#### **COMMISSION IMPLEMENTING DECISION (EU) 2019/665**

#### of 17 April 2019

amending Decision 2005/270/EC establishing the formats relating to the database system pursuant to European Parliament and Council Directive 94/62/EC on packaging and packaging waste

(notified under document C(2019) 2805)

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste (1), and in particular Articles 5(4), 6a(9) and 12(3d) thereof,

#### Whereas:

- Directive 94/62/EC, as amended by Directive (EU) 2018/852 of the European Parliament and of the Council (2) (1)lays down general calculation rules for the attainment of the packaging waste recycling targets for 2025 and 2030. It requires Member States to report to the Commission data on the implementation of the recycling targets for each calendar year in accordance with a format established by the Commission.
- (2) Commission Decision 2005/270/EC (3) should be amended to bring its provisions in line with the new rules in Directive 94/62/EC as regards the calculation of the attainment of the targets, laid down in Article 5(2) regarding the possibility to take account of reusable sales packaging, in Article 5(3) regarding wooden packaging repaired for reuse and in Article 6a, as well as the changes to Article 12 on reporting.
- The calculation rules for the attainment of the packaging and packaging waste targets for 2025 and 2030 (3) established in Article 6a(1) and (2) of Directive 94/62/EC clarify that only waste that enters a recycling operation or waste that has achieved end of waste status should be used for the calculation of the recycling target and, as a general rule, the measurement of waste should be at the input to the recycling operation. In order to ensure uniform application of the calculation rules and comparability of data, the calculation points for the main packaging materials and recycling operations should be specified.
- (4)With a view to ensuring harmonised reporting on metals separated after incineration of packaging waste and high quality recycling, it is necessary to establish a common methodology for the calculation of the amount of those metals. The methodology should take account only of the metal content of the materials that are separated from incineration bottom ash in order to be recycled into metals, and should ensure that only metals originating from the incineration of packaging waste are taken into account.
- (5) According to Article 6a(3) and (8) of Directive 94/62/EC the data calculated and reported must be underpinned by an effective system of quality control and traceability of packaging waste material streams. To that end, Member States should take measures to ensure high reliability and accuracy of the data gathered on generated and recycled packaging waste, in particular by collecting data directly from economic operators and by using electronic registries as referred to in Article 35(4) of Directive 2008/98/EC of the European Parliament and of the Council (4) and technical specifications applied to sorted waste.
- (6)The formats to be used by the Member States for reporting data in accordance with Article 12(3a) of Directive 94/62/EC should take account of the rules regarding the reporting on the recycling targets for packaging and on reusable packaging laid down in Directive 94/62/EC.

<sup>(</sup>¹) OJ L 365, 31.12.1994, p. 10. (²) Directive (EU) 2018/852 of the European Parliament and of the Council of 30 May 2018 amending Directive 94/62/EC on packaging and packaging waste (OJ L 150, 14.6.2018, p. 141).

Commission Decision 2005/270/EC of 22 March 2005 establishing the formats relating to the database system pursuant to Directive 94/62/EC of the European Parliament and of the Council on packaging and packaging waste (OJ L 86, 5.4.2005, p. 6). Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

<sup>(</sup>OJ L 312, 22.11.2008, p. 3).

- (7) The formats for reporting on reusable packaging should take into account the information on reusable packaging placed on the market for the first time and on the number of rotations that packaging performs per year, which is essential to determine the share of reusable packaging compared to single use packaging. As reusable sales packaging may be taken into account in the context of the recycling targets, it is also appropriate to distinguish between reusable sales packaging and other reusable packaging.
- (8) The measures provided for in this Decision are in accordance with the opinion of the Committee established pursuant to Article 21 of Directive 94/62/EC,

HAS ADOPTED THIS DECISION:

#### Article 1

Decision 2005/270/EC is amended as follows:

(1) Article 1 is replaced by the following:

'Article 1

This Decision establishes the formats for reporting data pursuant to Article 12 of Directive 94/62/EC, as well as the rules for the calculation, verification and reporting of data pursuant to that Directive, as regards the following:

- (a) attaining an adjusted level of the recycling targets referred to in points (f) to (i) of Article 6(1) of Directive 94/62/EC by taking account of reusable packaging pursuant to Article 5(2) of that Directive;
- (b) taking account of repair for reuse of wooden packaging pursuant to Article 5(3) of Directive 94/62/EC;
- (c) compliance with the targets set in in points (f) to (i) of Article 6(1) of Directive 94/62/EC;
- (d) quality check and the measures taken pursuant to Article 6a(3) and (8) of Directive 94/62/EC.';
- (2) Article 2 is amended as follows:
  - (a) paragraph 1 is replaced by the following:
    - '1. For the purposes of this Decision, the following definitions shall apply in addition to the relevant definitions set out in Article 3 of Directive 94/62/EC:
    - (a) "targeted materials" means packaging waste materials that are reprocessed in a given recycling operation into products, materials or substances that are not waste;
    - (b) "non-targeted materials" means, for the purposes of the calculation of the recycling targets set in points (f) to (i) of Article 6(1) of Directive 94/62/EC, waste materials that are not reprocessed in a given recycling operation into products, materials or substances that are not waste;
    - (c) "preliminary treatment" means any treatment operation that packaging waste materials undergo before submission to the recycling operation whereby those materials are reprocessed into products, materials or substances that are not waste. This includes checking, sorting and other preparatory operations to remove non-targeted materials and to ensure high-quality recycling;
    - (d) "calculation point" means the point where packaging waste materials enter the recycling operation whereby waste is reprocessed into products, materials or substances that are not waste, or the point where waste materials cease to be waste as a result of a preparatory operation before being reprocessed;
    - (e) "measurement point" means the point where the mass of waste materials is measured with a view to determining the amount of waste at the calculation point;
    - (f) "rotation" means a trip performed by reusable packaging from the moment it is placed on the market together with the goods it is intended to contain, protect, handle, deliver or present, to the moment it is sent back for reuse in a system to reuse packaging with a view to its repeated placing on the market together with the goods;
    - (g) "a system to reuse packaging" means organisational, technical or financial arrangements which ensure that reusable packaging performs multiple rotations.';
  - (b) in paragraph 2, the first subparagraph is deleted;

- (3) Article 3 is amended as follows:
  - (a) in paragraph 3, the first sentence is replaced by the following:
    - '3. For the purposes of calculating and verifying attainment of the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC, packaging made of different materials which cannot be separated by hand shall be reported under the predominant material by weight.';
  - (b) in paragraph 4, the first sentence is replaced by the following:
    - '4. For the purposes of calculating and verifying attainment of the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC, the weight of recovered or recycled packaging waste shall be the input of packaging waste to an effective recovery or recycling process. If the output of the sorting plant is sent to effective recycling or recovery processes without significant losses, it is acceptable to consider this output to be the weight of the recovered or recycled packaging waste.';
- (4) Article 4 is amended as follows:
  - (a) paragraph 1 is replaced by the following:
    - '1. For the purposes of calculating and verifying attainment of the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC, packaging waste exported out of the Union shall be counted as recovered or recycled only if there is sound evidence that the recovery and/or recycling took place under conditions that are broadly equivalent to those prescribed by the relevant Union legislation.';
  - (b) paragraph 3 is replaced by the following:
    - '3. For the purposes of calculating and verifying attainment of the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC, packaging waste generated in another Member State or outside the Union which is sent for recovery or recycling to a Member State shall not be counted as recovered or recycled in the Member State to which this packaging waste was sent.';
- (5) Article 5 is amended as follows:
  - (a) paragraph 1 is amended as follows:
    - (i) the first subparagraph is replaced by the following:
      - '1. For the purposes of calculating and verifying attainment of the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC, the weight of recovered or recycled packaging waste shall be measured using a natural humidity rate of the packaging waste comparable to the humidity rate of equivalent packaging put on the market.';
    - (ii) the fourth subparagraph is replaced by the following:
      - 'Significant corrections shall be reported in the descriptions regarding the data compilation in the data quality check report.';
  - (b) paragraph 2 is amended as follows:
    - (i) the first subparagraph is replaced by the following:
      - '2. For the purposes of calculating and verifying attainment of the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC, the weight of recovered packaging shall, as far as is practical, exclude non-packaging materials collected together with the packaging waste.';
    - (ii) the fourth subparagraph is replaced by the following:
      - 'Significant corrections shall be reported in the descriptions regarding the data compilation in the data quality check report.';
- (6) Article 6 is replaced by the following:

'Article 6

For the purposes of calculating and verifying attainment of the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC, the provisions on recovery in Articles 3, 4 and 5 of this Decision shall apply mutatis mutandis to packaging waste incinerated at waste incineration plants with energy recovery.';

(7) the following Articles 6a to 6f are inserted:

#### 'Article 6a

- 1. For the purposes of attaining an adjusted level of the recycling targets set in points (f) to (i) of Article 6(1) of Directive 94/62/EC by taking into account the average share, in the preceding three years, of reusable sales packaging placed on the market for the first time and reused as part of a system to reuse packaging, as provided for in Article 5(2) of Directive 94/62/EC, the amount of reusable sales packaging which is discarded after its first rotation shall be deducted from the total amount of reusable sales packaging placed on the market for the first time in a given year.
- 2. The percentage points that may be subtracted from the recycling targets to determine the adjusted level referred to in Article 5(2) of Directive 94/62/EC shall be calculated as a simple average of the percentage points that represent the share of reusable sales packaging in each of the preceding three years. That share shall be calculated by dividing the amount of reusable sales packaging determined in accordance with this Article that is composed of the packaging material to which the recycling target applies, by the amount of all sales packaging composed of that packaging material and placed on the market for the first time in a given year.

