



Aluminium beverage can recycling rates 2019

Report of the activities undertaken

European Aluminium
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FFact

strategy &
implementation

1 Background

For more than 25 consecutive years, the Packaging Group of European Aluminium has published the annual European and national aluminium beverage can recycling rates in the 27 EU countries, the UK and 3 EFTA countries (Iceland, Norway and Switzerland). This publication was based on data of the amounts of beverage cans put on the market, as provided by the beverage can-makers, and data about the recycling of these cans from a wide variety of data sources, including the national recycling initiatives of European Aluminium.

Since 2019 Metal Packaging Europe (MPE) and European Aluminium decided jointly to prepare a publication with the recycling data starting with the year 2016. MPE and European Aluminium recognised it was necessary to have external support to compile the necessary statistics. This year they decided to continue with the same methodology and to ask again support for the preparation of the publication of the 2019 data by the same two consultancy companies: GlobalData and FFact Management Consultants (further FFact). The support requested was for the following tasks:

1. Collection of information on the amounts of aluminium beverage cans consumed in the different countries.

This information was previously collected under supervision of the can-makers. Due to the concentration in the market it has become increasingly difficult for the can-makers to collect and share information which may be commercially sensitive. Moreover, this exchange of information between producers can constitute a conflict with the competition rules of the EU. For the data regarding 2019 this task was therefore given to GlobalData who collects this information independently via its own annual research processes.

2. Collection of information on the amounts of beverage cans recycled

This information is mainly provided by national correspondents of European Aluminium in the countries involved. FFact was asked to support European Aluminium with the collection and verification of information on the recycling of beverage cans.

This report describes the activities that were undertaken to establish the recycling rates of aluminium beverage cans in the 31 countries that were part of the project. It presents the results of the calculations and tables some recommendations for the future.

2 Data collected by GlobalData

GlobalData provides for estimates of the amount of beverage cans consumed on the market. All volume consumption data for aluminium beverage cans were measured in metric tonnes for each country and year under scope. These data were calculated as follows:

- Firstly, in accordance with GlobalData's standard research methodologies, total beverage can consumption (in million units) were calculated from annual beverage consumption data (in litres) in each country and category, segmented by packaging type and size¹.
- Secondly the beverage can data in units were segmented in each country by can material (i.e. aluminium vs steel) using additional consumption segmentation and analysis provided by surveying the major EU beverage can-makers (including where possible non-MPE members)
- Thirdly, using the average weights for aluminium beverage cans by size and type derived from the beverage can-makers estimates, GlobalData calculated the total volume of aluminium beverage cans consumed by weight in each country in each year.

The result of GlobalData's calculations is an estimation of the tonnage of aluminium beverage cans that are used to pack and sell the beverages in the different countries².

In its reports GlobalData refers to this amount as 'consumption' of beverage cans; this is a reference to the number of filled beverage cans consumed in each country, category and sub-category.

¹ Please note that calculation of the market volumes in litres is based on GlobalData's standard annual beverage research cycle. Carried out in each country between January and July of each year (for over 40 years), this is based on interviews with the leading soft drink, beer and cider and wines and spirits companies in each country and is aimed at quantifying the volume consumption and change in each country, beverage category and sub-category, segmented by packaging material, type and size (nominal fill capacity). As part of this process GlobalData also receives annual, quarterly and in some cases monthly sales information from the major global beverage players by SKU and packaging type which are amalgamated and triangulated to get to the total market consumption volumes. In this way the volumes can be tracked all the way through the chain to individual brands if necessary. As GlobalData is not allowed to provide these individual sales data to third parties, aggregations together with further fieldwork, research and analysis are used to supplement the inputs for its global beverage packaging databases; it is these which are the basis of the information used for this study.

² Please, note that Global Data's information about Cyprus could not be updated for the year 2019. Also data from Luxembourg and Iceland were less complete in the past but the coverage of these countries has improved considerably since 2019.

