



The Plastics Problem

A UK Policy Perspective

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Introduction

Environment Secretary Michael Gove has spent much of his tenure as head of the Department for Environment, Food and Rural Affairs (DEFRA) pushing through a raft of new proposals concerning plastics, including the overall ambition to eradicate all avoidable plastic waste by the end of 2042.

This push from the Government to boost their credibility on environmental issues is a welcome sign, but to what extent are these policies effectively tackling the issue? This article sets out to explore the policy context surrounding the plastics problem and evaluate the efficacy of the UK Government's response.

The Plastics Problem

Plastic pollution has been rising on the environmental policy agenda, gaining public and media attention as a danger to biodiversity and marine life. Plastics production has surged over the past 50 years, from 15m tonnes in 1964 to 311m tonnes in 2014—and this is expected to double again over the next two decades.

According to the Guardian, the amount of plastic produced in a year is roughly the same as the entire weight of humanity. While plastics have been well suited to our fast-paced, throwaway lifestyles, disposed plastic materials can remain in the environment for up to 2,000 years.

Of all the plastic produced in a given year, roughly 14% of this is collected for recycling, while 40% goes into landfill, 32% leaks into the ecosystem and 14% is incinerated for energy recovery. The current ratio of plastics to fish in the ocean by weight is 1:5, but if current trends continue the ratio is set to be 1:1.

The negative externalities related to the use of plastics can be broadly split into three: (i) degradation of natural systems as a result of leakage, especially in marine environments where 8m tonnes of plastic leak into the ocean each year; (ii) greenhouse gas emissions resulting from

production - 6% of global oil production goes into the production of plastics - and after use incineration; and (iii) health and environmental impacts from substances of concern such as bisphenol A and certain phthalates. With increased consumption, the harmful effects of these externalities will increase significantly.

These are just the headline dangers of plastic pollution - clearly, there are serious issues with plastics that can no longer be ignored. Modern society has developed a woefully unsustainable plastics system, especially with packaging and single-use products, that are highly damaging to the natural environment, but also a growing concern to public health. Without concerted international effort from governments on a unilateral basis, working with industry and citizens, the problem is unlikely to disappear any time soon.

UK Policy Context

DEFRA's 25 Year Plan for the Environment sets out the Government's ambition to: (i) make sure that resources are used more efficiently and promote reuse, re-manufacturing and recycling; (ii) work towards eliminating all avoidable plastic waste by the end of 2042; and (iii) reduce pollution and the impact of chemicals. The proposals can be grouped into the following overarching policy interventions:

Working with industry to promote the circular economy

The 25 Year Plan is light on firm commitments to bring in regulations and instead sets out proposals to 'work with producers' to inter alia rationalise packaging formats, improve recyclability, and incentivise producers to take greater responsibility for the environmental impact of their product. Part of this work will be taken on by the Waste and Resources Action Programme (WRAP)— a government funded charity that works with businesses, individuals and communities to achieve a circular economy and improve resource efficiency. Since it began in 2000, WRAP has brokered a number of voluntary agreements with businesses in the construction sector, retail sector and clothing industry.

Encouraging behaviour change in consumers

The Government has also set out potential interventions at the plastics consumption stage to promote behaviour change in citizens. These include extending fiscal nudges, such as the 5p plastic bag charge, to other disposable products

such as coffee cups; or by facilitating reuse of bottles by offering more water refill points. At the 2018 Spring Statement, the Chancellor announced a consultation looking into how the tax system could be used to address single-use plastic waste. Moreover, DEFRA recently announced plans to develop a deposit return scheme to improve recycling rates of plastic bottles— whether business or the public sector will be responsible for this is open to consultation.

Outright bans on certain plastics

This is the most clear policy intervention, where certain plastics or plastic products are completely banned from production and/or sale in the UK. In January 2018, the British Government was one of the first countries to introduce a ban on microbeads—tiny beads used in cosmetics and personal care products that harm marine life through leakage into the ecosystem. More recently, proposals have been mooted to ban other single-use items like plastic straws and cotton buds.

