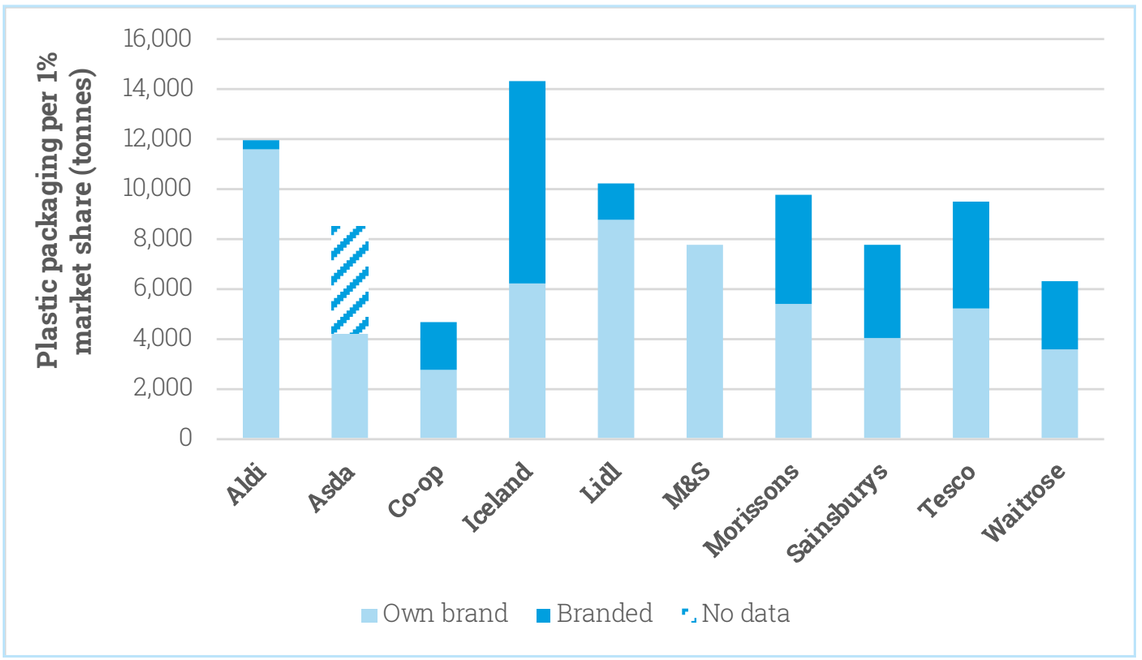


Figure 2: UK supermarkets' annual single-use plastic packaging footprint (tonnes per 1% market share)



Reduction targets

The figures above provide a snapshot of where the companies currently are in terms of their plastic packaging footprint. What is important is how they are now planning to move forward. Concerningly, only five companies have quantitative, plastic-specific reduction targets and these largely fall far short of the scale and pace required (see Table 3). Other companies have none, or only general weight-based packaging reduction targets, which may not necessarily lead to a reduction in plastic packaging.

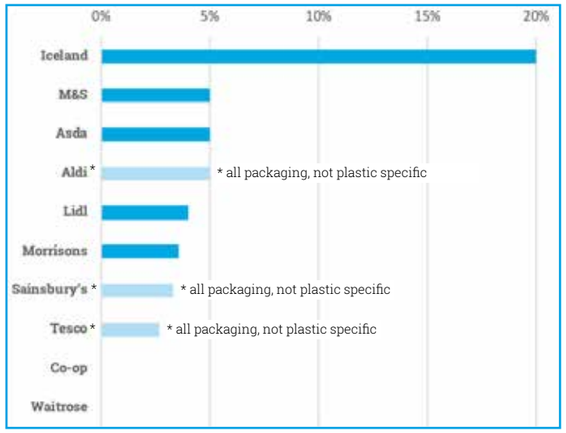
A best practice reduction target would include a clearly stated time-bound goal of phasing out single-use plastics with quantifiable milestone reduction targets. This should be accompanied by accountability mechanisms such as external auditing and transparent public reporting. With the exception of Iceland, no supermarket is currently near to meeting this bar. Iceland has committed to fully phase-out single-use own brand plastic packaging by 2023. It recently reported it will have eliminated 3,000 tonnes by 2019, achieving over a 20% reduction and on track for achieving the overall target.[41]

Table 3: UK supermarkets' own brand single-use plastic packaging reduction targets

Company	Reduction target for own brand packaging	Timeframe	% reduction per year
Iceland	100%	2023 (2018 baseline)	20%
M&S*	10% annual reduction	2018-2020	5%
Aldi*	50% (all packaging)	2025 (2015 baseline)	5%
Asda*	10%	2019 (2017 baseline)	5%
Lidl*	20%	2022 (2017 baseline)	4%
Morrisons*	25%	2025 (2018 baseline)	3.57%
Sainsbury's*	50% (all packaging)	2020 (2005 baseline)	3.30%
Tesco*	50% (all packaging)	2025 (2007 baseline)	2.77%
Co-op	0	N/A	N/A
Waitrose*	Not given	2025 (baseline not disclosed)	-

* UK Plastics Pact signatories have also adopted the non-quantitative target to eliminate problematic or unnecessary single-use packaging items by 2025.

Figure 3: Annual percentage reduction targets for own brand single-use plastic packaging



Other companies are taking a less ambitious approach. Many are members of the UK Plastics Pact, a voluntary industry initiative launched in 2018, including Waitrose, Tesco, Sainsbury's, Morrisons, M&S, Lidl, Asda and Aldi. It includes a target to 'take action to eliminate problematic or single-use packaging' by 2025. This framing can be understood as an either/or commitment, without binding signatories to take steps to reduce single-use plastics if they focus instead on those deemed problematic. As such, it does not necessarily entail an overall plastic reduction. The target is not quantified or unit-based and does not include specific accountability mechanisms, although public reporting forms part of the commitment.

Reduction targets should be met primarily by reducing the number of items (units) rather than solely the weight of packaging, as this is what is important for reducing plastic pollution. For example, if a company achieved its target by reducing the weight of plastic items but did not actually reduce the quantity sold, the number of items leaking into the natural environment may not actually decrease, posing the same level of risk to marine species.

Other than Waitrose, all Pact signatories have additional quantitative packaging reduction targets. Only four of these are plastic-specific, in addition to Iceland's (see Table 3). M&S and Asda both have plastic-specific targets that equate to reductions of 5% per year. M&S sought to reduce plastic packaging by 5% between March 2018 – 2019 (1,500 tonnes), and aims to achieve a further 5% reduction between 2019 – 2020 (a 10% overall reduction from the 2018 baseline to March 2020). Asda has committed to reduce own brand plastic packaging by 10% (6,500 tonnes) over two years (2017 -2019). Other plastic-specific targets include Lidl's commitment to reduce own brand plastic packaging by 20% by 2022 from a 2017 baseline, and Morrison's 25% by 2025 from a 2018 baseline - both equating to less than a 5% reduction per year.