#### Article 6b

- 1. Where a Member State takes into account the amounts of wooden packaging that is repaired for reuse in the calculation of the targets laid down in point (f), point (g)(ii), point (h) and point (i)(ii) of Article 6(1) of Directive 94/62/EC, the amount of wooden packaging that is repaired for reuse shall be added to both the generated packaging waste and the recycled packaging waste.
- 2. The amount of wooden packaging that is repaired for reuse shall be established on the basis of the mass of the repaired wooden packaging units that are subsequently reused and shall exclude wooden packaging or components of wooden packaging that are directed to waste treatment operations.

#### Article 6c

- 1. For the purposes of calculating and verifying compliance with the recycling targets set in points (f) to (i) of Article 6(1) of Directive 94/62/EC, the following shall apply:
- (a) The amount of recycled packaging waste shall be the amount of waste at the calculation point. The amount of packaging waste entering the recycling operation shall include targeted materials. It may include non-targeted materials only to the extent that their presence is permissible for the specific recycling operation.
  - The calculation points applicable to certain packaging waste materials and certain recycling operations are specified in Annex II.
- (b) Where the measurement point relates to the output of a facility that sends packaging waste for recycling without further preliminary treatment, or to the input of a facility where packaging waste enters the recycling operation without further preliminary treatment, the amount of sorted packaging waste that is rejected by the recycling facility shall not be included in the amount of recycled packaging waste.
- (c) Where a facility carries out preliminary treatment prior to the calculation point in that facility, the waste removed during the preliminary treatment shall not be included in the amount of recycled packaging waste reported by that facility.
- (d) Where biodegradable packaging that is subject to aerobic or anaerobic treatment is included in the recycled amounts for the respective packaging material, the amount of biodegradable packaging in biodegradable waste shall be determined by performing regular composition analyses of the biodegradable waste entering those operations. Biodegradable packaging waste that is removed before, during or after the recycling operation shall not be included in the recycled amounts.
- (e) Where the humidity rate of packaging waste at the measurement point differs from that of packaging placed on the market, the amount of packaging at the measurement point shall be corrected in order to reflect the natural humidity rate of the packaging waste comparable to the humidity of equivalent packaging placed on the market.
- (f) The amount of recycled packaging waste shall exclude non-packaging materials collected together with the packaging waste, such as waste of the same material that does not originate from packaging, and residues from products that the packaging used to contain.

- (g) Where packaging waste generated in a given Member State has been mixed with other waste or waste from another country before the measurement point or the calculation point, the proportion of packaging waste originating from a given Member State shall be identified using appropriate methods, such as electronic registries and sampling surveys. Where such waste undergoes further preliminary treatment, the amount of non-targeted materials removed by that treatment shall be deducted taking into account the proportion and, where appropriate, the quality of waste materials coming from packaging waste originating from a given Member State.
- (h) Where packaging waste materials enter recovery operations whereby those materials are used principally as a fuel or other means to generate energy, the output of such operations that is subject to material recovery, such as the mineral fraction of incineration bottom ash or clinker resulting from co-incineration, shall not be included in the amount of packaging waste recycled, with the exception of metals separated and recycled after incineration of packaging waste. Metals incorporated in the mineral output of the co-incineration process of packaging waste shall not be reported as recycled.
- (i) Where packaging waste materials enter recovery operations whereby those materials are not principally used either as a fuel or other means to generate energy, or for material recovery, but result in output that includes recycled materials, fuels or backfilling materials in significant proportions, the amount of recycled waste shall be determined by a mass balance approach which results in taking account only of waste materials that are subject to recycling.
- 2. For the purposes of calculating and verifying attainment of the recycling targets set in points (f) to (i) of Article 6(1) of Directive 94/62/EC, composite packaging and other packaging composed of more than one material shall be calculated and reported per material contained in the packaging. Member States may derogate from this requirement where a given material constitutes an insignificant part of the packaging unit, and in no case more than 5% of the total mass of the packaging unit.

#### Article 6d

- 1. For the purposes of calculating and verifying attainment of the targets set in points (f) to (i) of Article 6(1), of Directive 94/62/EC, the amount of recycled metals separated from incineration bottom ash shall be the mass of metals in the metal concentrate that is separated from raw incineration bottom ash originating from packaging waste, and shall not include other materials contained in the metal concentrate such as mineral adhesions or metals that do not originate from packaging waste.
- 2. The Member States shall apply the methodology laid out in Annex III for calculating the mass of recycled metals separated from incineration bottom ash.

#### Article 6e

For the purposes of calculating and verifying attainment of the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC, Member States may apply the calculation rules laid down in Articles 6a to 6d.