Analysis

While at first it may have seemed bold for the UK Government to work towards eliminating all unnecessary plastic waste by 2042, the limelight was quickly snatched away when the EU announced weeks later that they would work to make all plastic packaging recyclable or reusable by 2030. Indeed, with a problem of such magnitude, many would argue that a 25 year time frame is too slow to act and more ambitious, short-term targets are needed.

One aspect worth picking apart is that the UK's proposals are somewhat light on regulatory commitments, instead giving the more vague wording to 'work with industry' to achieve its goals. There are, of course, benefits to working with industry and, in some cases, over-zealous regulations can give rise to unintended consequences that may negate intended benefits or be economically damaging. Yet, there are also reasons to be sceptical of corporate willingness to shift towards more sustainable and expensive packaging systems in a competitive market, without concrete legislation forcing them to do so.

There are some reasons to be optimistic: on the 26th April 2018, 42 UK business - including large supermarkets such as Tesco, Sainsbury's, Morrisons, Aldi, Lidl and Waitrose - signed up to the UK Plastics Pact, brokered by WRAP. The pact includes the following targets to hit by 2025: 100% of plastic packaging to be reusable, recyclable or compostable; 70% of plastic packaging to be recycled or composted; a 30% average of recycled content across all plastic packaging; and the elimination of all problematic or unnecessary single-use packaging.

As this is a voluntary pact, without regulatory force or penalties for missing targets, it leaves the question open as to whether it will carry enough weight to ensure that the problem is effectively dealt with. It can be easy to overlook the power that consumer pressure has to catalyse businesses to move in certain directions—just look at the sudden proliferation of vegan and vegetarian options in supermarkets driven by growing 'flexitarian' dietary trends. Sustained public and media pressure can therefore motivate businesses to shift towards more sustainable packaging formats. However, this attention is often fickle and cannot be maintained indefinitely. Some might argue that some form of Government intervention - either in terms of regulation or penalties for missing targets - is needed to ensure that the UK Plastics Pact is more than just a symbolic gesture.



