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JRC-STUDY: HARMONISATION SEPARATE COLLECTION MUNICIPAL WASTE

1. STEEL FOR PACKAGING

APEAL, the Association of European Producers of Steel for Packaging, unites the six producers of steel for packaging in Europe. Its members (Acciaierie d'Italia, ArcelorMittal, Liberty Liège-Dudelange, Tata Steel, ThyssenKrupp Rasselstein and U. S. Steel Košice) employ over 200,000 workers in Europe, 15,000 of whom are employed directly in the production of steel for packaging across 11 dedicated manufacturing sites.

The steel sector is a top performer in recycling packaging materials. With a recycling rate of 84%, steel for packaging is the most recycled primary packaging material in Europe.

Our industry works closely with European, national and local authorities, Extended Producer Responsibility Schemes, waste management operators, customers, brands and civil society at large, to invest in collection systems that guarantee a modern and effective recycling infrastructure.

2. CONTEXT

The steel for packaging sector fully supports the European Commission's ambition to make the European Union climate neutral by 2050, boost the economy through green technology and achieve a truly circular economy for the benefit of citizens, the environment and the EU economy. In 2020, the European Commission adopted the [new circular economy action plan \(CEAP\)](#). It is one of the main building blocks of the [European Green Deal](#), Europe's new agenda for sustainable growth. EU's Circular Economy Plan (CEAP) commits the Commission to investigate the potential for harmonising separate waste collection systems across the EU. As APEAL, we recognise the need to optimise the separate collection of municipal waste, including packaging waste as it is a prerequisite for high-quality input to the recycling operations. Valuable materials need to stay in the circular loop as long as possible and high-quality recycling, using the material not just once, but over and over again not only saves resources, but also CO₂- and other emissions and water consumption.

3. APEAL POSITION – SUMMARY

- Optimised separate collection of municipal waste is a prerequisite to guarantee high-quality recycling as it ensures that valuable materials are kept in the circular loop as long as possible;
- For metals, aside from mono-streams or co-mingled streams with metals together with other light packaging materials like plastics and composite packaging, other good practices, such as metals together with glass, need to be analysed as alternative options;
- In a scheme where metals and other light packaging materials are collected co-mingled, cross-contamination may occur as flexible packaging can be entangled in the metal packaging, with an impact on the metal bales. Awareness creating campaigns towards citizens are therefore needed to avoid entanglement;
- In a co-mingled scheme, cross-subsidising of a packaging material by another one needs to be avoided. Collection and sorting costs therefore need to be calculated and allocated per material.

4. HARMONISATION OF SEPARATE COLLECTION OF MUNICIPAL WASTE

4.1. JRC-study: Project status

EU's Circular Economy Plan (CEAP) commits the Commission to investigate the impact potential for harmonising separate waste collection systems across the EU, a study which the JRC is currently executing. Steel packaging for household applications, is part of this municipal waste. Therefore, the APEAL Sust WG decided that APEAL should closely follow-up the study, incl. actively participating in the sub-WG's organised by the JRC, being: (0) Cross cuttings and transversal issues; (1) Waste collection logistics; (2) Instruments for dry recyclables; (3) Citizen awareness.

Project status



Following the workshops, the steel for packaging sector is keen to provide some additional input to the background documents, the presentations and the draft minutes and summary of comments of these workshops.

4.2. Steel packaging linked take-aways from JRC-literature study

In its background documents to the workshops and the presentations from the workshops (0), (1) and (2), the JRC formulated its take-aways from the literature study. Below are some JRC take-aways that according to APEAL's view have an important impact on the life cycle of steel packaging:

JRC take-aways from literature in sub-WG 0 "Cross-cutting and transversal issues":

