FLEXIBLE FILMS MARKET IN EUROPE
STATE OF PLAY

PRODUCTION, COLLECTION AND RECYCLING DATA

REPORT SNAPSHOT

FULL REPORT WILL BE PUBLISHED, AS A SECOND ITERATION OF THE MARKET REPORT RELEASED IN 2020. PRE INTENDS TO CONTINUE TO UPDATE AND RE-PUBLISH 'STATE OF PLAY' REPORTS BIENNIALLY TO ASSESS THE PROGRESS OF FLEXIBLE FILMS RECYCLING IN EUROPE. THIS SNAPSHOT HIGHLIGHTS KEY FINDINGS OF THE NEW REPORT.

Pathway toward circular flexible films

With increased collection, as well as improved efficiencies of sorting & recycling technologies, the uptake of recycled flexible films has grown. The end-market adoption of flexible films recyclate has experienced shifts from niche applications, where it is used to reduce virgin polymer use, into high value applications in pursuit of greater circularity. The majority of film recyclate usage is split between the lower and high value applications, respectively sacks & bags and non-food films & foils. However, the penetration rates of recyclates by application saw building & construction with the highest and non-food films & foils the lowest.

Collection - the first step in advancing the circularity of flexible films.

A total of 13.7 million tonnes of flexible films were placed on the European market in 2020. Although separate collection of flexible films has been implemented in most countries, the coverage of these systems to the wider population is still rather limited. For 2020, it is estimated that roughly 40% of these films placed on the EU market were collected for recycling, wherein PE flexible films accounted for a vast majority.

Within the 5.7 million tonnes of flexible films collected for recycling, commercial & industrial waste stream accounted for 3.6 million tonnes consisting of secondary and tertiary film waste such as shrink wraps, stretch films etc., from logistics firms, supermarkets and other B2B activities. Household packaging waste stream was the second largest stream accounting for 1.5 million tonnes of collected volumes within flexibles.

Agricultural waste stream accounted for 0.6 million tonnes of collected volumes, predominantly comprised of PE films such as greenhouse films, mulch films, silage films etc. Currently, agricultural film waste is not included under the regional EPR mandate, but there are a few countries with national legislations mandating or in the process of mandating EPR for managing agricultural plastic waste.

Separation at source results in highest collection, sorting and recycling rates, as evident from the household and commercial & industrial streams.

Efficient, quality sorting is a necessary to fully unlock the circularity potential of flexible films.

Roughly 2.4 million tonnes of flexible films waste was sorted as input for recyclers, which represents 42% of collected waste from this stream. The gap is largely due to contamination arising from use phase (moisture, food residues) or recyclability incompatibilities (multilayers). By increasing the quality & efficiency of sorting processes, this rate can increase significantly. In addition, standardisation of bale specifications will boost the transparency in the level of quality of input materials.

STRONG GROWTH POTENTIAL OF FLEXIBLE PLASTICS CIRCULARITY IS SET TO CONTINUE. WHILE LEGISLATION IS THE KEY ENABLER OF THIS TREND, VALUE-CHAIN COLLABORATION WILL BE CRUCIAL IN THE SUCCESSFUL TRANSITION OF THE MARKET.

PLASTICS RECYCLERS EUROPE
making plastics circular

ICIS
Independent Commodity Intelligence Services

European mechanical recycling capacity for flexibles was at 2.7 million tonnes in 2020, with an estimated 200 recycling facilities.

This capacity comprises of a large number of small plants, averaging 10,000 tonnes, with fewer large-scale plants (+50,000 tonnes). Capacities have developed more strongly in larger populated markets, with 9 countries accounting for three quarters of total installed capacity. A growing interest in upstream integration has been emerging as well as possibilities of industry consolidation through mergers and acquisitions.

Steep increase in collection rates and significant improvements in quality of sorting will be required

Key challenge for expanding flexible film circularity is to improve supply of high quality recyclates which is dependent on design for recycling, collection and sorting systems that prevent losses from the value chain. Key contributory factors are low collection rates, high contamination, absence of standardised systems, inefficient sorting, and lack of recyclability for flexible films.

Recyclability through design for recycling can reduce process losses, reject fractions and contamination, ultimately improving quality and quantity of supply. Consumer awareness is also key to improving recycling rates of flexible films, with education on how to segregate at source for recycling and eliminating contaminants.

7 million tonnes of installed mechanical recycling capacity for flexible films by 2025.

The Packaging and Packaging Waste Directive (PPWD) has set ambitious recycling targets of 50% by 2025 and 55% by 2030 for plastic packaging which includes flexibles. For the industry to achieve these targets, an incremental installed mechanical recycling capacity of 7 million tonnes for flexibles will be required by 2025.

NEW LEGISLATION, SUCH AS THE PROPOSAL FOR PACKAGING AND PACKAGING WASTE REGULATION AND THE MANDATORY RECYCLED CONTENT TARGETS, WILL FURTHER DRIVE INVESTMENTS & BOOST CONFIDENCE IN THE FLEXBILE FILMS SECTOR

Turning this ambition into reality would take significant effort and require more legal certainty, regulation, and collaboration across the value chain, especially around design for recycling, collection and sorting systems. There would have to be a corresponding effort to significantly improve the collection rates to be able to have enough waste to process regularly.

The value chain, through collaboration and commitments, has the potential to develop solutions. There are short- and long-term developments needed for flexibles circularity, but collaboration will be key to achieving that progress. Developing innovative recycling capabilities, in terms of both technology & scale would be a pre-requisite to ensuring stable supply & quality of recycled plastic pellets.

All the stakeholders of the value chain must step up efforts to develop viable infrastructure to better facilitate waste collection and sorting of flexibles. While technology & economies of scale would offer some support, legislative & regulatory incentives, paired with harmonisation and favourable fiscal policies would be critical to making this sector more viable for future investments.

While the reference year for data used in this report is 2020, updated positions on legislative & market developments over the past year are also discussed within this report.

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