

ANNEX I

Non-exhaustive list of calculation points referred to in article 6(2)

|  |  |
| --- | --- |
| **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 polymer 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 treatment before utilisation in particleboard manufacture.  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 individual component 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 in this Annex. |

ANNEX II

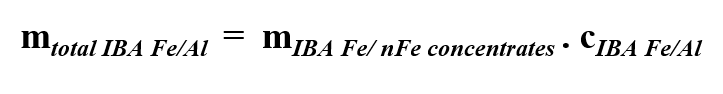
Methodology for calculating the recycled metals separated after incineration of packaging waste

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

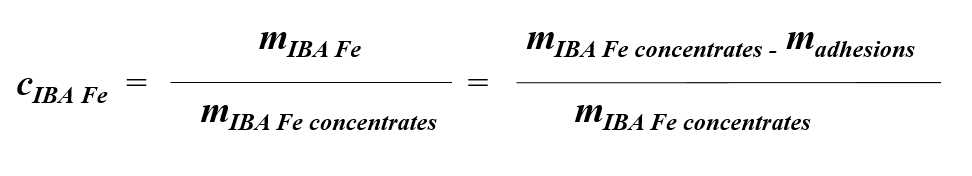
|  |  |
| --- | --- |
| **m*total IBA Fe/Al*** | total mass of ferrous metals or aluminium in incineration bottom ash in a given year |
| **m*IBA Fe/nFe concentrates*** | mass of ferrous metal concentrate or non-ferrous metal concentrate separated from raw waste incineration bottom ash in a given year |
| **c*IBA Fe/Al*** | 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 *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 |

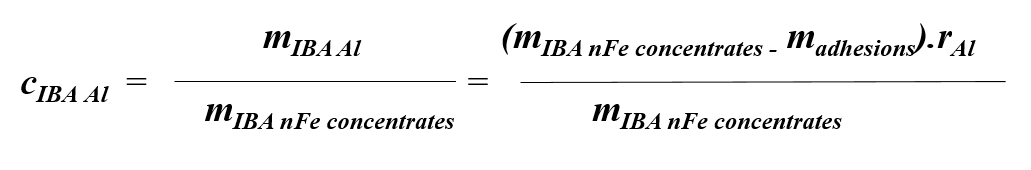
|  |  |
| --- | --- |
| **m*PW Fe/Al*** | mass of ferrous metals or aluminium from packaging waste entering an incineration operation in a given year |
| **m*W Fe/Al*** | mass of all ferrous metals or aluminium entering an incineration operation in a given year | |
| **m*PW IBA Fe/Al*** | mass of recycled ferrous metals or aluminium originating from packaging waste in a given year | |

1. 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:

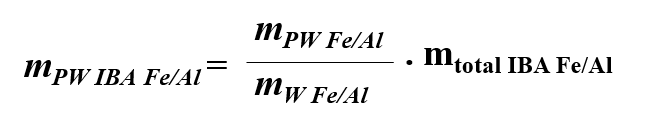


1. Data on the mass of ferrous /non-ferrous metal concentrates shall be obtained from facilities that separate metal concentrates from raw incineration bottom ash.
2. The concentration of ferrous metals and aluminium resulting from the processing of raw incineration bottom ash shall be calculated by 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. Change:





1. 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 the following formula:



ANNEX III

Amendments of the Annex to Decision 2005/270/EC

The title ‘ANNEX’ is replaced by ‘ANNEX I’

Tables 1, 2 and 3 of Decision 2005/270/EC are replaced by the following tables:

**TABLE 1**

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Packaging waste material** | **Waste generation**  **(t)** | **Recycling** | | **Repair of wooden packaging**  **(t)** | **Energy recovery1**  **(t)** | **Other recovery2**  **(t)** |
| **Recycling in the Member State**  **(t)** | **Recycling outside the Member State**  **(t)** |
| **All** |  |  |  |  |  |  |
| **Plastic** |  |  |  |  |  |  |
| **Wood** |  |  |  |  |  |  |
| **Metal (total)** |  |  |  |  |  |  |
| **Ferrous metal** |  |  |  |  |  |  |
| **Ferrous metal from IBA3** |  |  |  |  |  |  |
| **Aluminium** |  |  |  |  |  |  |
| **Aluminium from IBA4** |  |  |  |  |  |  |
| **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 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 includes backfilling.

3 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**  **(%)** |
| **Glass** |  |  |  |  |
| **Plastic** |  |  |  |  |
| **Paper/cardboard** |  |  |  |  |
| **Ferrous metal** |  |  |  |  |
| **Aluminium** |  |  |  |  |
| **Wood** |  |  |  |  |
| **All** |  |  |  |  |

*Notes:*

1. 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.

