Aluminium beverage can recycling rates 2020

Report of the activities undertaken

European Aluminium
Attn: Mr. Maarten Labberton

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 relating to 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 sources, including the national recycling initiatives of European Aluminium.

Since 2019 Metal Packaging Europe (MPE) and European Aluminium have decided to prepare a publication with the recycling data jointly 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 2020 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 the supervision of the beverage 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 2020 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:

1) 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 size[1].
2) 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)
3) 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 countries[2].

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.
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.

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[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 as 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.

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.

The questionnaire asks for the information on 2020 as well as for 2021 insofar as already available. The correspondents were asked to provide, as far as possible, the information according to both the measuring method used over the last years and the new measuring method that will be obligatory for the 2020 data according to the amended Commission Decision 2005/270/EC.

After receipt 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	Aluminium cans	Aluminium packaging	Total metal	2021 data	Sources of information	New method calculation
EU						
Austria	-	-	-	-	-	-
Belgium	-	+	+	-	+	+
Bulgaria	-	-	-	-	-	-
Croatia	+	+	-	-	+	+
Cyprus	-	-	-	-	-	-
Czechia	-	+	+	+	+	+
Denmark	+	-	-	-	+	+
Estonia	+	-	-	+	+	+
Finland	+	-	+	+	+	+

Country	Aluminium cans	Aluminium packaging	Total metal	2021 data	Sources of information	New method calculation
France	+	+	+	+	+	+
Germany	+	+	-	-	+	+
Greece	+	-	-	+	+	+
Hungary	+	+	-	+	+	+
Ireland	-	-	-	-	-	-
Italy	-	+	-	+	+	+
Latvia	+	+	-	+	+	+
Lithuania	+	-	-	+	+	+
Luxembourg	-	-	-	-	-	-
Malta	-	-	-	-	-	-
Netherlands	+	+	+	+	+	-
Poland	+	+	-	-	+	+
Portugal	-	+	+	-	+	+
Romania	+	+	+	+	+	+
Slovakia	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-
Spain	+	+	-	+	+	+
Sweden	+	+	+	+	+	+
United Kingdom	+	+	-	+	+	+
EFTA						
Iceland	-	-	-	-	-	-
Norway	-	-	-	-	-	-
Switzerland	+	+	+	+	+	+

Table 1 Information obtained from the network of EA correspondents

In order to compensate for the missing data in some of 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
Austria	Can recycling volumes	WKÖ report 2020 on the implementation of the sustainability agenda for drink packaging
Belgium	Can recycling volumes	Total aluminium packaging recycling as reported by Fost Plus
Bulgaria	Can recycling volumes	Total metal recycling as reported to Eurostat in 2019 (most recent data)

Country	Missing information	Sources used to fill information gaps
Cyprus	Can recycling volumes	Total aluminium packaging recycling as reported to Eurostat in 2019 (most recent data)
Czechia	Can recycling volumes	Total aluminium packaging recycling as reported to Eurostat
Ireland	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 aluminium packaging recycling as reported to Eurostat
Portugal	Can recycling volumes	Total aluminium 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

Table 2 Information used to complement data for countries where not all necessary information was received

This additional information allowed for the preparation of an estimation of the recycling rates for all 31 participating countries. With the exception of Austria, Bulgaria, Cyprus and the Netherlands the data reported are according to the new reporting rules. For the countries where we did not get recycling data and had to rely on Eurostat data for 2020, we assume that the countries have reported according to the new rules. Only the Netherlands indicated that their recycling amounts for 2020 were still according to the old method as EU reporting requirements had not yet been transposed into the Dutch legislation last year. For Austria the WKÖ did not change its reporting method that is being used for several years already so it is assumed the data are according to the old method. For Bulgaria and Cyprus no data for 2020 were available yet and we used Eurostat data from 2019. These are still based on the old reporting method.

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. The data from both datasets come reasonably close to each other with a difference of just under 4% for the total amount put on the market in the 31 countries concerned.

The understanding of the reporting methodology and the datasets from the various sources improves by the year. This facilitates the verification process.
For countries with larger differences in tonnages in 2020 or where the trends in consumption over the period 2019 - 2020 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
- Denmark
- Estonia
- Finland
- Greece
- Italy
- Latvia
- Lithuania
- Malta
- Norway
- Poland
- Portugal
- Romania

These verification checks 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 significant amounts of both steel and aluminium beverage cans are being bought abroad by private consumers for consumption 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. In most countries beverages are sold exclusively in aluminium. Therefore, this impacts the data quality only in a limited number of countries and this might be solved within the coming years when the market completely turns to aluminium.