The terminology used is related to the wording of the EU Directive on Packaging and Packaging Waste (P&PWD), which refers to the amounts of packaging “put on the market” with packed products. These two terms refer to the same measure. Since the recycling rates are directly related to the P&PWD this report also refers to these amounts as being ‘put on the market’. This terminology is also commonly used by other sources that calculate recycling rates.

3 Data collected by FFact

European Aluminium has always used a questionnaire requesting information about the amounts of aluminium beverage cans put on the market and the amounts recycled sent to correspondents in most of the European countries concerned. In preparation of the data collection, FFact reviewed this questionnaire and subsequently the updated version was sent out to the network of national correspondents of European Aluminium.

This year it was decided to ask for the information on 2019 as well as for 2020 insofar already available. It was also decided to ask correspondents to provide the information both according to the measuring method used over the last years as well as according to the new measuring method that will be obligatory for the 2020 data according to the amended Commission Decision 2005/270/EC..

After reception of the replies FFact prepared a datafile for each country. The information contained the data requested from the national correspondents was information about the amounts put on the market and recycled of:

- aluminium beverage cans
- other aluminium packaging (split over different packaging types insofar available)
- other aluminium items (packaging related but legally not defined as packaging, e.g. coffee capsules and household foil)
- total metal packaging (aluminium and steel).

The information other than those about aluminium cans is used to do some plausibility checks on the data on cans. FFact obtained the following types of information from the national correspondents:

Country	Al cans	All Al packaging	Total metal	2020	Sources of information	New method calculation
EU						
Austria	Total cans (including steel)	-	+	+	+	+
Belgium	-	+	+	-	+	-
Bulgaria	-	-	-	-	-	-
Croatia	+	+	+	+	+	-
Cyprus	-	-	-	-	-	-
Czech Republic	-	+	+	-	+	-

Country	Al cans	All Al packaging	Total metal	2020	Sources of information	New method calculation
Denmark	+ (including info border cans)	-	-	-	+	-
Estonia	+	-	-	+	+	-
Finland	+	-	-	+	+	-
France	+	+	+	-	+	+
Germany	+	+	-	-	-	+
Greece	+	-	-	+	-	-
Hungary	+	+	-	-	-	-
Ireland	+	+	-	+	+	+
Italy	-	+	-	+	+	-
Latvia	+	+	-	+	+	-
Lithuania	+	-	-	+	+	+
Luxembourg	-	+	-	+	-	-
Malta	-	-	-	-	-	-
Netherlands	+	+	+	+	+	-
Poland	+	+	-	-	-	-
Portugal	-	-	-	-	-	-
Romania	+	+	-	+	+	-
Slovakia	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-
Spain	+	+	-	+	+	+
Sweden	+	+	-	+	+	-
United Kingdom	+	+	-	+	+	+
EFTA						
Iceland	-	-	-	-	-	-
Norway	-	-	-	-	-	-
Switzerland	+	+	+	+	+	-

In order to compensate for the missing data regarding these countries FFact collected additional information from other sources. The next table gives an overview of those countries and the way how the data gaps were filled.

Country	Missing information	Sources used to fill information gaps
Belgium	Can recycling volume	Total metal packaging recycling as reported by Fost Plus
Bulgaria	Can recycling volume	Total metal recycling as reported to Eurostat in 2018 (most recent data)
Cyprus	Can consumption and can recycling	Ffact estimate on the can consumption, based on historic data from the can-makers, using the trend of incomplete consumption data from GlobalData for Cyprus. Total aluminium packaging recycling as reported to Eurostat
Czech Republic	Can recycling volumes	Total aluminium packaging recycling as reported to Eurostat
Italy	Can recycling volumes	Recycling of rigid aluminium packaging (including cans) from CIAL
Luxembourg	Can recycling volumes	Total aluminium packaging recycling as reported to Eurostat
Malta	Can recycling volumes	Total metal packaging recycling as reported to Eurostat (2018 data: most recent data)
Portugal	Can recycling volumes	Total metal packaging volumes as reported to Eurostat
Slovakia	Can recycling volumes	Total aluminium packaging volumes as reported to Eurostat
Slovenia	Can recycling volumes	Total metal packaging volumes as reported to Eurostat
Iceland	Can recycling volumes	Returns of the DRS system as reported in the annual report of Endurvinnslan
Norway	Can recycling volumes	Returns of the DRS system as reported in the annual report of Infinitum

This additional information allowed for the preparation of an estimation of the recycling rates for all 31 participating countries.