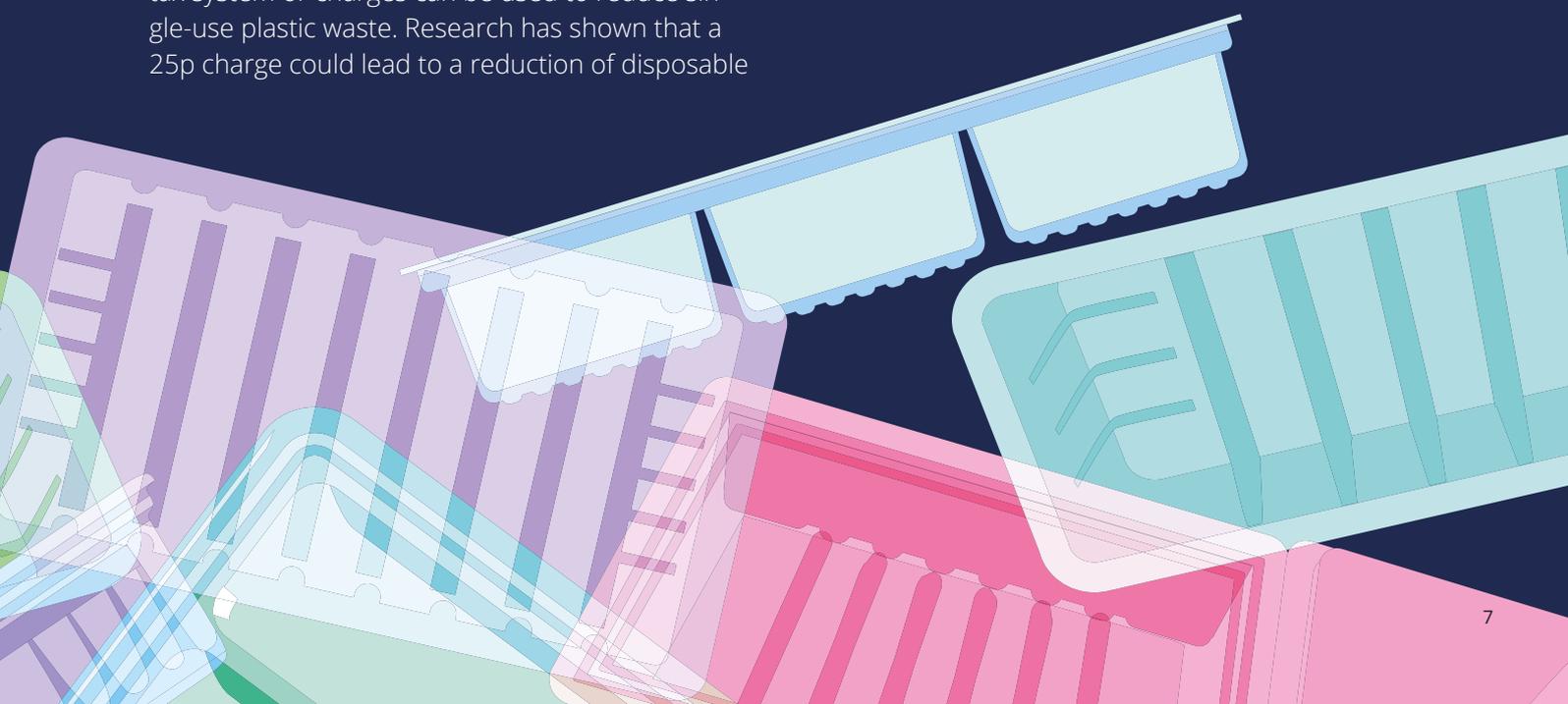
Turning to behaviour change, this is an area where there have been clearer successes. The 5p plastic bag 'tax' has resulted in a dramatic 90% drop in plastic bag use in the UK since its introduction in October 2015—this works out to 9 billion fewer bags per year used by shoppers since the charge was introduced. This is a classic example of what is known as nudge policy. The 5p charge is not meant to price consumers out of buying plastic bags, but instead to be a small reminder—or psychological nudge—that either they should bring a bag with them, or that they could carry their items without a bag. Nudge policies are intended to subtly shift citizens behaviour in certain ways and can often be as simple as 'opt in' vs. 'opt out'. The basic premise is that a population will act in predictable patterns depending on how certain questions are phrased, or systems are constructed.

Given the effectiveness of the 5p plastic bag charge, other items are now being considered for similar fiscal nudges—the most obvious being disposable coffee cups. The Environmental Audit Committee recently held an inquiry into disposable coffee cups and recommended a 25p charge, or "latte levy", on the 2.5 billion cups that are thrown away each year to nudge consumers to bring reusable cups, but also to raise money for local councils to provide food packaging recycling bins and waste management services.

The Government has responded to this by launching a consultation to gather evidence on how the tax system or charges can be used to reduce single-use plastic waste. Research has shown that a 25p charge could lead to a reduction of disposable

cups of between 50–300 million per year (around a 30% reduction); and a YouGov poll found 3 in 4 people would support a charge on disposable coffee cups. In any case, it is likely that more policy attention will be given to disposable coffee cups in the future, such as improving recycling labelling on cups and incentivising producers to take more fiscal responsibility for packaging and waste disposal.

A second nudge-style policy directed at consumers and citizens is the introduction of a Deposit Return Scheme (DRS) for plastic bottles. The UK uses 13 billion plastic bottles per year, with only 7.5 billion of these being recycled. A recycling rate of 57% is a significant improvement from the pitiful 1% in 2001; however recycling rates have plateaued over the past 5 years. After a separate inquiry into plastic bottles, the Environmental Audit Committee called for the introduction of a well designed DRS in the UK. Consumers would be financially incentivised to return plastic bottles into an organised recycling process after paying a small 'deposit' on top of the price of their drink. There are a wide array of DRS's in operation in 38 different countries, and research has shown that these have boosted recycling rates up to 85–90%. In Germany, for example, a DRS was introduced in 2003, pushing the recycling rate of plastic bottles to 99%, the highest in the world.