Tesco, Aldi and Sainsbury's have articulated 50% reduction targets that cover all packaging materials over long time periods (see Table 3). These do not clearly state if an absolute reduction of 50% will be sought from plastic packaging or whether progress will be calculated as an average across all materials. Since weight losses could be more easily achieved through removing heavier packaging (such as glass) than removal of lighter plastic items, these targets may not imply a significant reduction in units of plastic - and could even be achieved through shifting from heavier materials to plastic. It is important that retailers specify a plastic-specific reduction target as part of overall packaging reduction targets.

Co-op has recently announced that it will 'eliminate single-use own-brand plastic products and packaging, including the plastic you didn't know was there, by 2023'.[42] Co-op defines 'single-use' plastics as those that cannot be recycled, rather than those that are designed to be used once by customers before being discarded. Therefore, the commitment is not synonymous to Iceland's. Since the target is not quantified, it is uncertain how much plastic the company will remove and how much will be swapped for recyclable plastic materials and formats.

It is worth noting that almost all retailers' reduction targets are for their own-brand ranges and do not include branded items. With the exception of M&S, Aldi and Lidl, branded products represent 40-60% of supermarkets' plastic packaging portfolios. Ideally, retailers should look to achieve an absolute reduction in their total plastic footprint, ensuring that reductions in own-brand plastic packaging are not achieved through a simple shift to sales of branded products. More information on what the companies are doing to engage with brand suppliers can be found in Section 4. Ideally, a plastic-specific target would sit within an overall packaging reduction strategy, to prevent a simple like-for-like substitution of one single-use item with another, which may also have negative environmental consequences.

None of the convenience chain retailer companies reported having plastic reduction targets or strategies in place.

Reusable and refillable packaging ranges

The introduction of reusable and refillable ranges for customers can help companies reduce dependency on single-use plastic packaging. However, progress on this was thin on the ground, with just four companies reporting reusable initiatives already underway in store (see Table 4).

Table 4: Retailers with reusable and refillable primary packaging options

Initiatives underway	Currently scoping options	No current plans
Morrisons, Sainsbury's, Waitrose, Tesco	Aldi, Asda, Lidl, M&S	Co-op, Iceland, Costcutter Supermarkets, McColl's Retail Group, Nisa Retail

In Morrisons, Tesco, Waitrose and Sainsbury's, customers can use their own reusable containers for certain products bought over the counter, such as meat and fish. Morrisons is also trialling an initiative where customers can use refillable containers for nuts, seeds and dried fruit. Waitrose has announced it will pilot further refillables in 2019. Four companies reported scoping work under way, although for commercial reasons, many said they could not disclose the details.

Another way supermarkets can reduce plastics is through offering loose, unpackaged goods. The British Growers Association found that Morrisons offers more loose fruit and vegetables than its competitors and the company is currently trialling the removal of plastic packaging from more fresh grocery ranges.[43]

A number of respondents noted challenges to the introduction of reusable packaging formats, including limited space in smaller convenience stores and health and safety concerns. Through industry collaboration and customer engagement, some of these issues could be overcome. For example, industry standards could be established around refillable containers to mitigate the risk of contamination and address concerns of liability.

Companies should look to expand refillable and unpackaged ranges. Examples could include water and soft drinks dispensers in store, reusable bags for produce, refillable containers and dispensers for items such as shampoos, dried goods and household cleaning products. Retailers should expand the number and variety of products sold loose where packaging can be removed altogether.

Online shopping

Online grocery shopping is a booming business, expected to grow 48% and account for 7.5% of the total UK grocery market by 2022.[44] The survey asked whether companies have targets or strategies to address single-use plastic packaging associated with online grocery shopping, including to reduce quantity and improve recyclability.

Waitrose, Sainsbury's, Iceland and Asda offer bagless deliveries, often using reusable crates instead. Morrisons is looking to reduce single-use plastic packaging in online shopping, working with partners Ocado and Amazon on refillable and reusable options. Asda, Sainsbury's and Waitrose offer a collection service for bag recycling. No retailer currently offers reusable/refillable packaging and reverse logistics, where packaging is retrieved from customers for reuse, through online deliveries.

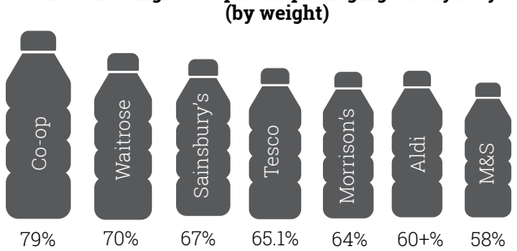
Recyclability and recycled content of packaging

Non-recyclable single-use packaging has no role to play in a circular economy and should be eliminated by companies as a priority. While the plastic pollution crisis requires a focus on reduction, rather than switching from one type of plastic to another, it is important that all remaining plastic placed on the market is easy to recycle. Eliminating formats and materials that are not widely recyclable would alleviate customer confusion and simplify household collection systems. Companies are encouraged to take action to eliminate non-recyclable plastic packaging by the end of 2019, as an interim step towards reducing their plastic waste footprint.

Companies were asked what percentage of single-use packaging is currently widely recyclable, both for own-brand items and for own brand and branded items combined. Few companies had data available for the latter category. Table 5 summarises the data that was provided for own-branded plastic packaging. In defining 'widely recyclable', many used the On-Pack Recycling Label (OPRL) guidelines.

Table 5: Recyclability of supermarkets' own brand plastic packaging

% own brand single-use plastic packaging widely recyclable (by weight)



Co-op topped the leaderboard in terms of how much of their packaging is widely recyclable (79% by weight), most others are lagging behind at 58-70%. Co-op also measures the recyclability of plastic packaging on a per-item basis, which is much lower at 55%. This difference is due to the fact that certain heavier items (such as plastic bottles) are more widely recyclable than the more numerous but lighter weight items such as plastic films, which have very low recyclability levels.[45] Ideally, all retailers should measure recyclability on a unit basis as this offers a better insight into the number of items being placed on the market each year that cannot be recycled.