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 – 2020 for Europe are given in the table below.

Europe	2015	2016	2017	2018	2019	2020	Δ 20/19
Recycling (t)	360 108	385 628	420 574	456 847	488 650	509 854	+4%
POM (t)	489 189	529 520	564 193	600 421	644 620	700 007	+9%
Recycling %	73,6%	72,8%	74,5%	76,1%	75,8%	72,8%	-3,0%

Table 3 Total trends of development of the markets and the recycling in the 31 countries covered

The year 2020 was an unusual year for the sales of beverages in cans because of the Covid 19 lockdowns. The sales of beverages in the out-of-home segment went down while retail and e-commerce demand increased, especially for beer and cider. This resulted in exceptional growth rates of the can use. Moreover, there was a continued shift from steel to aluminium. These combined factors resulted in a growth of the market for aluminium beverage cans by 9% in 2020. The growth in recycling of cans was restricted to 4% and has not kept pace with the growth in consumption, mainly due to impact of the new reporting rules. Therefore, the overall recycling rate went down with 3% points.
The incomplete data as transmitted for 2021 suggest that the recycling percentages might increase compared to 2020. It is likely that 2020 is not a break in the trend of improved recycling performance but rather a correction due to the change of the reporting method.

The results of the aluminium can recycling rates per country are given in the following 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	2020
EU						
Austria	87%	83%	79%	70%	70%	73%
Belgium	98%	98%	98%	98%	98%	93%
Bulgaria	69%	59%	73%	81%	81%	76%
Croatia	52%	85%	72%	80%	79%	81%
Cyprus	38%	55%	58%	31%	30%	30%
Czechia	59%	40%	40%	47%	37%	32%

Country	2015	2016	2017	2018	2019	2020
Denmark	90%	88%	88%	88%	88%	83%
Estonia	71%	74%	74%	75%	88%	94%
Finland	99%	99%	98%	95%	97%	98%
France	68%	58%	58%	66%	73%	45%
Germany	99%	99%	99%	99%	99%	99%
Greece	35%	59%	65%	55%	57%	60%
Hungary	38%	42%	38%	33%	40%	37%
Ireland	53%	54%	73%	73%	89%	59%
Italy	70%	72%	71%	78%	70%	67%
Latvia	40%	44%	43%	45%	45%	44%
Lithuania	45%	77%	95%	96%	90%	90%
Luxembourg	91%	96%	96%	93%	94%	83%
Malta	39%	30%	30%	42%	42%	47%
Netherlands	91%	83%	85%	82%	82%	82%
Poland	80%	80%	81%	80%	80%	76%
Portugal	29%	42%	43%	43%	46%	57%
Romania	53%	35%	36%	38%	40%	37%
Slovakia	74%	80%	86%	75%	43%	28%
Slovenia	63%	71%	71%	71%	68%	59%
Spain	62%	56%	62%	66%	64%	56%
Sweden	85%	86%	86%	86%	88%	91%
United Kingdom	68%	71%	72%	75%	76%	82%
Subtotal	**72,8%**	**72,1%**	**73,8%**	**75,4%**	**75,1%**	**72,1%**
EFTA						
Iceland	91%	89%	87%	87%	86%	88%
Norway	97%	93%	98%	95%	97%	93%
Switzerland	91%	90%	92%	94%	94%	94%
Subtotal	**93,5%**	**91,1%**	**94,2%**	**94,0%**	**94,6%**	**93,4%**
Grand Total	**73,6%**	**72,8%**	**74,5%**	**76,1%**	**75,8%**	**72,8%**

Table 4 Development of the recycling rates per country and group of countries

To better understand the trend 2019 – 2020 the next table provides from some characteristics of the data for 2020. It is indicated if:

- The old or the new reporting method is being used. This may explain some of the changes observed between 2019 and 2020
- If there is a DRS system in the country. These systems have high recycling rates and the impact of the new reporting system is small.
- If the recycling data are based on specific data for cans or if data for recycling of total aluminium or total metal packaging were used as a proxy