#### Article 6f

- 1. The Member States shall take appropriate measures to ensure the reliability and accuracy of data reported under this Decision. In particular, the amount of packaging waste generated shall be subject to verification and cross-checking, including by using data on the amount of packaging placed on the market, relevant data on waste and composition analyses of mixed municipal waste. Member States shall inform the Commission of such verification carried out and, where appropriate, of any significant inconsistencies identified and corrective measures planned or taken.
- 2. Member States shall obtain data directly from establishments or undertakings managing waste, as appropriate.
- 3. Member States shall consider the use of electronic registries.
- 4. Where data collection is based on surveys, including those underpinning sampling methodologies, those surveys shall be carried out to a minimum standard which shall include the following minimum requirements:
- (a) the surveys are carried out at regular, specified intervals, to adequately reflect the variation in the data to be surveyed;
- (b) the surveys are based on a representative sample of the population to which their results are applied.

- 5. Estimates may be used for packaging materials occurring in small quantities and for those not mentioned in this Decision. Those estimates shall be based on the best information available and shall be described in the quality check reports accompanying the data on packaging waste generation and recycling.';
- (8) Articles 7 and 8 are deleted;
- (9) Article 9 is amended as follows:
  - (a) paragraphs 1 and 2 are replaced by the following:
    - '1. The Member States shall report the data on the generation and treatment of packaging waste and on reusable packaging using the formats set out in Tables 1, 2 and 3 of Annex I.
    - 2. The Member States shall provide the data on the consumption of lightweight plastic carrier bags using the format set out in Table 4 or Table 5 of Annex I, as appropriate, for reporting by numbers and the format set out in Table 6 or Table 7 of Annex I, as appropriate, for reporting by weight.';
  - (b) the following paragraphs 3 to 7 are added:
    - '3. The Member States shall complete the reporting formats set out in Annex I on an annual basis and shall submit them to the Commission within 18 months from the end of the reference year in electronic form, by means of an interchange standard set up by the Commission. The reporting shall cover a full calendar year.
    - 4. The Member States shall submit a quality check report using the format set out in Annex IV.
    - 5. Where, for the purposes of verifying compliance with the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC, a Member State does not apply the calculation rules laid down in Articles 6a to 6d, that Member State shall submit the data for verifying compliance with the targets set in points (a) to (e) of Article 6(1) of Directive 94/62/EC separately by using the format laid down in Table 1 of the Annex.
    - 6. Member States that decide to attain an adjusted level of a target in accordance with Article 5(2) of Directive 94/62/EC for a given year shall complete the reporting format set out in Annex I, Table 2 to this Decision for that year for the respective packaging material and shall submit it to the Commission within 18 months from the end of the reference year in electronic form, by means of an interchange standard set up by the Commission.
    - 7. The Commission shall publish the data reported under the Annexes to this Decision, unless, as regards information included in the quality check reports established under Annex IV, a Member State provides a justified request to withhold the publishing of certain data.';
- (10) the Annex is amended as set out in the Annex to this Decision.

Article 2

This Decision is addressed to the Member States.

Done at Brussels, 17 April 2019.

For the Commission
Karmenu VELLA
Member of the Commission

#### **ANNEX**

Reporting on the recycling targets set in Article 6 of Directive 94/62/EC

The Annex to Decision 2005/270/EC is amended as follows:

- (1) the title is replaced by 'ANNEX I';
- (2) tables 1, 2 and 3 are replaced by the following:

### 'Table 1

(tonnes)

			Recycling		Renair of			
Packaging waste material	Waste generation	Recycling in the Member State	Recycling in other Member States	Recycling outside the EU	Repair of wooden packaging	Energy recovery (1)	Other recovery (²)	
All								
Plastic								
Wood								
Metal (total)								
Ferrous metal								
Ferrous metal from IBA (3)								
Aluminium								
Aluminium from IBA (4)								
Glass								
Paper and cardboard								
Other								

#### Notes:

- 1. Dark shaded boxes: reporting is not applicable.
- 2. Light shaded boxes: reporting is mandatory only to Member States that include those amounts in the recycling rates. Where Member States report on metals from incineration bottom ash (IBA) they shall complete both the boxes on recycling in and outside the Member State.
- (1) This includes incineration with energy recovery and the reprocessing of waste to be used as fuel or other means to generate energy.
- (2) This excludes repair of wooden packaging, recycling and energy recovery and includes backfilling.
- (2) Ferrous metals recycled after their separation from incineration bottom ash shall be reported separately and shall not be included in the row for reporting ferrous metals.
- (4) Aluminium recycled after separation from incineration bottom ash shall be reported separately and shall not be included in the row for reporting aluminium.

