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► **B**     **DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**  
**of 19 November 2008**  
**on waste and repealing certain Directives**  
**(Text with EEA relevance)**  
(OJ L 312, 22.11.2008, p. 3)

Amended by:

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► <b><u>M1</u></b>	Commission Regulation (EU) No 1357/2014 of 18 December 2014	L 365	89	19.12.2014
► <b><u>M2</u></b>	Commission Directive (EU) 2015/1127 of 10 July 2015	L 184	13	11.7.2015
► <b><u>M3</u></b>	Council Regulation (EU) 2017/997 of 8 June 2017	L 150	1	14.6.2017
► <b><u>M4</u></b>	Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018	L 150	109	14.6.2018
► <b><u>M5</u></b>	Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023	L 191	1	28.7.2023

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- **C1**     Corrigendum, OJ L 297, 13.11.2015, p. 9 (2015/1127)
- **C2**     Corrigendum, OJ L 42, 18.2.2017, p. 43 (1357/2014)
- **C3**     Corrigendum, OJ L 90243, 17.4.2024, p. 1 (2023/1542)

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## CHAPTER I

## SUBJECT MATTER, SCOPE AND DEFINITIONS

**▼M4***Article 1***Subject matter and scope**

This Directive lays down measures to protect the environment and human health by preventing or reducing the generation of waste, the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use, which are crucial for the transition to a circular economy and for guaranteeing the Union's long-term competitiveness.

**▼B***Article 2***Exclusions from the scope**

1. The following shall be excluded from the scope of this Directive:

- (a) gaseous effluents emitted into the atmosphere;
- (b) land (in situ) including unexcavated contaminated soil and buildings permanently connected with land;
- (c) uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of construction in its natural state on the site from which it was excavated;
- (d) radioactive waste;
- (e) decommissioned explosives;
- (f) faecal matter, if not covered by paragraph 2(b), straw and other natural non-hazardous agricultural or forestry material used in farming, forestry or for the production of energy from such biomass through processes or methods which do not harm the environment or endanger human health.

2. The following shall be excluded from the scope of this Directive to the extent that they are covered by other Community legislation:

- (a) waste waters;
- (b) animal by-products including processed products covered by Regulation (EC) No 1774/2002, except those which are destined for incineration, landfilling or use in a biogas or composting plant;

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- (c) carcasses of animals that have died other than by being slaughtered, including animals killed to eradicate epizootic diseases, and that are disposed of in accordance with Regulation (EC) No 1774/2002;
- (d) waste resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries covered by Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries <sup>(1)</sup>;

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- (e) substances that are destined for use as feed materials as defined in point (g) of Article 3(2) of Regulation (EC) No 767/2009 of the European Parliament and of the Council <sup>(2)</sup> and that do not consist of or contain animal by-products.

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3. Without prejudice to obligations under other relevant Community legislation, sediments relocated inside surface waters for the purpose of managing waters and waterways or of preventing floods or mitigating the effects of floods and droughts or land reclamation shall be excluded from the scope of this Directive if it is proved that the sediments are non-hazardous.

4. Specific rules for particular instances, or supplementing those of this Directive, on the management of particular categories of waste, may be laid down by means of individual Directives.

*Article 3***Definitions**

For the purposes of this Directive, the following definitions shall apply:

- 1. ‘waste’ means any substance or object which the holder discards or intends or is required to discard;
- 2. ‘hazardous waste’ means waste which displays one or more of the hazardous properties listed in Annex III;

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2a. ‘non-hazardous waste’ means waste which is not covered by point 2;

2b. ‘municipal waste’ means:

- (a) mixed waste and separately collected waste from households, including paper and cardboard, glass, metals, plastics, bio-waste, wood, textiles, packaging, waste electrical and electronic equipment, waste batteries and accumulators, and bulky waste, including mattresses and furniture;

<sup>(1)</sup> OJ L 102, 11.4.2006, p. 15.

<sup>(2)</sup> Regulation (EC) No 767/2009 of the European Parliament and of the Council of 13 July 2009 on the placing on the market and use of feed, amending European Parliament and Council Regulation (EC) No 1831/2003 and repealing Council Directive 79/373/EEC, Commission Directive 80/511/EEC, Council Directives 82/471/EEC, 83/228/EEC, 93/74/EEC, 93/113/EC and 96/25/EC and Commission Decision 2004/217/EC (OJ L 229, 1.9.2009, p. 1).

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- (b) mixed waste and separately collected waste from other sources, where such waste is similar in nature and composition to waste from households;

Municipal waste does not include waste from production, agriculture, forestry, fishing, septic tanks and sewage network and treatment, including sewage sludge, end-of-life vehicles or construction and demolition waste.