**TABLE 3**

Format for reporting on reusable packaging

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |
| **Packaging material** | **Packaging placed on the market for the first time** | | | | **Reusable packaging placed on the market for first time** | | **Rotations** | | | | **Reusable packaging in rotation**  **(t)** |
| **All packaging** | | **Sales packaging** | | **All reusable packaging**  **(t)** | **Reusable sales packaging**  **(t)** | **All reusable packaging** | | **Reusable sales packaging** | |
| **(t)** | **(number)** | **(t)** | **(number)** | **(t)\*** | **(number)** | **(t)\*** | **(number)** |
| **Glass** |  |  |  |  |  |  |  |  |  |  |  |
| **Plastic** |  |  |  |  |  |  |  |  |  |  |  |
| **Paper/cardboard** |  |  |  |  |  |  |  |  |  |  |  |
| **Ferrous metal** |  |  |  |  |  |  |  |  |  |  |  |
| **Aluminium** |  |  |  |  |  |  |  |  |  |  |  |
| **Wood** |  |  |  |  |  |  |  |  |  |  |  |
| **Other** |  |  |  |  |  |  |  |  |  |  |  |
| **All** |  |  |  |  |  |  |  |  |  |  |  |

*Notes:*

1. Light shaded boxes: provision of data is voluntary.
2. The term “all packaging” includes reusable and single-use packaging that is sales, transport and grouped packaging.
3. In columns 8 to 11 the rotations of reusable packaging in a given year shall be reported. The amount in tonnes shall be calculated by multiplying the mass of the packaging unit by the number of rotations in a given year.

The term "in rotation" is determined according to DIN EN 13429.

\*This includes the of rotations of packaging units in a given year multiplied by their weight

ANNEX IV

Format for quality check

# Objectives of the report

The objectives of the quality check report are as follows:

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

# 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):

# Annual consumption of lightweight plastic carrier bags

1. Description of the parties involved in the data collection

|  |  |
| --- | --- |
| Name of institution | Description of key responsibilities |
|  |  |

*Insert more rows as appropriate*

1. Description of methods used

|  |
| --- |
|  |

1. Accuracy of the data
   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
   2. Explanation of the scope and validity of surveys to collect data on the annual consumption of lightweight plastic carrier bags
   3. Statistical surveys used regarding the annual consumption of lightweight plastic carrier bags

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scope of the survey | Year | Statistical units | Percentage of population surveyed | Data (tonnes) | Confidence level | Error margin | Details of adjustments from the survey year to the current year | Other details |
|  |  |  |  |  |  |  |  |  |

*Add new rows for each survey used*

* 1. 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).

|  |
| --- |
|  |

# Reusable packaging

1. Parties involved in the data collection

|  |  |
| --- | --- |
| Name of institution | Description of key responsibilities |
|  |  |

*Insert more rows as appropriate*

1. Description of the application of the definition of reusable packaging in the national data collection system, including ensuring that reusable packaging placed on the market for the first time is reused as part of a system to reuse packaging and that all rotations of reusable packaging are captured

|  |
| --- |
|  |

1. Methods to collect and aggregate the data for the different categories, type of packaging and systems to reuse packaging

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 |
| Plastic |  |  |  |  |
| Wood |  |  |  |  |
| Ferrous metals |  |  |  |  |
| Aluminium |  |  |  |  |
| Glass |  |  |  |  |
| Paper and cardboard |  |  |  |  |
| Other |  |  |  |  |

*Insert more rows after each material as appropriate*

1. 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 |  |

1. Accuracy of the data
   1. Description of main issues affecting the accuracy of data on reusable packaging, including errors related to sampling, coverage, measurement, processing and non-response

|  |
| --- |
|  |

* 1. Explanation of the scope and validity of surveys to collect data on reusable packaging
  2. Statistical surveys used regarding reusable packaging

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

*Add new rows for each survey used*

* 1. 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)

# Packaging waste

1. Description of the parties involved in the data collection

|  |  |
| --- | --- |
| Name of institution | Description of key responsibilities |
|  |  |

*Insert more rows as appropriate*

1. Description of methods used
   1. Packaging waste generation
      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 | Aluminium | Glass | Paper and cardboard | Other |
| Use of data on packaging placed on the market |  |  |  |  |  |  |  |  |
| Administrative reporting |  |  |  |  |  |  |  |  |
| Surveys |  |  |  |  |  |  |  |  |
| Electronic registry |  |  |  |  |  |  |  |  |
| Waste analysis |  |  |  |  |  |  |  |  |
| Data from waste operators |  |  |  |  |  |  |  |  |
| Data from municipalities |  |  |  |  |  |  |  |  |
| Data from extended producer responsibility schemes |  |  |  |  |  |  |  |  |
| Production and Foreign Trade Statistics |  |  |  |  |  |  |  |  |
| Other (specify) |  |  |  |  |  |  |  |  |