Most major supermarkets (Tesco, Sainsbury's, Morrisons, Lidl, Asda), as signatories to the WRAP Plastic Pact, have committed to eliminate non-recyclable plastic packaging by 2025 – 6 years later than Greenpeace and EIA's recommended 2019 target. Only four have adopted more urgent timeframes – M&S and Aldi by 2022, Waitrose and Co-op by 2023.

Many companies have additional targets to eliminate the most problematic polymers and packaging format types within the next two years. Tesco will phase out PVC, polystyrene and most bioplastics by 2019; Morrisons will remove PVC by 2019 and expanded polystyrene from by 2020; M&S will remove polystyrene by 2019; Iceland will remove PVC by 2020; and Co-op will eliminate a variety of non-recyclable materials and formats including crystallized polyethylene terephthalate (CPET) ready meal trays and polyethylene (PE) film from breakfast goods by 2020. A number of companies have also committed to take action to remove black plastic, including Waitrose (2019), M&S (2019), Morrisons (2019), Lidl (2019), Co-op (2020) and Asda (dates unconfirmed). While some retailers are seeking to develop a solution to recycling black plastic, this is not operating at scale and retailers are therefore encouraged to phase-out black plastic as a priority to prevent this plastic ending up in landfill.

As well as ensuring that all plastic placed on the market is easy to recycle, supermarkets can also help drive the shift to a circular economy by maximising the recycled content levels of remaining packaging. Currently, very few companies have data available on this and only two companies were able to provide an estimate. Co-op reported a 33% average recycled content in own brand single-use plastic packaging and Sainsbury's 20%. Various respondents noted specific products which contain higher than average recycled content levels. Sainsbury's, Iceland, M&S, Co-op and Tesco all have tray ranges with recycled content levels between 60%-95%.

All major supermarkets (except Iceland due to its phase-out pledge) are committed to increasing the levels of recycled content used in plastic packaging (see Table 6). Many are aligned with the WRAP Plastic Pact target of 30% by 2025. Some have gone further, with Waitrose the most ambitious (50% by 2019 across widely recycled plastic), followed by Co-op (50% by 2021 for some packaging), M&S (between 30%-50% by 2022), Lidl and Aldi (50% by 2025).

Table 6: Targets for increasing the recycled content of own brand plastic packaging

Companies	Recycled content % and timeline for achieving
Waitrose	50% by 2019 in widely recycled packaging
Co-op	50% by 2021
M&S	30-50% by 2022
Lidl, Aldi	50% by 2025
Asda, Morrisons, Sainsbury's, Tesco*	30% by 2025

*Target adopted as part of the UK Plastics Pact

Some companies noted challenges to increasing the level of recycled content in products and packaging, including a lack of post-consumer recycled plastic at food grade. These issues can be overcome with industry cooperation and improvements to recycling and collection infrastructure. For example, a Deposit Return Scheme would increase the quantity of low contamination, high quality plastic collected for recycling.

Position on non-conventional plastics including bio-based, biodegradable and compostables

As the plastics debate heats up, non-conventional plastics including biodegradable, bio-based and compostable plastics are being promoted as sustainable alternatives. However, there are a range of concerns associated with each of these.[46] While there may be a limited role for some non-conventional plastics, they will not solve the plastic pollution crisis, which requires a more comprehensive strategy emphasising reduction, reuse and redesign.

Foremost, 'alternative' plastics will continue to pose a risk to marine life as they require specific conditions for biodegradation that are not met in the natural environment. For example, some need prolonged exposure to temperatures of more than 50°C.[47] Their wide-scale adoption could present additional problems such as complicating waste collection and recycling systems, as well as causing microplastic pollution if the conditions required for full biodegradation are not met. Most bio-based plastics are produced from agro-based feedstock,[48] requiring an estimated 600,000 hectares to produce 1.6 million tonnes in 2013 – a fraction of the total demand for plastics (< 0.5% of 2015 total demand).[49] If their production is scaled up, land-use demands could bring about competition with agriculture and cause biodiversity loss.[50]

Our survey asked companies their position on non-conventional plastics. Table 7 highlights companies that stated they currently have or plan to move into the following plastic types:

Table 7: Companies currently considering adoption of non-conventional plastics

Bio-based	Biodegradable	Compostable
Costcutter, Sainsbury's	Costcutter, Iceland, Sainsbury's	Aldi, Co-op, Costcutter, Iceland, Sainsbury's, M&S, Morrisons, Tesco, Waitrose

Many of the respondents recognised the issues associated with non-conventional plastics, including: a lack of disposal facilities at scale (Aldi, Asda, Co-op, Sainsbury's, Tesco); contamination of recycling systems and impact on recyclate quality (Asda, M&S, Morrisons, Sainsbury's, Waitrose); confusing or misleading consumers (Asda, Tesco); land-use requirements for bio-based (Lidl, M&S, Morrisons, Tesco); and leakage into the natural environment (M&S, Morrisons, Waitrose).

None of the convenience chain companies provided information to suggest they were aware of the risks associated with non-conventional plastics. In fact, Costcutter said that where brands offered these products it would be a fast adopter. This is representative of the confusion around non-conventional plastics and the belief that they present eco-friendly alternatives.

Other companies, though cognisant of the problems, suggested that they were looking to adopt non-conventional plastics for certain products, with compostable plastics being the most popular option. Co-op is planning to use compostable plastic (or paper) labels on fruit and in tea bags because of the high probability that these will enter the food waste collection system or be put into home-compost bins. The company recently announced that around 60 million plastic carrier bags will be replaced with compostable plastic bags in constituencies where there are waste management facilities in place that will accept these with food compost.[51] Waitrose has also recently announced its intention to introduce compostable plastic produce bags for loose fruit and vegetable ranges nationwide.[52] An estimated 42% of UK local authorities don't offer food waste collection.

Sustainable packaging guidelines

Sustainable packaging guidelines are an important tool to ensure conformity and standards across a company's packaging range. All the supermarkets reported to have such guidelines in place, while the convenience chains reported this would not be applicable as they do not control product specifications. Most contained criteria related to reduction of plastic usage and improving the recyclability of packaging, with many encouraging increased use of recycled content.

6.2 Summary of survey responses - Item specific actions and initiatives

Certain plastic items are particularly prominent in marine pollution, and many of these originate from supermarket shelves. Among the top items found on beach cleans and other audits include plastic bags, straws, bottles, cutlery, cotton buds and on-the-go food wrappers.[53] Actions taken by retailers to end sales or introduce initiatives to prevent them from entering the marine environment could make a significant difference to ocean pollution. The survey asked grocery retailers about item-specific plans and initiatives, with questions concerning:

- whether the company has committed to end the sale of any single-use plastic items
- data on plastic water bottles, plastic cutlery and coffee cups
- initiatives to reduce the impact of some of the most highly littered items
- commitments to remove single-use plastic items from in-store cafes.