Depending on how this DRS is designed, it could have a negative impact on local authorities by taking materials away from household recycling. Local authorities sell the materials that are collected from citizens households, generating on average £127 per tonne of recyclable plastic material. With councils budgets stretched to their limits, having taken a 50% real term reduction in funding since 2010, anything that might reduce their revenue streams is of concern. However, research by Eunomia suggests that a DRS would bring about a net-benefit for local authorities through savings on litter clearing costs - estimates suggest that the scheme would reduce littering of bottles by 80%, with individual authorities saving between £60,000 and £500,000 per year.

The Government has approved the introduction of a DRS in the UK. The introduction and design of the scheme will be subject to a consultation. It is, therefore, unclear whether all retailers will be required to participate, or if the DRS will be voluntary. Still, with so many schemes already up and running internationally, the hope is that there is a strong enough evidence-base for a well-designed scheme to be relatively easily transferred to a UK context.

The final policy intervention type - an outright ban on certain plastics - is somewhat more straightforward. The microbeads ban in the UK came after reports finding that more than a third of fish in the English Channel are contaminated with microscopic plastic debris from everyday products and

cosmetics. Given the damaging impact of what is essentially an entirely unnecessary substance (there are many natural alternatives to micro beads), an outright ban was an easy political win for the Government.

Outright bans are more likely to come into effect in circumstances where the following conditions are broadly met: (i) strong evidence of significant harm caused by banned product; (ii) high levels of public approval for the ban; (iii) willingness of industry/business to accept ban. Each of these factors will come into play as the Government considers a potential ban on certain single-use items like plastic straws and cotton buds.

Indeed, it does seem that each of these conditions are potentially satisfied with plastic straws. First, billions of plastic straws are disposed of each year (the number 8.5 billion has been used, however this has been contested as an overestimate), and they are among the top 10 items found in beach clean ups. Second, a recent international survey found that 91% of people would support a full or partial ban on plastic straws. Finally, numerous companies have already stated their intention to either remove plastic straws altogether, or switch to more eco-friendly versions. It would therefore seem likely that the Government will introduce some sort of ban on plastic straws as another, relatively uncontroversial, policy win to boost their environmental credentials.



Conclusion

So, how does the British policy response shape up? It is positive to see a willingness from Government to address the plastics problem. However, some environmental advocacy groups have expressed concern at the lack of concrete regulation or legislation affecting plastics producers. While it is important to work with industry to reduce the chance of unintended consequences, it is also possible that without Government intervention there may not be sufficient weight in any of the pledges made by businesses to make costly, yet necessary, changes to the current plastics and packaging system.

The interventions aimed at behaviour change have been effective. After the success of the 5p plastic bag charge, it makes sense to look into how similar levies can be used to reduce waste on other single-use items. Furthermore, the introduction of a Deposit Return Scheme for plastic bottles is long overdue, with campaigners demanding one for decades. The UK has historically been slow to act in these areas—as mentioned above, 38 countries already have Deposit Return Schemes in place and significantly higher recycling rates as a result—but it is good to see that mounting pressure from NGOs, the media and the public has forced action in these areas.

Of course, the question remains of whether all of this is really enough? Even if we can improve recycling rates of plastic bottles, reduce the amount of disposable coffee cups used, and begin setting up some plastic free supermarket isles, the fact remains that the problem will persist without truly systemic changes. Consumers have their role to play, and there needs to be concerted efforts across industry, alongside ambitious Government policy, to transform our plastics production, consumption and recycling behaviours. Many would argue that, as things stand, we don't have 25 years to 'work with industry' towards a solution.





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