#### Table 2

# Format for reporting for the purposes of adjusting the recycling rates in accordance with Article 5(2) of Directive 94/62/EC

(%)

1	2	3	4	5
Packaging waste material	Share of reusable sales packaging in all sales packaging year n-3	Share of reusable sales packaging in all sales packaging year n-2	Share of reusable sales packaging in all sales packaging year n-1	Average share of reusable sales packaging in the three years preceding year n
Plastic				
Wood				
Ferrous metal				
Aluminium				
Glass				
Paper and cardboard				
All				

### Table 3 Format for reporting on reusable packaging

1	2	3	4	5	6	7	8	9	10	11
	Packaging		n the mark time	et for the		ing placed on the		Rotati	ions (³)	
Packaging material	All pack	taging (1)	Sales pac	kaging (²)	All reusable packaging	Reusable sales packaging		ble packa- ing	Reusable sales packaging	
	(t)	(units)	(t)	(units)		(t)	(t) (4)	(number)	(t) (4)	(number)
Plastic										
Wood										
Ferrous metal										
Aluminium										
Glass										

Light shaded boxes: Data is obligatory only for the material for which the Member State has decided to achieve an adjusted target.
 Dark shaded boxes: the calculation of data is automatic and represents the simple average of columns 2, 3 and 4.

1	2	3	4	5	6	7	8	9	10	11	
Packaging material	Packaging		n the mark time	et for the		Reusable packaging placed on the market for first time Rotations (3)					
	All pack	taging (1)	Sales pac	kaging (²)	All reusable packaging Reusable sales packaging Reusable sales gin				Reusable sales packaging		
	(t)	(units)	(t)	(units)	(t)	(t)	(t) (4)	(number)	(t) (4)	(number)	
Paper and cardboard											
Other											
All											

Note: Light shaded boxes: provision of data is voluntary.

- This means all reusable and single-use packaging comprising sales, transport and grouped packaging.
   This means reusable and single-use sales packaging.
   This means the number of rotations that reusable packaging completes in a given year.
   This means the number of rotations that reusable packaging completes in a given year multiplied by their mass.';

#### (3) the following Annexes II, III and IV are added:

### 'ANNEX II Calculation points referred to in Article 6c(1)(a)

Packaging Material	Calculation Point
Glass	Sorted glass that does not undergo further processing before entering a glass furnace or the production of filtration media, abrasive materials, glass fibre insulation and construction materials.
Metals	Sorted metal that does not undergo further processing before entering a metal smelter or furnace.
Paper / board	Sorted paper that does not undergo further processing before entering a pulping operation
Plastics	Plastic separated by polymers that does not undergo further processing before entering pelletisation, extrusion, or moulding operations;  Plastic flakes that do not undergo further processing before their use in a final product.
Wood	Sorted wood that does not undergo further processing before utilisation in the manufacture of particleboard or other products.  Sorted wood entering a composting operation.
Textiles	Sorted textile that does not undergo further processing before its utilisation for the production of textile fibres, rags or granulates.
Composite packaging and packaging composed of multiple materials	Plastic, glass, metal, wood, paper and cardboard and other materials resulting from the treatment of composite packaging or of packaging composed of multiple materials that do not undergo further processing before reaching the calculation point established for the specific material.

#### ANNEX III

## Methodology for calculating the recycled metals separated after incineration of packaging waste

1. The following terms shall apply in relation to the formulas set out in this annex:

m <sub>total IBA Fe/Al</sub>	total mass of ferrous metals or aluminium in incineration bottom ash in a given year;
m <sub>IBA Fe/nFe concentrates</sub>	mass of ferrous metal concentrate or non-ferrous metal concentrate separated from raw waste incineration bottom ash in a given year;
C <sub>IBA Fe/Al</sub>	concentration of ferrous metals or aluminium in the respective metal concentrate;
$m_{IBA\ Fe/Al}$	mass of ferrous metals or aluminium in the ferrous metal concentrate or in the non-ferrous metal concentrate separated from incineration bottom ash in a given year;
$m_{\scriptscriptstyle non-metallic}$	mass of non-metallic material contained in specific ferrous metals concentrate or aluminium concentrate;
$r_{Al}$	share of aluminium in non-ferrous metals contained in non-ferrous concentrate separated form incineration bottom ash;
$m_{PW\ Fe/Al}$	mass of ferrous metals or aluminium from packaging waste entering an incineration operation in a given year;
$m_{W\ Fe/Al}$	mass of all ferrous metals or aluminium entering an incineration operation in a given year; and
m <sub>PW IBA Fe/Al</sub>	mass of recycled ferrous metals or aluminium originating from packaging waste in a given year.