The results found that while many companies have made commitments to end sales of certain single-use items, there remains significant scope for action on others and innovation through eco-design and customer engagement. The total number of single-use items such as water bottles and plastic cutlery remains startlingly high, with very few companies having initiatives in place to reduce the sales or impact of these often unnecessary items.

Single-use item sales bans

Table 8 summarises specific single-use plastic items that companies have ended sales of or are in the process of phasing out, as well as other initiatives such as provision of in-store water dispensers. It is positive to see that many companies have acted on plastic straws and cotton buds but further progress is needed on plastic cutlery and cups. There are many key items present in marine plastic pollution (single-use plastic bottles, balloons, on-the-go wrappers etc.) that no companies have yet committed to eliminate. It is important to note that disability rights groups, such as One in Five, are concerned that bans on certain items such as plastic straws could be detrimental to certain citizens and therefore are calling on manufacturers to produce an environmentally friendly flexible non-plastic straw suitable for hot and cold liquids.[54]

Table 8: Overview of commitments to reduce specific single-use items

	Aldi	Asda	Co-op	Iceland	Lidl	M&S	Morrisons	Sainsbury's	Tesco	Waitrose
Straws	√	√ (by 2019)	√ (from Jan 2019)	√	√	X (but removed from cafes)	√	X	√	√
Cutlery	X	√ (by 2019)	X (investigating alternatives)	N/A	√	√	X (although removing from cafes)	X	X (but removed from home offices)	X (but plastic free in cafes)
Cotton buds	√	√	√	√	√	√	√	√	√	√
Coffee cups	N/A	√ (by 2019)	X (investigating alternatives)	N/A	N/A	X (but discount for reuse)	X	X	X (but 10p charge for single-use)	√
In-store water refills	X	X (offered in cafes and exploring fountains)	X	X (currently exploring)	X	X (offered in cafes)	X (installing in new stores and offered in cafes)	X (offered in cafes)	X	X (exploring options & available at cafes)
Other		Replacing polystyrene takeaway containers	Plastic-free tea bags			Plastic free tea bags				

* N/A denotes where the store does not provide or sell that item, or does not operate in-store cafes / drinks facilities

Of the companies that operate in-store cafes, many have initiatives under way to reduce their single-use plastic output including removing single-use coffee cups (see Table 8), offering financial incentives for reuse (charges/ discounts) and replacing plastic cutlery and stirrers with alternatives. For example, Asda, M&S and Tesco offer a discount to customers who bring reusable coffee cups, with Asda and Waitrose both planning to phase out single-use cups completely. Morrisons is trialling the phase-out of single-use plastic cups, sauce sachets and dairy sticks in one store. Others state they are still investigating alternatives: Co-op for plastic cutlery and cups, McColl's for its food on-the-go range and single-use cups and Spar for plastic straws and cutlery.

A handful of companies - Asda, Iceland, Morrisons and Waitrose - are looking into facilities where customers can get water refills in stores and cafes, reducing the need for single-use plastic bottles, something that more supermarkets should seek to roll out.

The survey requested unit data on the number of plastic water bottles, plastic cutlery and coffee cups the companies place on the market each year. Figure 4 shows the total number of items reported and the number of companies which reported this data. Often described as the marketing trick of the century, a staggering 504 million units of bottled water are sold each year by just six of the major supermarkets, despite wide access to free and safe drinking water across the UK, the true figure being undoubtedly much higher when factoring in those who wouldn't disclose sales figures. In addition to this, more than 123 million pieces of cutlery and 84 million coffee cups are given away free each year.

Figure 4: Overview of single-use items

Several companies were not transparent with data on single-use plastic items. Sainsbury's and Morrisons stated that all the data was commercially sensitive and Asda and Lidl also withheld data on plastic water bottles.

Some companies have undertaken additional steps to reduce the impact of other plastic items that have a high potential to reach the marine environment. Many of the respondents said they supported labelling to educate customers and ensure correct disposal methods, with a focus on wet-wipes and sanitary items which have a high tendency to be flushed down the toilet. Various companies support the On-Pack Recycling Label (OPRL) system, which seeks to provide a consistent UK-wide recycling message. Asda reported it is the only supermarket member of the Microfibre Consortium, a group looking to understand the impact of fibre shedding from clothing and solutions for reducing this. M&S is also looking into solutions to address microfibre pollution. Packaging innovation is another area companies are working on. Co-op is working towards the removal of certain packaging components (known as 'tear-off bits'), and Iceland is looking into 'marine safe' packaging alternatives, such as those made from kelp.

Plastic Bags

A total of 1.2 billion single-use plastic bags, more than 958 million bags for life and 1.3 billion ultra-lightweight plastic produce bags are consumed every year by the 10 supermarket respondents. The carrier bag charge has resulted in an overall drop in single-use of 86% compared to a 2014 baseline but there remains a need for further action.[55] Iceland, followed closely by M&S, had the highest consumption of single-use plastic bags relative to their market share. Tesco had the highest sales of bags for life and Lidl, Sainsbury's and Tesco the highest use of plastic produce bags relative to market share.

Differences in definition may skew the reported figures, with some companies reporting they provide zero single-use bags, describing their 5p option as 'bags for life' as they can be returned to store for a free replacement. Many companies report they are phasing out single-use plastic bags, including Asda, Iceland, Lidl, Tesco, McColl's, Morrisons and Waitrose. Unfortunately, the figures indicate that many consumers continue to use so-called 'bags for life' bags as a single-use option, with Sainsburys and Asda seeing increases in 5p bags sold in 2017/18 compared to 2016/17, rising by 4% and 16% respectively.[56] Retailers must take action to drive further reductions, rather than undermining the success of the 5p charge by offering 'bags for life' at similar prices. A significant increase to the price of bags, or ending sales completely, should help drive further reductions.

Co-op recently reported that it would be swapping conventional plastic single-use bags for compostable alternatives. Morrisons has committed to remove the very lightweight plastic bags for loose fruit and vegetables offering paper bags instead and Waitrose will replace its produce bags with a home-compostable option. Waitrose also note changes in customer behaviour, with a 30% reduction in customer use of fruit and vegetable bags in 2018. In a welcome move, some retailers report that they are exploring reusable produce bags, though none have yet trialled them, an action that would be much preferable to substitution of one single-use product for another.