Country	Reporting method	DRS system (y/n)	Basis recycling data
Austria	Old	No	Can recycling
Belgium	New	No	Aluminium recycling 2020
Bulgaria	Old	No	Metal recycling 2019
Croatia	New	Yes	Can recycling
Cyprus	Old	No	Aluminium recycling 2019
Czechia	New	No	Aluminium recycling 2020
Denmark	New	Yes	Can recycling DRS and aluminium recycling 2020 for border cans[3]
Estonia	New	Yes	Can recycling
Finland	New	Yes	Can recycling
France	New	No	Can recycling
Germany	New	Yes	Can recycling
Greece	New	No	Can recycling
Hungary	New	No	Can recycling
Ireland	New	No	Aluminium recycling 2020
Italy	New	No	Aluminium recycling 2020
Latvia	New	No	Can recycling
Lithuania	New	Yes	Can recycling
Luxembourg	New	No	Aluminium recycling 2020
Malta	New	No	Can recycling
Netherlands	Old	No	Aluminium recycling 2020
Poland	New	No	Can recycling
Portugal	New	No	Can recycling
Romania	New	No	Can recycling
Slovakia	New	No	Aluminium recycling 2020
Slovenia	New	No	Aluminium recycling 2020
Spain	New	No	Can recycling
Sweden	New	Yes	Can recycling
United Kingdom	New	No	Can recycling
Iceland	New	Yes	Can recycling
Norway	New	Yes	Can recycling
Switzerland	New	No	Can recycling

Table 5 Characteristics of the 2020 data.

[3] Aluminium beverage cans sold in Northern Germany and imported into Denmark under a specific import provision outside the Danish and German deposit return system

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.
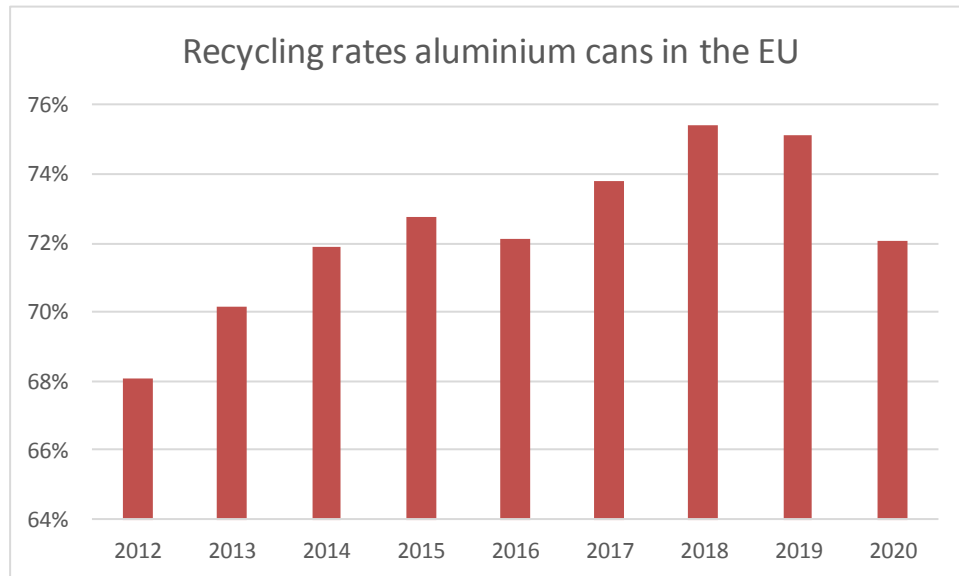

Figure 1. Development of the aluminium can recycling rates in the EU

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 resulted into 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. The rate in 2020 is lower than 2019 due to the combined impact of the introduction of the new EU calculation and measurement method and the requirement for the Member States to report accordingly and the exceptional growth of the amount of cans put on the market rather than a sign of worsening of the recycling performance. The amount of cans recycled increased, but did not follow the even larger increase of the amount of cans put on the market for final consumption.

6 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 perform cross-checks 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. It should be noted that, with the continuous replacement of steel with aluminium cans the issue will become less important over time.

One other point that requires attention is that the number of countries reporting to the EA questionnaire is decreasing. It has proven to be difficult to establish contacts with these countries partly due to change in personnel. Next year efforts to re-establish contacts in those countries should be continued.

Authors:

Drs. K. Wielenga

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