- Collection rates increase following implementation of door-to-door separate collection;
- Separate collection schemes have better environmental performance;
- Separate collection schemes benefits are the result of the higher quantities of recycled materials as opposed to incineration and landfill;
- Separate collection has a higher cost than mixed waste collection to incineration/landfill;
- Within separate collection, door-to-door collection has a higher cost than bring systems, but results in a higher amount of recyclable material and yields high-quality recycling;
- Metals are collected via bring system + door-to-door commingled metal and plastics;
- Glass collected with other packaging shall be avoided;
- (Collectors, 2020) recommends an extension of separation guidelines to all types of plastic packaging. This would need however an adaptation phase for sorting centers to be able to sort the new fractions;
- Metals can be collected very effectively via bring points and/or civic amenity sites (CAS), since metals are easily sorted out by using magnets, eddy current separator etc. They can also be collected commingled with plastics in door-to-door collection systems;

- Harmonised primary and secondary collection schemes can be proposed. Different schemes can be put into place depending on local specificities. A certain level of flexibility should be guaranteed;
- Common practices in EU-27 for each waste stream: for metals: commingled door-to-door (with plastic), commingled door-to-door (with paper, glass, paper/glass), separated door-to-door, bring points and civic amenity sites;
- Commingling of plastics and metals is acceptable and can be implemented as best practice;
- Reusable packaging show better ecological performance than single use packaging (in case of limited transport distances);
- Deposit return schemes (DRS) are mostly limited on beverage packaging and thus cover only a small part of the total waste volume;
- Countries with existing systems would have to alter the system with additional costs
- Existing systems (e.g., EPR) would lose market share and thus get specifically more expensive.

4.3. Steel packaging linked JRC workshop draft minutes' items

The JRC drafted minutes on the held workshops. The following items, extracted from these draft minutes, are related to steel packaging:

- The value of the obtained secondary raw material should be included in the KPIs;
- Separate collection of beverage cartons and other composite packaging within the commingled collection of plastics and metals shows good performances;
- Cross-contamination level of packaging materials as well as technical issues that might arise in the sorting facilities (e.g., with plastic films) need to be considered;
- The commingled collection needs to be a decision of each sorting plant, based on the requirements of the recycling facility (its receiving criteria);
- Optimised separation technology can ensure high quality output from separation centers leading to high-quality input to recycling operations.

4.4. APEAL's feedback to the JRC-study

APEAL is sure that optimised separate collection of municipal waste is a prerequisite to guarantee high-quality recycling as it ensures that valuable materials are kept in the circular loop as long as possible.

When it comes to optimising separate collection, our sector strongly recommends assessing various methods to collect metal packaging. Aside from mono-streams or co-mingled streams where metals are mixed with plastics, other good practices need to be investigated. With the right infrastructure, both in collection and sorting, metal packaging is also successfully collected co-mingled with glass for example. Furthermore, it needs to be noted that, following the adoption of the reviewed PPWD in 2018, the mandatory recycling targets for the resp. packaging materials have been raised for resp. 2025 and 2030. This has led to a trend whereby several Member States, no longer only collect rigid plastic packaging (e.g., PET- and HDPE-bottles), but also started collecting other plastic packaging, including flexible ones.

In a scheme where metals and plastics are collected co-mingled, cross-contamination will occur as flexible packaging can be entangled in the metal packaging, having a negative influence on the quality of the steel bale ex-sorting plant.

Furthermore, to be considered in a co-mingled collection system, is the allocation of the collection and sorting costs to the different packaging materials in the commingled fraction. Cross-subsidising of a packaging material by another one needs to be avoided. For each packaging material in the co-mingled fraction, the real cost of collection and sorting has to be calculated and allocated accordingly.

Because of lower quantity and quality for recycling, a less preferred route for steel packaging waste treatment is through mixed waste with subsequent treatment through incineration. However, the transition away from mixed waste treatment to separate collection can not be made overnight. Therefore, in APEAL's point of view, prior to incineration (and in the Member States where landfill is still allowed), mixed waste should undergo a pre-treatment to remove valuable high-quality materials, such as steel for packaging. For steel, this could be done by installing a magnet which is the most cost effective way of sorting.

In an ideal scenario, and where technically and economically feasible, moving up in the waste hierarchy is preferred. However, in a true circular economy, one should not only look at the top levels of the waste hierarchy, but also at the lowest level. One of the goals of the CEAP is for all packaging to be recyclable or reusable by 2030 . Diverting all recyclable packaging from landfill should therefore be phased out.

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