6.3 Summary of survey responses - Supply chains

The plastics found in the aisle are just a part of the picture in calculating a grocery retailer's plastic footprint. From the tiny pellets used to manufacture plastic items, to the fields of plastic polytunnels used to grow crops, plastic is ubiquitous throughout the supply chain. The survey sought to gain a better understanding of how grocery retailers are looking to reduce and responsibly manage these behind-the-scene plastics. It contained questions concerning:

- whether the company is engaging with brand suppliers around the elimination of non-recyclable plastics and single-use plastic packaging
- whether the company is working with agricultural and fisheries supply chains on the reduction and responsible management of plastics
- requirements concerning the responsible management of plastic pellets
- secondary and tertiary packaging used in operations and transportation, and the use of reusable distribution containers.

Most retailers indicated that they are only in the early stages of monitoring and managing plastic use in supply chains. The highest scoring area was reusable distribution containers, with almost all respondents using these for the transportation of produce. While some engagement with brand suppliers is under way, it does not appear that the UK's largest supermarkets are systematically applying their buying power to encourage the elimination of single-use and non-recyclable plastics by brands. Only a limited number are actively working to address plastics in fisheries and even fewer have a comprehensive approach to dealing with agricultural plastics or plastic pellets (nurdles). It is clear that much more action is needed in response to the plastics used before products end up on supermarket shelves.

Engaging with brand suppliers

From Coca-Cola and Walkers to small independent labels, grocery retailers sell large volumes of branded goods. These represent varying proportions of their plastic packaging portfolios - from around 40-60% (e.g. Co-op, Iceland, Morrisons, Sainsbury's, Tesco, Waitrose) to less than 5% (Aldi, M&S). Multinational brands have wide-ranging (or sometimes non-existent) sustainability policies. A recent sector survey of fast moving consumer goods (FMCG) corporations such as Coca-Cola, Nestlé and P&G found that none of the companies surveyed had commitments to move away from single-use plastic, with most actually increasing the amount of single-use plastic packaging and waste they produce.[57] Retailers can leverage their buying power to encourage brand suppliers to improve their approach to plastics, requesting that they adopt best practices and set targets and timelines. If a brand is unwilling or unable to meet these goals, supermarkets could stop selling their products. Retailers have previously dropped brands that do not meet standards for animal testing or labour rights, so this approach is not unprecedented.

Four retailers reported that they have no engagement under way with brand suppliers regarding plastics (see Table 9), although Nisa and Costcutter reported that this will form part of future plans and M&S and Lidl have limited branded stock. The majority of respondents said they had communicated their own strategies and commitments on plastics, often sharing information and technical learnings with companies. For example, Co-op helped Quorn to devise a strategy to remove hard-to-recycle black plastic from its packaging. Generally, the focus of engagement tended to be on recyclability rather than reduction.

Disappointingly, few companies said they were actively encouraging branded suppliers to adopt ambitious strategies and targets on plastic. Asda said it is encouraging its largest suppliers to set targets and Sainsbury's said it will be asking branded suppliers to support the UK Plastics Pact. Tesco suggested they were engaging with branded suppliers to 'follow their lead on packaging', although it was unclear whether this included setting targets. Only Sainsbury's said it has enshrined its plastic strategy into a policy for branded suppliers.

Table 9: Overview of engagement initiatives with branded suppliers

Communicate standards and share information	Encourage target setting or support of UK Plastic pact	Policy for branded suppliers	No current action
Aldi, Asda, Co-op, Iceland, McColl's Retail Group, Morrisons, Sainsbury's, Spar, Tesco, Waitrose	Asda, Sainsbury's	Sainsbury's	Lidl & M&S (limited branded stock), Costcutter Supermarkets, Nisa Retail

Case study: Marine agriplastic pollution in southern Spain

In Spain, plastic greenhouses and mulching coverage is concentrated in the southern regions of Murcia, Canarias and Andalucía. Andalucía has the highest concentration, with over 50% of its 113,897 hectares covered with agricultural plastics.[58] Within the Andalucia region, Almería is thought to have the highest greenhouse coverage in the world.[59] Many UK grocery retailers are known to source produce from this region.

Between 2010-15, University de Deusto and Asociación Ambiente Europeo studied the correlation between agriplastics and marine pollution, analysing 47,682kg of marine plastic pollution from shorelines across Murcia, Andalucía, Canarias and other regions.[60] They found an eightfold increase in plastic items related to intensive agriculture between 2014-15, with the highest concentration in the Punta Calnegre-Cabo Cope Regional Park in Murcia. Other studies have also identified this area as an agriplastic pollution hotspot. Between October and November 2015, four areas were sampled in Marina, Cabo de Cope. Over 10,000 units of agricultural plastics were recovered, making it the largest identifiable source of marine debris (22% of total plastics).[61]

The impact this is having on marine species is becoming increasingly clear, with correlation between sperm whale mortalities and agriplastic hotspots.[62] In 2013, a dead sperm whale was found to have digested 17kg of plastic greenhouse waste on the southern Spanish coast of Granada.[63] Studies also indicate the emerging threat of ingestion of plastics by birds in inland Spanish agricultural landscapes.[64]

Below: NASA photo of agriplastic coverage approx. 20,000 ha of the Campo de Dalías, Almería, Spain
Bottom left: Sperm whale stranded on Spanish shore, 2018
Bottom right: Plastic retrieved from stomach of dead sperm whale, 2018

Working with agricultural suppliers

The use of plastics in agricultural production (known as agriplastics) has intensified in recent years, including mulch and greenhouse film, silage covers and bags, irrigation systems, tunnels and covers.[65] They have a variety of purposes, such as weed suppression, protecting crops from insects and harsh weather conditions and for storage and transportation. Due to high levels of contamination from soil and pesticides, these are often difficult to recycle.[66] Where agriplastics are not recovered, they are often buried in the soil, abandoned in fields or watercourses,[67] and even illegally burnt.[68] This can lead to leakage into the environment, contributing to marine pollution (see case study, previous page). Residual plastic film can also have detrimental effects on soil structure, salt levels, nutrient transport and crop growth.[69]

When asked if they are actively working with fruit and vegetable suppliers on the reduction and responsible management of agriplastics, retailers generally indicated that this was an issue they were only just beginning to explore, without comprehensive policies or programmes yet in place (see Table 10). Their focus is primarily on recovery and recycling rather than reduction. Two supermarkets (Sainsbury's and M&S) reported existing initiatives under way on the responsible use and recovery of agriplastics. Only Waitrose and Morrisons mention reducing the amount of agriplastics used. Going forward, supermarkets should develop more proactive strategies and targets, aligned with the waste hierarchy, to reduce usage and ensure responsible management of plastics in their supply chains, with independent auditing of suppliers to ensure they meet specified criteria.