2. Following the separation of ferrous /non-ferrous concentrate from raw incineration bottom ash, the ferrous metals/aluminium content of the metal concentrate shall be calculated by applying the following formula:

$$m_{total\ IBA\ Fe/Al} = m_{IBA\ Fe/nFe\ concentrates} \cdot c_{IBA\ Fe/Al}$$

- 3. Data on the mass of ferrous /non-ferrous metal concentrates shall be obtained from facilities that separate metal concentrates from raw incineration bottom ash.
- 4. The concentration of ferrous metals and aluminium resulting from the processing of raw incineration bottom ash shall be calculated by using data collected by regular surveys from facilities that treat metal concentrates and from facilities that use metals seprated from incineration bottom ash to producing metal products by applying the following formulas:
  - (a) for ferrous metals

$$c_{IBA\,Fe} = \frac{m_{IBA\,Fe}}{m_{IBA\,Fe\,concentrates}} = \frac{m_{IBA\,Fe\,concentrates} - m_{non-metallic}}{m_{IBA\,Fe\,concentrates}}$$
, and

(b) for aluminium

$$c_{IBA\;AI} = \frac{m_{IBA\;AI}}{m_{IBA\;nFe\;concentrates}} = \frac{\left(m_{IBA\;nFe\;concentrates} - m_{non-metallic}\right) \cdot r_{AI}}{m_{IBA\;nFe\;concentrates}}$$

5. The mass of recycled ferrous metals/aluminium originating from packaging waste in all recycled ferrous metals/aluminium separated from incineration bottom ash shall be determined through sampling surveys of the waste that enters the incineration operation. These surveys shall be carried out at least every five years and when there are reasons to expect that the composition of the incinerated waste has significantly changed. The mass of ferrous metals/aluminium originating from packaging waste shall be calculated by applying the following formula:

$$m_{\text{PW IBA Fe/Al}} = \frac{m_{\text{PW Fe/Al}}}{m_{\text{W Fe/Al}}} \cdot m_{\text{total IBA Fe/Al}}.$$

#### ANNEX IV

#### Format for quality check

#### I. Objectives of the report

The objectives of the quality check report are as follows:

- 1. Evaluate the methodology to report on the annual consumption of lightweight plastic carrier bags;
- 2. Evaluate the quality of data on reusable packaging;
- 3. Check the comprehensiveness of Member State application of the definition of packaging waste, in particular as regards data on packaging waste generation;
- 4. Evaluate the quality of data collection processes, including the scope and validation of administrative data sources and the statistical validity of survey-based approaches;
- 5. Understand the reasons for significant changes in reported data between reference years and ensure confidence in the accuracy of that data;
- 6. Ensure the application of the rules and common methodologies to measure metals separated after the incineration of packaging waste; and
- 7. Verify compliance with specific requirements established in the rules for calculating the recycling targets for packaging waste.

#### II. General information

- 1. Member State:
- 2. Organisation submitting the data and the description:
- 3. Contact person / contact details:
- 4. Reference year:
- 5. Delivery date / version:
- 6. Link to data publication by the Member State (if any):

#### III. Annual consumption of lightweight plastic carrier bags

1. Description of the parties involved in the data collection

Name of institution	Description of key responsibilities					
Add rows as appropriate.						
2. Description of methods used						

- 3. Accuracy of the data
- 3.1. Description of main issues affecting the accuracy of data on annual consumption of lightweight plastic carrier bags, including errors related to sampling, coverage, measurement, processing and non-response

3.2. Explanat plastic c		the scope and ags	validity of su	rveys to co	llect data on th	ne annual c	onsumption o	of lightweight
3.3. Statistica	al surve	ys used regardinį	g the annual c	consumption	n of lightweight	plastic carr	ier bags	
Scope of the survey	Yea	Statistical units	Percentage of popula- tion surveyed	Data (t)	Confidence level	Error margin	Adjustments from the survey year to the current year	Other details
	•							
Add rows for each	ch survey	used.						
3.4. Differen	ces fron	n previous year's	data					
Significant m particular ret	ethodol rospecti	ogical changes in ve revisions, the	n the calculati	ion method whether a b	for the current oreak-flag is requ	reference you	ear, if any (ple ertain year).	ase include in
<ul><li>IV. Reusable</li><li>1. Parties inv</li></ul>	-	ging  1 the data collect	ion					
		Name of institution	n		Descri	intion of key	responsibilities	
		Turne of institution			Descri	priori or key	responsibilities	
Add rows as app	propriate.							_
including	ensuring	e application of that reusable p nd that all rotati	ackaging plac	ed on the n	narket for the fir	n the natio	nal data colle eused as part o	ction system, of a system to
3. Methods t packaging		ct and aggregate	the data for	the differen	nt categories, ty	pe of pack	aging and syst	tems to reuse
Packaging m	aterial	Category of packaging cover (sales, grouped transport packag	or (for exar	f packaging nple bottles, containers)	Description of reuse system (op loop or close-lo system)	to co the inclu pen- cover poop p comb	ed description collect and aggregating sources of age, and any est ossible separatel ination of packagory, type of pareuse systems	gate the data, information, imates used if y for each Iging material, ckaging and
Plastic								
Wood								

		<i>'</i>	•	
Packaging material	Category of packaging covered (sales, grouped or transport packaging)	Type of packaging (for example bottles, crates, containers)	Description of the reuse system (open- loop or close-loop system)	Detailed description of the methods to collect and aggregate the data, including sources of information, coverage, and any estimates used if possible separately for each combination of packaging material, category, type of packaging and reuse system
Ferrous metals				
Aluminium				
Glass				
Paper and cardboard				
Other				
Add rows after each mate	rial as appropriate.			
4. Data verification				

