Regulation risks less sustainable alternatives to plastic
Over the past couple of years plastics have become the public face of the waste pollution crisis, prompting an unprecedented consumer and regulatory backlash that shows no sign of stopping.

Industry is responding by switching to other materials without considering their environmental impact relative to plastics, or whether sufficient local waste collection systems are in place, the Plastic Promises report launched last week by independent UK think tank the Green Alliance concludes.

Although its findings will come as little surprise to those involved in recycled plastics markets, and are mirrored across Europe, it once again highlights the gap in consumer understanding of the relative environmental impact of non-plastic alternatives and the unintended consequences this is having across the recycling industries.

For example, non-plastic food-packaging alternatives – on average – increase energy use by 2.2 times, carbon dioxide (CO2) emissions by 2.7%, and weight by 3.6 times, according to a UK parliamentary select committee report released in September.

Indeed, the shift in things like bottled drinks from glass to materials such as polyethylene terephthalate (PET) that took place across recent decades was in part driven by its lower carbon usage and weight.

Coupled with this, food-contact paper and cardboard packaging typically needs to be treated with a plastic barrier, making it more difficult to recycle and doing little to counterbalance the problem of micro-plastic ocean leakage.

For consumers, plastic is an homogenised entity rather than a series of different materials with different degrees of sustainability, recyclability or local collection rates.

PET, for example, has post-consumer collection rates of plastic bottles across Europe at 63% according to the ICIS 2018 study – the latest year for which data is available – but country by country collection varies from as low as 21% in Bulgaria, to as high as 96.2% in Germany.
These facts have done little to stem the tide of announcements of switches to non-plastic packaging from retailers and consumer brands, because the public perception is that these materials are always more sustainable, leading to rising pressure to abandon single-use plastics. The same consumer pressure is not being felt to the same extent on other packaging types, despite plastics accounting for less than a quarter of packaging waste generated in Europe.

Plastics account for 19% of packaging waste generated in Europe, compared with cardboard and paper at 41% and glass at a similar 19%, according to Eurostat figures collected in 2016 – the latest year for which data is available.

The knock-on effect of the public focus on single-use plastics is that this is concentrating regulatory efforts disproportionately on plastics because it is providing a mandate to act which is yet to exist for other packaging types, as conceded by the EU Commission at the ICIS PET Value Chain conference in March 2019.

This has led to a raft of upcoming regulation specifically targeted at the plastics industry, the latest of which is a plastic tax due to be introduced in Italy on 1 July. This will tax plastic at €0.45/kg with the exemption of recycled plastic and bio-based plastic.

The law is clearly targeted at encouraging the use of recycling. In recent years, a two-tier market has opened up across European recycling markets between companies which are driven by sustainability targets – typically coming from the packaging sector due to the public pressure – willing to pay above virgin values to secure material, and those purchasing for cost-saving reasons. Southern Europe has typically seen a higher percentage of cost-based packaging purchasing of recycling than other regions.

This is on top of EU legislation mandating minimum average recycled content of 25% in PET bottles by 2025 – on a country-by-country basis – and 30% across all beverage bottles by 2030.

Effectively allowing prices of recycled material to trade significantly above virgin values before cost-saving kicks in through taxation will no doubt increase buying interest in recycling from companies that had previously shown little interest, as will minimum average recycled content mandates.

Nevertheless, while these measures are targeted specifically at the plastics industry and not across environmentally harmful packaging as a whole, the regulatory framework runs the risk of giving other packaging materials an unfair competitive advantage.

Rather than helping to solve the problem of packaging waste and encouraging recycling, this could drive firms to move to alternative materials that are equally, or even more, damaging to the environment – shifting the problem rather than tackling it.

The risk is doubled by the ongoing consumer pressure and lack of detailed knowledge on the impact of different materials. It’s further compounded by the inability of waste collection rates to meet sustainability targets, which ICIS has shown in detail in previous Insight pieces.
Waste collection in Europe is predominantly controlled by municipalities. Under-funding in the wake of the global recession of 2008 has meant that collection systems have not kept pace with packaging growth or complexity.

Shortages of material for in-demand grades of recycled material – typically transparent material most attractive to the packaging industry – led natural recycled polyethylene (R-PE) pellet and natural recycled polypropylene (R-PP) pellets to trade above virgin grades for the first time in 2019, while the spread between virgin PET and recycled R-PET food-grade pellets reached a record high.

Faced with shortages of suitable recycled material, a growing consumer backlash and a hostile regulatory environment that is not mirrored in non-plastic packaging, it is no wonder that some companies are deciding to shift away from plastics.

Further encouraging this shift towards material choices that do little to improve end-of-life environmental impact would be the worst possible outcome for the planet. Regulation that encourages recycling or responsible waste disposal can only be a good thing, but narrowly focussed laws that shift the problem to other sectors could intensify the damage, or at a minimum leave it unchecked.

All the while, the major challenge of increasing collection rates and infrastructure remains unsolved. If lawmakers were determined to help the recycling industry, this is where their efforts would be concentrated.

Mark Victory
Senior Editor, Manager, ICIS

Mark Victory is the Senior Editor for recycling at ICIS and is dedicated to expanding our coverage across the sector. Mark joined ICIS in 2008 and has been the editor for 23 separate petrochemical and fertilizer markets. He was also the chief editor of the ICIS Global Automotive report. Most recently Mark has been developing the Europe recycled polyethylene report due to launch late May. Before working at ICIS, Mark covered structured products, international bonds and commercial paper markets.

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