Other companies (Aldi, Asda, Co-op, Lidl, Morrisons, Tesco & Waitrose) noted early stage thinking on agriplastics, exploring best practices. McColl's and Costcutter both reported that they do not work directly with fruit and vegetable suppliers but have spoken with their main wholesale suppliers (Morrisons and Co-op respectively) to determine what is being done.

Working with fisheries suppliers

Each year, over 640,000 tonnes of abandoned, lost or discarded fishing gear (known as 'ghost gear') enters the ocean.[70] This poses a huge threat to marine life, with the hundreds of kilometres of nets and lines lost every year ensnaring, injuring and killing marine life, impacting already depleted commercial fish stocks as well as protected species.[71]

Formed in 2015 by World Animal Protection, the multi-stakeholder Global Ghost Gear Initiative (GGGI) works to build evidence, define best practice and catalyse and replicate sustainable solutions through the four R's: reducing the volume of fishing gear entering the oceans; removing ghost gear already there; recycling ghost gear; and rescuing marine animals.[72] A number of the supermarkets responded that they were engaged with the GGGI, including Waitrose, Tesco, Sainsbury's, Morrisons and M&S, while Co-op and Lidl are considering the initiative. Iceland and Lidl both noted that they are members of the Sustainable Seafood Coalition, which includes in its guidance framework that if ghost gear is known to be an issue, then mitigation measures are put in place.[73] Four respondents including two of the UK's largest supermarkets (Asda and Aldi) said this was not an issue they were currently considering. Actions that could be taken include supporting gear marking, retrieval and recycling schemes for fishing gear as well as encouraging the use of reusable catch and bait boxes and elimination of polystyrene packaging.

Plastic pellets

Small plastic pellets, also known as nurdles, are melted down and used in the manufacture of all plastic products. They can enter the environment at every stage of the plastic production, manufacturing and recycling process. According to recent analysis, between 16,888 and 167,431 tonnes of these pellets may be entering the ocean across Europe each year.[74] Numerous marine species have been found to ingest the pellets which, like other microplastics, may cause a range of impacts, including effects on reproduction and behaviour.[75]

Few grocery retailers reported that they are currently engaged with suppliers on actions to prevent pellet loss. Co-op and M&S referenced Operation Clean Sweep, an industry-led voluntary scheme which provides a toolbox of best practices to prevent pellet loss.[76] However, the voluntary scheme lacks monitoring and compliance mechanisms, and plastic pellets are still the second largest direct source of microplastic emissions in Europe. Co-op appears the most active on the issue, working with BRC Global Standards (a standard-setting organisation) to find an effective, low-cost way of addressing the issue with the broadest possible reach. Tesco reported that its quality standards policy and documentation covered plastic pellets. Sainsbury's and Waitrose stated they were looking into the issue but not yet actively engaging with suppliers about best practices. The remaining majority of respondents said they were not currently active on the issue at all (see Table 10).

Packaging in supply chains

Besides the packaging that consumers see on the shelf (known as primary packaging), grocery retailers also use secondary packaging to protect and collate products during storage, transport and distribution (including packaging made to display multiple primary product units on the shelf) and tertiary packaging to transit goods, including pallets, stretch wrap and strapping.

Companies were asked to report the quantity of single-use secondary and tertiary packaging used and disposed of annually. Four companies provided this data, with quantities ranging from 2,000 to 4,680 tonnes per year, accounting for between 1 - 8% of their overall single-use plastic packaging footprint. Others (including Asda, Co-op, Costcutter, McColl's, Morrisons and Sainsbury's) did not provide this data, with many stating it is not currently collected.

Most respondents said they have in place policies and initiatives regarding reusable distribution containers for transportation of produce, although the extent of their use across product lines was often unclear. Only M&S provided an exact figure of the proportion of food distributed to stores in reusable containers: 76%. Convenience stores McColl's and Costcutter both reported that since they don't have a central distribution service or direct relationship with produce suppliers, this question was not applicable to them.

Table 10: Supply chain engagement on agriplastics, fisheries and plastic pellet loss

	Initiatives underway	Early stage thinking	No
Agriplastic initiatives	M&S, Sainsbury's	Aldi, Asda, Co-op, Lidl, Morrisons, Tesco, Waitrose, Iceland	
Ghost gear initiatives	M&S, Iceland, Lidl, Morrisons, Sainsbury's, Tesco, Waitrose	Co-op	Aldi, Asda
Action on plastic pellets (nurdles)	Co-op, M&S, Tesco	Sainsbury's, Waitrose	Aldi, Asda, Iceland, Lidl, McColl's Retail Group, Morrisons, Nisa

Below left: Agriplastic waste polluting the marine environment in Southern Spain

Below right: Discarded fishing gear on Cornwall beach

Below: Plastic pellet pollution on a beach in North Queensferry, Firth of Forth, Scotland

6.4 Summary of survey responses - Customer, staff and policy engagement

From the millions of customers passing through supermarket doors every day to staff and policy makers, grocery retailers interact with a wide variety of stakeholders whose behaviour and actions collectively shape the UK's plastic habits. Through these engagements, the companies can enable and incentivise sustainable lifestyle choices and support the adoption of ambitious legislation to reduce single-use plastics.

The survey sought to gain a better understanding of how grocery retailers are using their influence to steer the agenda on plastics, asking questions on the following issues:

- engagement programmes for staff and customers about reducing their plastic footprint
- policy engagement on key legislative issues including Deposit Return Schemes (DRS), Extended Producer Responsibility (EPR), plastic levies and bans, and an extension to the microbead ban
- a commitment to transparent reporting on their plastic footprint on an annual basis.

Overall, we found that while almost all grocery retailers have laudable engagement initiatives under way, few are fully tapping into the transformative potential available through marketing, communications and actively advocating for policy measures. Companies were generally supportive of policy actions to increase recycling rates, and all major supermarkets stated they would be willing to report transparently on their plastic footprint. While there appears to be a general good will, more concrete actions will be required before these measures can help catalyse a real transition away from our current throwaway culture.

Engagement with customers and staff about reducing plastic waste

All respondents indicated that they had initiatives under way to engage with staff and consumers about reducing plastic waste. These took a variety of forms, including internal communications (i.e. online resources, internal bulletins and newsletters, promotion of reuse and recycling in staff facilities); staff education and trainings programmes; customer communications and engagement (including through labelling, magazines, promotion of plastic-free options and incentives); as well as wider awareness raising (including through education programmes, clean-up initiatives and community projects).