Packaging material	Detailed description of methods for verification of data on reusable packaging if possible separately for each combination of packaging material, category, type of packaging and reuse system
Plastic	
Wood	
Ferrous metals	
Aluminium	
Glass	
Paper and cardboard	
Other	

### 5. Accuracy of the data

5.1.	Description of	of main	issues	affecting	the	accuracy	of	data	on	reusable	packaging,	including	errors	related	to
	sampling, cov	erage, n	neasure	ement, pro	ocess	sing and 1	non	-respo	onse	9					

### 5.2. Explanation of the scope and validity of surveys to collect data on reusable packaging

#### 5.3. Statistical surveys used regarding reusable packaging

Packaging material	Year	Statistical units	Percentage of popula- tion surveyed	Data (tonnes)	Confidence level	Error margin	Details of adjustments from the survey year to the current year	Other details

Add rows for each survey used.

#### 5.4. Differences from previous year's data

Significant methodological changes in the calculation method for the current reference year, if any (please include in particular retrospective revisions, their nature and whether a break-flag is required for a certain year)

#### V. Packaging waste

1. Description of the parties involved in the data collection

Name of institution	Description of key responsibilities

Add rows as appropriate.

- 2. Description of methods used
- 2.1. Packaging waste generation
- 2.1.1. Methods for determining packaging waste generation (mark with a cross all the relevant cells)

Packaging waste material/Data collection methods	Total	Plastic	Wood	Ferrous metals	Alu- minium	Glass	Paper and card- board	Other
Use of data on packaging placed on the market								
Administrative reporting								
Surveys								
Electronic registry								
Waste analysis								
Data from waste operators								
Data from municipalities								

EN

Packaging waste material/Data collection methods	Total	Plastic	Wood	Ferrous metals	Alu- minium	Glass	Paper and card- board	Other
Data from extended producer responsibility schemes								
Production and Foreign Trade Statistics								
Other (specify)								
Description of the verification meth placed on the market is used	ods conce	erning dat	a on pack	caging was	ste generat	ed in cas	e data on	packaging
2.1.2. Explanation of the applicatio instance, where data collectio private shipments in or out of	n does no	ot cover tl	he whole	on packaş market or	ging place in order	d on the to take ac	market is	used (for ree riders,
2.1.3. Indication whether an estimat the total	e has bee	n calculate	ed and add	1		Yes' the a	dded volun	ne in % of
Packaging waste material/Validation	Total	Plastic	Wood	Ferrous metals	Alu- minium	Glass	and card- board	Other
General estimates (e.g. based on surveys)								
Free-riders								
Private shipments								
On-line sales								
Others								
2.1.4. Description of the methodol packaging waste is used, incluwell as (b) packaging materials	uding (a)	how non-	packaging	waste col	lected toge	ether with	ted in cas 1 packaginş	e data on g waste as
2.1.5. Description of the methodolo composite packaging and repseparately.								

#### 2.1.6. Verification of data on packaging waste generated

Packaging waste material	Cross-check (yes/no)	Time-series check (yes/no)	Audit (yes/no)	Verification Process
Plastic				
Wood				
Ferrous metals				
Aluminium				
Glass				
Paper and cardboard				
Other				

Additional details as regards the verification of data on packaging w	waste generated
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#### 2.2. Packaging waste management

#### 2.2.1. Classifications of treatment operations

Information on the classification used for treatment operations (if a standard classification is used such as the disposal operation or recovery operation codes established in Annexes I and II of Directive 2008/98/EC refer to its name or specify and describe all the relevant categories used).

#### 2.2.2. Description of methods for determining packaging waste treatment (mark with a cross)

Packaging waste material/Data collection methods	Total	Plastic	Wood	Ferrous metals	Alu- minium	Glass	Paper and card- board	Other
Administrative reporting								
Surveys								
Electronic registry								
Waste analysis								
Data from waste operators								
Data from municipalities								
Data from extended producer responsibility schemes								
Other (specify)								

Additional information about the methods, including the	e combination of methods used	I
2.2.3. Measurement points for recycling applied by the	Member State	
Packaging waste material	at the output of sorting oper target materials as appropria	oints used (at calculation point or ation with subtraction of non- tte, end-of-waste criteria, etc.), regional and local level
Plastic		
Wood		
Ferrous metals		
Aluminium		
Glass		
Paper and cardboard		
Other		
Detailed description of the methodology to calculate measurement and the calculation points, where applical	the amount of non-target ma	aterials removed between the
2.2.4. Description of the methodology to determine composite packaging or of packaging composed applied for materials constituting less than 5 % of	d of multiple materials, and inf	ormation on any exemption
2.2.5. Use of Average Loss Rates (ALRs)  Description of the sorted packaging waste to which ALRs apply, the methodological approach to calculatinal any surveys used, or the nature of any technical specific	g ALRs at such point(s), includ	ing plants to which differen ling the statistical accuracy o
Sorted waste material and sorting plant type	ALR applied (in %)	Description

Add rows as appropriate.