This definition is without prejudice to the allocation of responsibilities for waste management between public and private actors;

- 2c. ‘construction and demolition waste’ means waste generated by construction and demolition activities;

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3. ‘waste oils’ means any mineral or synthetic lubrication or industrial oils which have become unfit for the use for which they were originally intended, such as used combustion engine oils and gearbox oils, lubricating oils, oils for turbines and hydraulic oils;

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4. ‘bio-waste’ means biodegradable garden and park waste, food and kitchen waste from households, offices, restaurants, wholesale, canteens, caterers and retail premises and comparable waste from food processing plants;
- 4a. ‘food waste’ means all food as defined in Article 2 of Regulation (EC) No 178/2002 of the European Parliament and of the Council <sup>(1)</sup> that has become waste;

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5. ‘waste producer’ means anyone whose activities produce waste (original waste producer) or anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste;
6. ‘waste holder’ means the waste producer or the natural or legal person who is in possession of the waste;
7. ‘dealer’ means any undertaking which acts in the role of principal to purchase and subsequently sell waste, including such dealers who do not take physical possession of the waste;
8. ‘broker’ means any undertaking arranging the recovery or disposal of waste on behalf of others, including such brokers who do not take physical possession of the waste;

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9. ‘waste management’ means the collection, transport, recovery (including sorting), and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker;

<sup>(1)</sup> Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety (OJ L 31, 1.2.2002, p. 1).

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10. ‘collection’ means the gathering of waste, including the preliminary sorting and preliminary storage of waste for the purposes of transport to a waste treatment facility;
11. ‘separate collection’ means the collection where a waste stream is kept separately by type and nature so as to facilitate a specific treatment;
12. ‘prevention’ means measures taken before a substance, material or product has become waste, that reduce:
  - (a) the quantity of waste, including through the re-use of products or the extension of the life span of products;
  - (b) the adverse impacts of the generated waste on the environment and human health; or

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- (c) the content of hazardous substances in materials and products;

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13. ‘re-use’ means any operation by which products or components that are not waste are used again for the same purpose for which they were conceived;
14. ‘treatment’ means recovery or disposal operations, including preparation prior to recovery or disposal;
15. ‘recovery’ means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. Annex II sets out a non-exhaustive list of recovery operations;

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- 15a. ‘material recovery’ means any recovery operation, other than energy recovery and the reprocessing into materials that are to be used as fuels or other means to generate energy. It includes, *inter alia*, preparing for re-use, recycling and backfilling;

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16. ‘preparing for re-use’ means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing;
17. ‘recycling’ means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations;

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- 17a. ‘backfilling’ means any recovery operation where suitable non-hazardous waste is used for purposes of reclamation in excavated areas or for engineering purposes in landscaping. Waste used for backfilling must substitute non-waste materials, be suitable for the aforementioned purposes, and be limited to the amount strictly necessary to achieve those purposes;

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18. ‘regeneration of waste oils’ means any recycling operation whereby base oils can be produced by refining waste oils, in particular by removing the contaminants, the oxidation products and the additives contained in such oils;
19. ‘disposal’ means any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy. Annex I sets out a non-exhaustive list of disposal operations;
20. ‘best available techniques’ means best available techniques as defined in Article 2(11) of Directive 96/61/EC;

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21. ‘extended producer responsibility scheme’ means a set of measures taken by Member States to ensure that producers of products bear financial responsibility or financial and organisational responsibility for the management of the waste stage of a product’s life cycle.

**▼B***Article 4***Waste hierarchy**

1. The following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy:

- (a) prevention;
- (b) preparing for re-use;
- (c) recycling;
- (d) other recovery, e.g. energy recovery; and
- (e) disposal.

2. When applying the waste hierarchy referred to in paragraph 1, Member States shall take measures to encourage the options that deliver the best overall environmental outcome. This may require specific waste streams departing from the hierarchy where this is justified by life-cycle thinking on the overall impacts of the generation and management of such waste.

Member States shall ensure that the development of waste legislation and policy is a fully transparent process, observing existing national rules about the consultation and involvement of citizens and stakeholders.

Member States shall take into account the general environmental protection principles of precaution and sustainability, technical feasibility and economic viability, protection of resources as well as the overall environmental, human health, economic and social impacts, in accordance with Articles 1 and 13.

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3. Member States shall make use of economic instruments and other measures to provide incentives for the application of the waste hierarchy, such as those indicated in Annex IVa or other appropriate instruments and measures.