4 Comparison of GlobalData and European Aluminium Data

The information reported by the national correspondents on the amounts put on the European markets were compared with the consumption data obtained from GlobalData. Both datasets were reasonably close to each other and demonstrated a 6% difference for the total amount put on the market in the 31 countries concerned.

The understanding of the reporting methodology and the datasets coming from the different sources improves by the year. This facilitates the verification process. For countries with considerably different tonnages in 2019 or where the trends in consumption over the period 2018 - 2019 were different between the two datasets, cross-checks were performed in order to better understand the possible causes of these differences. Data regarding the following countries were checked:

- Austria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- Germany
- Italy
- Latvia
- Lithuania
- Luxemburg
- Malta
- Poland
- Romania
- Spain
- United Kingdom

These verifications resulted into some amendments and corrections of both datasets and provided satisfactory explanations for most of the differences that would have impact on the calculation of the recycling rates.

In some countries the correspondents of European Aluminium have only limited insight as to the share of beverage cans, both regarding the amounts of cans put on the market as well as on the specific recycling rate of cans within the waste management system of their country. The biggest differences were due to the information obtained by GlobalData on the share of steel in markets where both steel and aluminium cans are being sold and in countries where significant amounts of canned beverages are bought abroad by private persons and consumed in their own country (border cans). GlobalData obtained information on shares of steel can

production per country from the can-makers which provides for good insight in the total European market but makes it difficult to make an accurate estimation of where the filled cans were ultimately sold. The information on the total amount of steel cans used in Europe is therefore more accurate than the information per country. However, in most countries beverages are sold exclusively in aluminium. This issue therefore affects the data quality in a limited number of countries only.

5 Results

When all the information was collected, the verifications were completed and additional explanations were obtained, European Aluminium and FFact reviewed all information available per country to establish the best estimates for the total amounts put on the market and recycled per country as well as for Europe as a whole. The amounts and the development over the period 2015 – 2019 for Europe are given in the table below.

Europe	2015	2016	2017	2018	2019	Δ 19/18
Recycling (t)	360 108	385 628	420 574	456 847	488 331	6.9%
POM (t)	489 189	529 520	564 193	600 421	644 077	7.3%
Recycling %	73,6%	72,8%	74,5%	76,1%	75,8%	

The market for aluminium beverage cans grew by 7% in 2019 and the growth of the volumes recycled by nearly the same percentage.

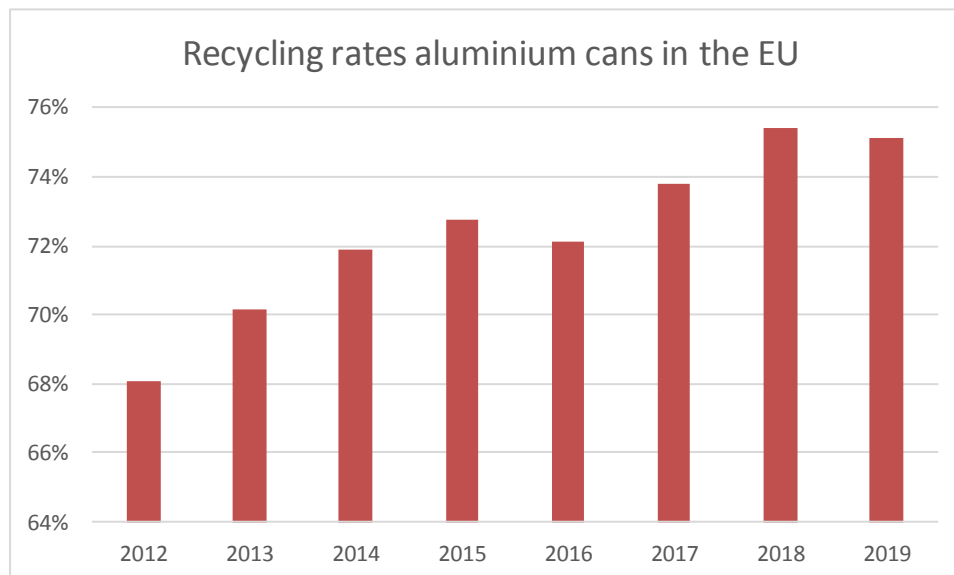
The results per country are given in the next table. Due to the limited number of actors in some markets the overview only provides for the recycling rates and not for the volume of the market per country.