In terms of customer engagement, Morrisons provided the most extensive range of plastic-related initiatives. The issue has been prioritised following the company's 2017/18 survey, where customers ranked 'reducing plastic packaging' as the third most important issue. The company is incentivising customers to reduce plastic through offering points for reusing containers.

There is scope for a significant scaling up of activities if retailers are to fully leverage the plastic reductions available through customer engagement. Increased use of incentives and penalties could play a role, as seen with the 5p levy on plastic bags which reduced consumption by 80%.[77] The rolling out of customer engagement on plastic reduction will need to be accompanied by widening the scope of plastic-free and refill options available in supermarkets.

Engagement with policy-makers

Through meetings with policy makers and legislative consultation processes (including collective action via trade bodies), grocery retailers have power to influence policy outcomes. Almost all respondents indicated they were actively involved in current discussions on plastics and only McColl's and Nisa said they do not directly engage with policy makers.

A number of important policy measures are being considered over the 2018/19 period, including the introduction of a Deposit Return Scheme for drinks containers, reforms to legislation that define producers' responsibilities to cover the costs associated with the packaging they place on the market (Extended Producer Responsibility) and the introduction of bans and taxes on certain single-use plastic items. The survey asked companies what their position is on these policy instruments. It also asked whether they would support an extension to the 2018 UK ban on microbeads in 'rinse off' cosmetic products, for example to additionally cover microplastics intentionally added to household cleaning products.

Table 11: Overview of staff, customer and community engagement initiatives

Internal communications	Staff education and training	Customer communications and engagement	Wider education and communication projects
Aldi, Asda, Co-op, Iceland, Lidl, M&S, Morrisons, Tesco, Waitrose, Sainsbury's	Aldi, Asda, Costcutter, Lidl, Sainsbury's, Iceland	Aldi, Asda, Co-op, Costcutter, Iceland, Lidl, M&S, McColl's, Morrisons, Tesco, Waitrose, Sainsbury's	Aldi, Lidl, M&S, Tesco, Asda, Co-op

Most respondents were supportive of all these reforms, and no company stated they actively opposed any of the legislative tools. Around three-quarters of respondents were supportive of a legislative extension to the microbead ban and three quarters supported introduction of DRS. Morrisons, Tesco and Iceland are currently trialling reverse vending machines for plastic bottles in some stores. Most also supported reform to the UK's EPR scheme for packaging, with some calling for complete reform of the system. The current EPR framework has come under criticism on a number of fronts: including its lack of transparency concerning how revenues are spent; that it does not cover the full costs of the recovery and recycling of packaging and that it does not act as an incentive for companies to reduce packaging, increase the reuse or recyclability of packaging or levels of recycled content.[78]

In Spring 2018, the UK Government outlined plans to ban the sale of certain single-use plastic items that have a high potential to become marine plastic pollution (including plastic straws, drink stirrers and plastic-stemmed cotton buds) with a consultation launched in October 2018. The Treasury also ran a consultation regarding the possible introduction of a tax system on charges of addressing single-use plastic waste, announcing in October 2018, plans to introduce a tax on plastic packaging that contains less than 30% recycled content from April 2022. Six major supermarkets were supportive of plastic bans and levies depending on the specifics of proposed measures.

Almost all respondents were supportive of a more comprehensive microbead ban and/or had already excluded microplastics ingredients from household products as well as the rinse-off personal care products already covered by the current ban. Co-op was the most articulate, saying "We don't believe that the current legislation goes far enough, feeling very much like unfinished business. We would like to see a complete ban on the use of any plastics in products that are likely to go down the drain."

This strong support from the grocery retail sector is a clear sign to policy-makers that an extension to the current ban would be a welcome step towards reducing marine plastic pollution.

Commitment to transparency

Ocado was the only major grocery retailer that refused to participate in the survey, along with the convenience chains, Spar, Premier Stores, Londis, Lifestyle Express and Best-One.

The 10 supermarket respondents said they would in principle commit to report transparently on their plastic footprint on an annual basis. Convenience stores McColl's, Costcutter and Nisa noted issues in gathering the data to calculate their plastic footprint. Co-op, Morrisons, Waitrose and Asda are the only supermarkets which have so far published their plastic packaging footprints online, with Waitrose the highest performing, publishing both unit and tonnage data.

A commitment to transparency which is not reflected in public disclosures of key information serves little purpose. It is notable that many companies chose not to disclose full details about their plastic footprint through the survey. As just one example, companies including Asda, Lidl, Morrisons and Sainsbury's did not disclose data on sales of plastic water bottles.

Table 13: Companies committed to transparent reporting of their plastic footprint

Yes	No
Aldi, Asda, Co-op, Costcutter, Iceland, Lidl, M&S, Morrisons, Sainsbury's, Tesco, Waitrose	McColl's

Table 12: Overview of companies' positions on key legislative measures

Name of legislation	Deposit return scheme	Packaging Recovery Note reform and Extended Producer Responsibility	Plastic bans and levies	Extension of microbead ban
Generally support	Aldi, Co-op, Iceland, Lidl, M&S, Morrisons, Tesco, Waitrose	Aldi, Asda, Co-op, Iceland, M&S, Tesco, Waitrose	Aldi, M&S, Tesco, Iceland, Waitrose, Asda	Asda, Co-op, Iceland, M&S, Morrisons, Tesco, Waitrose, Lidl, Sainsbury's

7. Conclusions

UK supermarkets have a major role to play in facilitating the shift away from a single-use linear economy and reversing current plastic consumption trends. Our survey results show that most companies are yet to take the opportunity provided by current levels of public interest to fundamentally rethink their relationship with single-use plastics. As it becomes increasingly clear that we cannot recycle our way out of the plastic pollution crisis, more ambitious action is required on reduction: both across own brand ranges and through exerting pressure on brand suppliers.

The following summary provides a snapshot of how companies perform against the three key criteria set out by EIA and Greenpeace.

Introduce annual targets to reduce single-use plastic footprint

Ten UK supermarkets are placing more than 810,000 tonnes of single-use plastic packaging on the market each year and only half of these companies have quantitative, plastic-specific reduction targets in place to address this. Iceland has the most ambitious pledge to eliminate all own brand single-use plastic packaging by 2023 (a 20% annual reduction), whereas most companies are reducing their footprint at a much slower pace (under 5% per year), with much focus still on lightweighting plastic packaging (reducing the weight of plastic in a unit of packaging) rather than removing it from the shelf entirely.

There is considerable scope for future reductions to be achieved through the scaling-up of loose product ranges and refillable packaging formats. At present, reusable packaging options remain thin on the ground, with some progress made by Morrisons, Sainsbury's, Waitrose and Tesco in allowing customers to bring their own containers for a limited number of product lines. Morrisons is the largest provider of unpackaged fruit and vegetables, with many retailers making limited effort to increase their range of loose produce - despite growing customer appetite.