**▼ B***Article 5***By-products****▼ M4**

1. Member States shall take appropriate measures to ensure that a substance or object resulting from a production process the primary aim of which is not the production of that substance or object is considered not to be waste, but to be a by-product if the following conditions are met:

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- (a) further use of the substance or object is certain;
- (b) the substance or object can be used directly without any further processing other than normal industrial practice;
- (c) the substance or object is produced as an integral part of a production process; and
- (d) further use is lawful, i.e. the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts.

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2. The Commission may adopt implementing acts in order to establish detailed criteria on the uniform application of the conditions laid down in paragraph 1 to specific substances or objects.

Those detailed criteria shall ensure a high level of protection of the environment and human health and facilitate the prudent and rational utilisation of natural resources.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 39(2). When adopting those implementing acts, the Commission shall take as a starting point the most stringent and environmentally protective of any criteria adopted by Member States in accordance with paragraph 3 of this Article and shall prioritise replicable practices of industrial symbiosis in the development of the detailed criteria.

3. Where criteria have not been set at Union level under paragraph 2, Member States may establish detailed criteria on the application of the conditions laid down in paragraph 1 to specific substances or objects.

Member States shall notify the Commission of those detailed criteria in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council <sup>(1)</sup> where so required by that Directive.

**▼ B***Article 6***End-of-waste status****▼ M4**

1. Member States shall take appropriate measures to ensure that waste which has undergone a recycling or other recovery operation is considered to have ceased to be waste if it complies with the following conditions:

<sup>(1)</sup> Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (OJ L 241, 17.9.2015, p. 1).

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- (a) the substance or object is to be used for specific purposes;

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- (b) a market or demand exists for such a substance or object;
- (c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and
- (d) the use of the substance or object will not lead to overall adverse environmental or human health impacts.

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2. The Commission shall monitor the development of national end-of-waste criteria in Member States, and assess the need to develop Union-wide criteria on this basis. To that end, and where appropriate, the Commission shall adopt implementing acts in order to establish detailed criteria on the uniform application of the conditions laid down in paragraph 1 to certain types of waste.

Those detailed criteria shall ensure a high level of protection of the environment and human health and facilitate the prudent and rational utilisation of natural resources. They shall include:

- (a) permissible waste input material for the recovery operation;
- (b) allowed treatment processes and techniques;
- (c) quality criteria for end-of-waste materials resulting from the recovery operation in line with the applicable product standards, including limit values for pollutants where necessary;
- (d) requirements for management systems to demonstrate compliance with the end-of-waste criteria, including for quality control and self-monitoring, and accreditation, where appropriate; and
- (e) a requirement for a statement of conformity.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 39(2).

When adopting those implementing acts, the Commission shall take account of the relevant criteria established by Member States in accordance with paragraph 3 and shall take as a starting point the most stringent and environmentally protective of those criteria.

3. Where criteria have not been set at Union level under paragraph 2, Member States may establish detailed criteria on the application of the conditions laid down in paragraph 1 to certain types of waste. Those detailed criteria shall take into account any possible adverse environmental and human health impacts of the substance or object and shall satisfy the requirements laid down in points (a) to (e) of paragraph 2.

Member States shall notify the Commission of those criteria in accordance with Directive (EU) 2015/1535 where so required by that Directive.



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4. Where criteria have not been set at either Union or national level under paragraph 2 or 3, respectively, a Member State may decide on a case-by-case basis, or take appropriate measures to verify, that certain waste has ceased to be waste on the basis of the conditions laid down in paragraph 1 and, where necessary, reflecting the requirements laid down in points (a) to (e) of paragraph 2, and taking into account limit values for pollutants and any possible adverse environmental and human health impacts. Such case-by-case decisions are not required to be notified to the Commission in accordance with Directive (EU) 2015/1535.

Member States may make information about case-by-case decisions and about the results of verification by competent authorities publicly available by electronic means.

5. The natural or legal person who:

- (a) uses, for the first time, a material that has ceased to be waste and that has not been placed on the market; or
- (b) places a material on the market for the first time after it has ceased to be waste,

shall ensure that the material meets relevant requirements under the applicable chemical and product related legislation. The conditions laid down in paragraph 1 have to be met before the legislation on chemicals and products applies to the material that has ceased to be waste.

**▼ B***Article 7***List of waste**

► **M4** 1. The Commission is empowered to adopt delegated acts in accordance with Article 38a in order to supplement this Directive by establishing, and reviewing in accordance with paragraphs 2 and 3 of this Article, a list of waste. ◀ The list of waste shall include hazardous waste and shall take into account the origin and composition of the waste and, where necessary, the limit values of concentration of hazardous substances. The list of waste shall be binding as regards determination of the waste which is to be considered as hazardous waste. The inclusion of a substance or object in the list shall not mean that it is waste in all circumstances. A substance or object shall be considered to be waste only where the definition in point (1) of Article 3 is met.