Country	2015	2016	2017	2018	2019	Remarks
EU						
Austria	87%	83%	79%	70%	70%	Figure is an official publication but is likely to be an underestimation
Belgium	98%	98%	98%	98%	98%	Officially published data for total metal packaging. Likely to be an overestimation
Bulgaria	69%	59%	73%	81%	81%	Based on total metal recycling data of Eurostat 2018; likely to be an overestimation
Croatia	52%	85%	72%	80%	79%	
Cyprus	38%	55%	58%	31%	30%	
Czech Republic	59%	40%	40%	47%	37%	
Denmark	90%	88%	88%	88%	88%	
Estonia	71%	74%	74%	75%	88%	In 2019 there was less import of border cans. This resulted into a statistical higher share of local cans in the DRS as well as an improved recycling rate.
Finland	99%	99%	98%	95%	97%	
France	68%	58%	58%	66%	73%	

Country	2015	2016	2017	2018	2019	Remarks
Germany	99%	99%	99%	99%	99%	
Greece	35%	59%	65%	55%	57%	Includes an official estimate of the recycling by the informal sector
Hungary	38%	42%	38%	33%	40%	Including a prudent estimate of recycling by the informal sector
Ireland	53%	54%	73%	73%	89%	Due to increased recovery of aluminium from the bottom ash of household waste incineration plants
Italy	70%	72%	71%	78%	70%	
Latvia	40%	44%	43%	45%	45%	
Lithuania	45%	77%	95%	96%	90%	
Luxembourg	91%	96%	96%	93%	94%	
Malta	39%	30%	30%	42%	42%	
Netherlands	91%	83%	85%	82%	82%	
Poland	80%	80%	81%	80%	80%	
Portugal	29%	42%	43%	43%	46%	
Romania	53%	35%	36%	38%	40%	
Slovakia	74%	80%	86%	75%	43%	Based on aluminium packaging recycling data of Eurostat while in previous years it was based on total metal recycling data. Likely to be an underestimation.
Slovenia	63%	71%	71%	71%	68%	
Spain	62%	56%	62%	66%	64%	
Sweden	85%	86%	86%	86%	88%	
United Kingdom	68%	71%	72%	75%	76%	
Subtotal	72,8%	72,1%	73,8%	75,4%	75,2%	
EFTA						
Iceland	91%	89%	87%	87%	86%	
Norway	97%	93%	98%	95%	97%	
Switzerland	91%	90%	92%	94%	94%	
Subtotal	93,5%	91,1%	94,2%	94,0%	94,6%	
Grand Total	73,6%	72,8%	74,5%	76,1%	75,8%	

Timeseries of recycling rates

At the request of MPE the data that were reported last year and this year were complemented with historically reported recycling rates of cans since 2012 to provide for a longer trend for the EU. The following graph presents this trend.



This graph shows a trend of steady growth over the years until 2018, with a dip in 2016. This was due to the introduction of the new reporting methodology for the data of that year. From 2016 onwards GlobalData data were used as additional data source which allowed for a better estimate of the can consumption. The dip in 2016 can therefore be explained as a correction of the underlying trend of steady growth at a more realistic level rather than by qualifying 2016 as being a bad year for recycling.