Branded goods can make up to as much as 60% of supermarket's plastic packaging footprint, yet it does not appear that companies are systematically using their relationships and buying power to urge reductions and target setting from big brands. More robust engagement will be a significant factor in reducing companies' overall plastic footprints going forward.

Reduction and management of plastics in supply chains - including agriplastics, those associated with fisheries, and plastic pellets - also appears at an embryonic stage. Better progress has been seen with reusable distribution containers, with almost all respondents using these for the transportation of produce.

Urgently eliminate unnecessary and non-recyclable plastic packaging by the end of 2019

Plastics that are hard to recycle have no role to play in a circular economy and the lack of urgency around their elimination is concerning. The majority of respondents are aligned with the WRAP Plastic Pact timeframe of removing non-recyclable plastics by 2025, with more ambitious commitments being made by M&S and Aldi (2022) and Co-op and Waitrose (2023). Many companies are committed to phasing out the most problematic formats and materials before 2025, including PVC, expanded polystyrene and black plastic packaging.

Also concerning is the data deficit on overall recyclability levels of plastics leaving supermarket shelves, particularly for branded goods. To assess the number of non-recyclable items hitting the market each year, companies must collect this data using a line-by-line approach. Currently, only Co-op provides this unit data, the rest reporting in tonnage which can be skewed by the presence of heavier but more recyclable items. Co-op leads the way on how much of their own brand packaging is widely recyclable by weight (79%), with most others lagging behind at 58 -70%.

While progress on recyclability is welcome, in line with the waste hierarchy, the emphasis should be on reduction. With UK recycling capacity already maxed out, and waste being shipped half-way across the world (and even then not necessarily recycled), eliminating non-recyclable plastics should be seen as the first step in an overall plastic reduction strategy.

Introduce transparency by publishing yearly audits of single-use plastic use

By refusing to participate in the survey, Ocado, Spar, Premier Stores, Londis, Lifestyle Express and Best-One demonstrated the lowest levels of transparency. The lack of data provided by the convenience chains is particularly concerning given the large number of stores they represent, leaving a data gap among a group of retailers already lagging behind on commitments to tackle plastic pollution.

Among the survey respondents, commitments to transparency were reassuringly widespread, with Co-op, Morrisons, Waitrose and Asda already reporting on their plastic packaging footprint. Disclosures can be further improved by providing data on the number of items put on the market, as well as tonnage. A commitment to transparency which is not backed up by public disclosures of key information serves little purpose and a number of companies were unwilling to provide data on the sales of items such as plastic bags, water bottles and coffee cups.

8. Recommendations

Public appetite for a radical rethink of single-use plastic is at an all-time high. Grocery retailers have an exciting opportunity to move beyond incremental change and fundamentally redefine their relationship with plastic. The actions and choices made by companies today are defining the future health of ocean ecosystems and those that depend on them. EIA and Greenpeace encourage grocery retailers to take this responsibility to heart and pioneer new ways to reduce their plastic footprint across the entire supply chain.

A summary of key recommendations is provided below. More detailed suggestions have been provided throughout the main body of this report.

Single-use plastic packaging

- **Reduction targets**. Introduce plastic-specific, quantitative year-on-year reduction targets for single-use packaging, achieved principally through removal of plastic packaging rather than lightweighting. Reductions should be made as part of an overall packaging reduction drive, rather than through substitution with single-use packaging made from other materials.
- **Refillable and reusable packaging**. Significantly expand refillable and reusable packaging options and unpackaged ranges across stores and product lines and incentivise consumer use.
- **Eliminate non-recyclable packaging**. Commit to urgently eliminate all non-recyclable plastic packaging from own brand ranges by end of 2019. Establish targets, sustainable packaging guidelines and design requirements with a focus on material reduction, reuse and recycling.
- **Non-conventional plastics.** Adopt a precautionary approach and fully assess the sustainability issues associated with non-conventional plastics (bio-based, biodegradable, compostable), viewing them as a last resort for well-adapted purposes rather than a go-to substitute for conventional plastic.

Single-use plastic items

- **End sales and free provision of single-use items that commonly leak into the environment and improve collection incentives, eco-design and labelling.** This includes but is not limited to plastic cutlery, bottles, cups, straws, stirrers, sanitary items and plastic stemmed cotton buds.

Working with the supply chain

- **Robust engagement with branded suppliers**. Engage with brand suppliers on reducing single-use plastics by encouraging target-setting, sharing best practice and collaborating on refillable packaging ranges.
- **Agriplastics**. Work with fruit and vegetable suppliers on the reduction and responsible management of plastics used on the farm to prevent pollution of soil, rivers and oceans.
- **Fisheries-related plastic waste:** Work with fishery suppliers on implementing best practice to prevent and address abandoned, lost and discarded fishing gear and other plastic waste.
- **In-store operations and transportation.** Introduce a comprehensive policy requiring reusable distribution containers for transportation of all products.
- **Plastic pellet loss:** Introduce requirements for suppliers to implement best practice measures to prevent plastic pellet loss, with auditing and reporting requirements.

Engagement with staff, customers and policy makers

- **Staff, customer and community engagement campaigns.** Introduce schemes and initiatives to shift staff and consumer behaviour on plastics, through incentivising reusable and refillable options, awareness-raising initiatives, staff training, information-sharing platforms and community engagement campaigns.
- **Engage with policy makers to support reduction of plastic pollution.** Engage individually and through industry bodies to encourage the introduction of policies which will address the causes of plastic pollution, including: the introduction of a Deposit Return Scheme; wholesale reform of Extended Producer Responsibility; plastic item bans and levies; and the extension of the UK microbeads ban to other products.

Investors and shareholders in these companies are encouraged to promote these recommendations through their engagements.

Recommendations for policy-makers:

Action by retailers and brands must be supported and incentivised by government policies that provide a clear signal to businesses to reform their use of single-use plastics. The UK Government must develop a suite of policy measures to tackle plastic pollution at source, implementing a combination of bans; reduction targets; a Deposit Return Scheme; wholesale reform of Extended Producer Responsibility regulation; as well as taxes and charges. Such measures should be designed to reduce consumption of single-use plastics and incentivise reusable and refillable packaging formats, alongside ensuring easy, harmonised and cost-effective recycling in the UK. Policy-makers are encouraged to take note of the strong support signalled in this survey for an extension of the UK ban on microbeads and introduction of a Deposit Return Scheme.

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