#### 2.2.6. Attribution of waste to packaging and non-packaging types and correction for humidity

Description, where applicable, of the methodology to exclude non-packaging waste from the reported amount of
recycled packaging waste and of the methodology to correct the amount of packaging waste at the measurement
point in order to reflect the natural humidity rate of packaging (including by using relevant European standards).
Aggregated data across facilities of a similar type is acceptable.

Packaging waste material	Facility type	Share of packaging waste (%)	Description of the methodologies applied to obtain the percentage

Add rows as appropriate.

#### 2.2.7. Attribution of waste to different Member States

Description of the methodology to exclude waste originating from other countries, where applicable. Aggregated data across facilities of a similar type is acceptable.

Packaging waste material	Facility type	Share of waste from the Member State (%)	Description of the methodologies applied to obtain the percentage	

Add rows as appropriate.

#### 2.2.8. Other recovery of waste

Description of treatment of waste reported under the category of other recovery and the share of waste (%) subject to such treatment

2.2.9. Information on the relevance of temporary storage of packaging waste to the amounts of treated waste in a given year and any estimates of waste recycled in the current reference year following temporary storage in a previous reference year, and waste going to temporary storage in the current reference year

#### 2.2.10. Verification of data on packaging waste recycling

Packaging waste material	Cross-check (yes/no)	Time-series check (yes/no)	Audit (yes/no)	Verification Process
Plastic				
Wood				

EN	Official Journal of the	e European Union		26.4
Packaging waste material	Cross-check (yes/no)	Time-series check (yes/no)	Audit (yes/no)	Verification Process
Ferrous metals				
Aluminium				
Mixed waste				
Other				
2.2.11. Calculation of recycling of m  Detailed description of the method incineration bottom ash in accorda Article 37(7) of Directive 2008/98/EG	to collect data in o	order to calculate ti		
Data	Description of the	measurement meth	od to obtain the data	
Total amount of metal concentrate ex	xtracted from incin-			

Data	Description of the measurement method to obtain the data
Total amount of metal concentrate extracted from incinerator bottom ash	
Average level of metallic content in the total amount of metal concentrate, including the reliability of any surveys undertaken	
Proportion of waste entering incineration plants that is packaging waste, including the reliability of any surveys undertaken	

- 2.3. Accuracy of the data
- 2.3.1. Description of main issues affecting the accuracy of data on the generation and treatment of packaging waste, including errors related to sampling, coverage, measurement, processing and non-response
- 2.3.2. Explanation of the scope and validity of surveys to collect data on the generation and treatment of packaging waste
- 2.3.3. Statistical surveys used regarding packaging waste generation and treatment

Component of packaging waste	Year	Statistical units	Percentage of popula- tion surveyed	Data (tonnes)	Confidence level	Error margin	Details of adjustments from the survey year to the current year	Other details

2.3.4.	Differences	from	previous	vear's	data

Significant methodologic							include in
particular retrospective r	evisions, their nat	ure and whether	a break-flag is r	equired for a	certain year	·)	

2.3.5. Explanation detailing the causes of the tonnage difference (in relation to which waste streams, sectors or estimates have caused the difference, and what the underlying cause is) for any component of packaging waste generated and recycled which shows greater than a 10 % variation from the data submitted for the previous data year

Material	Variation (%)	Main reason for variation

Add rows as appropriate.

## VI. Traceability of waste and ensuring its treatment in conditions that are broadly equivalent of the requirements of EU environmental law

1.	Detailed	description	of t	he system	for	quality	control	and	traceability	for	packaging	waste	pursuant	to
	Article 6	a(3) and (8)	of Dir	ective 94/6	2/EC								_	

#### 2. Waste treated outside the Member State

Packaging waste material	Subject to final treatment in the Mem- ber State (yes/no)	Shipped to another EU Member State (yes/no)	Exported outside the EU (yes/no)	Description of specific measures for quality control and traceability of packaging waste, in particularly as regards monitoring and validation of data
Plastic				
Wood				
Ferrous metals				
Aluminium				
Glass				
Paper and cardboard				
Other				

3. Description of measures to ensure that, in accordance with Article 6a(8) of Directive 94/62/EC, the exporter can prove that the shipment of waste complies with the requirements of Regulation (EC) No 1013/2006 of the European Parliament and of the Council ( $^1$ ) and that the treatment of waste outside the Union took place in conditions that are broadly equivalent to the requirements of the relevant Union environmental law

<sup>(</sup>¹) Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (OJ L 190, 12.7.2006, p. 1).

VII. Confidentiality	
Justification to withhold the publication of specific parts of this report:	
VIII. Main national websites, reference documents and publications	
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