Different factors may have caused the stagnation of the recycling rate in 2019. The main reason is that the amount of aluminium put on the market for consumption grew slightly more than the amount recycled. This growth was driven by three factors.

- Increase of the volume of beverages sold
- Shift from steel to aluminium cans
- Increase of the use of cans with a bigger volume, which results in an increase of the average can weight

In summary, although the volumes of beverage cans recycled increased, this increase was less than the growth of the overall market, resulting in a small dip in the recycling rate.

6 Potential impact of the new measuring point

The EU has adopted new reporting rules that should provide data on ‘real recycling’ and no longer accept amounts reported as output of multi-material sorting plants as recycling when during subsequent treatment steps losses of material occur. Also, the way that packaging materials are defined has been amended meaning that some packaging consisting of several materials may no longer be reported under the dominant material but must be reported separately. This may have an impact on the reported recycling rates for aluminium beverage cans. During the data collection an attempt was made to get 2019 data according to both the old method and the new method which would allow assessing the impact of the new rules. This may be helpful for the interpretation of data next year which will need to take account of these new rules and would also allow to start anticipating on the message to convey if such change would significantly impact the multi-year trend.

6.1 Data received

The annual and adjusted questionnaire sent to the country correspondents invited them to provide two datasets for 2019 and, insofar already available, also for 2020 according to the two systems of reporting. The next table contains an overview of the information received, either via the questionnaire or from complementary information. In some cases, FFact has added remarks after an assessment of the information received.

Country	Info correspondent	Remark FFact
Austria	not available yet	
Belgium	not available yet	
Bulgaria	no data received	
Croatia	did not provide information on the issue	DRS country; unlikely it would have a big impact
Cyprus	no data received	
Czech Republic	did not provide information on the issue	
Denmark	did not provide information on the issue	DRS country, unlikely to have an impact on the number of local cans within DRS but may have some impact on the imported border cans
Estonia	did not provide information on the issue	
Finland	MEPAK provided information on 2020 as new recycling method. Lower recycling rate than in 2019 but no comparison of both methods. PALPA (DRS) did not provide information	

Country	Info correspondent	Remark FFact
France	considerable decrease is expected: recycling might decrease from current 73% to 50% under new reporting rules for cans and from 58% to 35% for whole aluminium	
Germany	Provided information based on a study from UBA. For aluminium the assessment is that the overall recycling percentage in 2019 would have been 93,5% under the old reporting rules and would now drop to 65,8% under the new rules.	This drop is caused by two factors: new material allocation, which would account for about half of the expected drop, and new measuring point, which would account for the other half of the drop. It is also expected that the impact on the recycling rate of aluminium cans within the DRS system will only show a limited drop, although this is not quantified.
Greece	did not provide information on the issue	
Hungary	did not provide information on the issue	
Iceland	no data received	DRS country; unlikely it would have a big impact
Ireland	indicated it is unlikely to change because it is measured post sorting	Assessment seems a bit optimistic due to possible losses after sorting
Italy	did not provide information on the issue	
Latvia	goes down slightly without really impacting the recycling percentage (44% instead of 45%)	Future DRS country as from 2022 onwards
Lithuania	did not provide information on the issue	DRS country; unlikely it would have a big impact
Luxembourg	did not provide information on the issue	
Malta	did not provide information on the issue	
Netherlands	did not provide information on the issue	Unlikely to change considerably, due to the method of calculation; future can DRS country (impact to be seen as from 2022 onwards)
Norway	no data received	DRS country; unlikely it would have big impact
Poland	did not provide information on the issue	
Portugal	no data received	