Description of the verification methods concerning data on packaging waste generated in case data on packaging placed on the market is used

|  |
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|  |

* + 1. Explanation of the application of estimates in case data on packaging placed on the market is used (for instance, where data collection does not cover the whole market or in order to take account of free riders, private shipments in or out of the country or on-line sales)

|  |
| --- |
|  |

* + 1. Indication whether an estimate has been calculated and added (Yes/No) and if 'Yes' the added volume in % of the total

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Packaging waste material/  Validation | Total | Plastic | Wood | Ferrous metals | Aluminium | Glass | Paper and cardboard | Other |
| General estimates (e.g. based on surveys) |  |  |  |  |  |  |  |  |
| Free-riders |  |  |  |  |  |  |  |  |
| Private shipments |  |  |  |  |  |  |  |  |
| On-line sales |  |  |  |  |  |  |  |  |
| Others |  |  |  |  |  |  |  |  |

* + 1. Description of the methodology and verification of data on packaging waste generated in case data on packaging waste is used, including (a) how non-packaging waste collected together with packaging waste as well as (b) packaging materials in other waste (mixed waste streams) are accounted for.

|  |
| --- |
|  |

* + 1. Description of the methodology to report on composite packaging, including where materials contained in composite packaging and representing less than 5% of the mass of the packaging unit are not reported separately.

|  |
| --- |
|  |

* + 1. 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 waste generated

|  |
| --- |
|  |

Packaging waste management

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 Annex I and II of Directive 2008/98/EC, refer to its name or specify and describe all the relevant categories used).

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Packaging waste material/  Data collection methods | Total | Plastic | Wood | Ferrous metals | Aluminium | Glass | Paper and cardboard | 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 combination of methods used

2.2.3. Measurement points for recycling applied by the Member State

|  |  |
| --- | --- |
| Packaging waste material | Description of measurement points used (at calculation point or at the output of sorting operation with subtraction of non-target materials as appropriate, end-of-waste criteria, etc.), including variation at regional and local level |
| Plastic |  |
| Wood |  |
| Ferrous metals |  |
| Aluminium |  |
| Glass |  |
| Paper and cardboard |  |
| Other |  |

Detailed description of the methodology to calculate the amount of non-target materials removed between the measurement and the calculation points, where applicable

|  |
| --- |
|  |

2.2.4. Description of the methodology to determine per material the amount of recycled materials contained in composite packaging or of packaging composed of multiple materials, and information on any exemptions applied for materials constituting less than 5% of the total mass of the packaging unit.

|  |
| --- |
|  |

2.2.5. Use of Average Loss Rates (ALRs)

Description of the sorted packaging waste to which ALRs are applied, types of sorting plants to which different ALRs apply, the methodological approach to calculating ALRs at such point(s), including the statistical accuracy of any surveys used, or the nature of any technical specifications.

|  |  |  |
| --- | --- | --- |
| Sorted waste material and sorting plant type | ALR applied (in %) | Description |
|  |  |  |

*Add new rows as appropriate*

2.2.6. Attribution of waste to packaging and non-packaging types

Description of the methodology to exclude non-packaging waste, where applicable. 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 |  |  |  |  |
| Ferrous metals |  |  |  |  |
| Aluminium |  |  |  |  |
| Mixed waste |  |  |  |  |
| Other |  |  |  |  |

2.2.11. Calculation of recycling of metals from incinerator bottom ash

Detailed description of the method to collect data in order to calculate the amount of metals separated from incineration bottom ash in accordance with the Commission Implementing Act adopted in accordance with Article 37(7) of Directive 2008/98/EC

Description of the method to measure the total amount of metal concentrate extracted from incinerator bottom ash

Description of the method to measure the average level of metallic content in the total amount of metal concentrate, including the reliability of any surveys undertaken

Description of the method to measure the proportion of waste entering incineration plants that is packaging waste, including the reliability of any surveys undertaken

* 1. 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 population surveyed | Data (tonnes) | Confidence level | Error margin | Details of adjustments from the survey year to the current year | Other details |
|  |  |  |  |  |  |  |  |  |

*Add new rows for each survey used*

2.3.4. 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).

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 new rows as appropriate*

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

1. Detailed description of the system for quality control and traceability for packaging waste pursuant to Article 6a (3) and (8) of Directive 94/62/EC
2. Waste treated outside the Member State

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Packaging waste material | Subject to final treatment in the Member 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 |  |  |  |  |

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 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.

# Confidentiality

Justification to withhold the publication of specific parts of this report:

# main national websites, reference documents and publications

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ANNEX […]