Country	Info correspondent	Remark FFact
Romania	did not provide information on the issue	
Slovak Republic	no data received	
Slovenia	did not provide information on the issue	
Spain	report increase due to aluminium cans sorted from mixed metal fractions after the sorting plant	Spain does not yet take into account possible losses from the aluminium fraction after sorting; increase may be a bit too optimistic
Sweden	did not provide information on the issue	DRS country; unlikely it would have a big impact
Switzerland	reports small increase of both consumption and recycling without impact on the recycling figures	
United Kingdom	seems to indicate no change is expected (reported exactly the same data for the two scenarios)	Not unlikely that this indication could be correct since the packaging recycling notes in the UK can be issued only for real recycling if recycled inside the country. Only for exported materials the rules seem to be less strict

6.2 Conclusions

- Incomplete picture

Only from 7 countries quantitative information was received. Austria and Belgium reported that they were looking into the issue but could not yet communicate any result.

- Impacts reported

The picture of the countries that did provide information is mixed. Some indicate they expect limited impacts or no impacts at all. This is the case for Finland, Ireland, Latvia, Switzerland and the UK.

The reported conclusion for Ireland that it is unlikely there will be an impact seems to be optimistic: if they currently measure at the output of their sorting facilities, losses might occur later in the recycling chain.

France reported an expected significant reduction of the recycling rates, both for aluminium cans and for packaging in total. Germany reported a significant reduction of the recycling rate of aluminium packaging in total, but the impact on cans will be

limited, as they are part of a DRS system with only limited losses of material after collection.

Spain reported a potential increase, due to recycling of aluminium packaging from mixed metal fractions that are currently reported as steel recycling. However, they do not yet take into account losses that may occur during further treatment of aluminium fractions from sorting facilities.

- Overall picture

The correspondents that reported quantitative data, apart from France, do not expect major negative impacts on the recycling data for aluminium cans.

The figures for France will go down dramatically. This was to some extent to be expected as France still has a monitoring system in place which is not yet fully in line with the new rules and can be even considered as too optimistic under the current rules. This may be the case for aluminium recycled from incineration bottom ashes. The French authorities knowingly accepted materials to be counted as aluminium recycling which are in fact non-metallic residues or aluminium fractions that were not necessarily derived from packaging.

The information received until now seems to suggest that the overall impact on the figures in Europe for aluminium cans would be limited. But this is based on limited indications that do not always seem to be very robust. The fact that for a lot of countries no replies were received seems to indicate that the issue is not yet a top priority. However, the information received from a number of countries where systems of collection of mixed packaging are the major source of recycling of cans suggest that in particular in those countries the impact on the reported recycling rates can be significant. These systems represent a large share of the reported recycling amounts. Therefore it is likely that the results for 2020 will show a fairly large drop of the recycling rates but based on the information received this year it is not yet possible to accurately assess how significant this drop will be.

7 Recommendations for the next reporting period

This year the information position has again improved compared with last year. However, there are some points of attention that may need to be addressed in the next reporting period.

With respect to the information provided by GlobalData, the most important action would be to further improve the information on the development of the market share of steel versus aluminium cans in countries where both are being put on the market for consumption. It is necessary to collect information from multiple sources and to do a cross-check with some experts based on the information obtained. Other possible means of improving the accuracy of the data and insights would be to collate information on brands that use steel cans or conduct a series of retailer shop audits in countries where both steel and aluminium cans are being sold.

Regarding the recycling rates the main concern next year will be related to the likely drop in the reported amounts recycled, due to the new reporting rules. The current exercise did not provide for very robust insights in the expected impact. It would be important to put specific emphasis on this aspect next year and to request the correspondents to provide their assessments of the impact of this change on the amounts reported. Otherwise it may be very difficult to interpret the 2020 data.

Next year's data also will show the impact of the Covid 19 lockdown measures in many European Countries. These might have had considerable impact on the beverage can demand in many markets, by driving volume from on-premise (foodservice) channels to retail and e-commerce. This is likely to result into higher consumption '(put on the market)' volumes for beverage cans in 2020, whilst (as noted above) the reported volumes of cans recycled are likely to drop. These two trends compounded are likely to lead to a significant drop in the recycling rate.

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