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2. A Member State may consider waste as hazardous waste where, even though it does not appear as such on the list of waste, it displays one or more of the properties listed in Annex III. The Member State shall notify the Commission of any such cases without delay and provide the Commission with all relevant information. In the light of notifications received, the list shall be reviewed in order to decide on its adaptation.

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3. Where a Member State has evidence to show that specific waste that appears on the list as hazardous waste does not display any of the properties listed in Annex III, it may consider that waste as non-hazardous waste. The Member State shall notify the Commission of any such cases without delay and shall provide the Commission with the necessary evidence. In the light of notifications received, the list shall be reviewed in order to decide on its adaptation.

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4. The reclassification of hazardous waste as non-hazardous waste may not be achieved by diluting or mixing the waste with the aim of lowering the initial concentrations of hazardous substances to a level below the thresholds for defining waste as hazardous.

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6. Member States may consider waste as non-hazardous waste in accordance with the list of waste referred to in paragraph 1.

7. The Commission shall ensure that the list of waste and any review of this list adhere, as appropriate, to principles of clarity, comprehensibility and accessibility for users, particularly small and medium-sized enterprises (SMEs).

## CHAPTER II

## GENERAL REQUIREMENTS

*Article 8***Extended producer responsibility**

1. In order to strengthen the re-use and the prevention, recycling and other recovery of waste, Member States may take legislative or non-legislative measures to ensure that any natural or legal person who professionally develops, manufactures, processes, treats, sells or imports products (producer of the product) has extended producer responsibility.

Such measures may include an acceptance of returned products and of the waste that remains after those products have been used, as well as the subsequent management of the waste and financial responsibility for such activities. These measures may include the obligation to provide publicly available information as to the extent to which the product is re-usable and recyclable.

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Where such measures include the establishment of extended producer responsibility schemes, the general minimum requirements laid down in Article 8a shall apply.

Member States may decide that producers of products that undertake financial or financial and organisational responsibilities for the management of the waste stage of a product's life cycle of their own accord should apply some or all of the general minimum requirements laid down in Article 8a.

2. Member States may take appropriate measures to encourage the design of products and components of products in order to reduce their environmental impact and the generation of waste in the course of the production and subsequent use of products, and in order to ensure that the recovery and disposal of products that have become waste take place in accordance with Articles 4 and 13.

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Such measures may encourage, *inter alia*, the development, production and marketing of products and components of products that are suitable for multiple use, that contain recycled materials, that are technically durable and easily repairable and that are, after having become waste, suitable for preparing for re-use and recycling in order to facilitate proper implementation of the waste hierarchy. The measures shall take into account the impact of products throughout their life cycle, the waste hierarchy and, where appropriate, the potential for multiple recycling.

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3. When applying extended producer responsibility, Member States shall take into account the technical feasibility and economic viability and the overall environmental, human health and social impacts, respecting the need to ensure the proper functioning of the internal market.

4. The extended producer responsibility shall be applied without prejudice to the responsibility for waste management as provided for in Article 15(1) and without prejudice to existing waste stream specific and product specific legislation.

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5. The Commission shall organise an exchange of information between Member States and the actors involved in extended producer responsibility schemes on the practical implementation of the general minimum requirements laid down in Article 8a. This includes, *inter alia*, exchange of information on best practices to ensure adequate governance, cross-border cooperation concerning extended producer responsibility schemes and a smooth functioning of the internal market, on the organisational features and the monitoring of organisations implementing extended producer responsibility obligations on behalf of producers of products, on the modulation of financial contributions, on the selection of waste management operators and on the prevention of littering. The Commission shall publish the results of the exchange of information and may provide guidelines on these and other relevant aspects.

The Commission shall publish guidelines, in consultation with Member States, on cross-border cooperation concerning extended producer responsibility schemes and on the modulation of financial contributions referred to in point (b) of Article 8a(4).

Where necessary to avoid distortion of the internal market, the Commission may adopt implementing acts in order to lay down criteria with a view to the uniform application of point (b) of Article 8a(4), but excluding any precise determination of the level of the contributions. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 39(2).

*Article 8a***General minimum requirements for extended producer responsibility schemes**

1. Where extended producer responsibility schemes are established in accordance with Article 8(1), including pursuant to other legislative acts of the Union, Member States shall:

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- (a) define in a clear way the roles and responsibilities of all relevant actors involved, including producers of products placing products on the market of the Member State, organisations implementing extended producer responsibility obligations on their behalf, private or public waste operators, local authorities and, where appropriate, re-use and preparing for re-use operators and social economy enterprises;
- (b) in line with the waste hierarchy, set waste management targets, aiming to attain at least the quantitative targets relevant for the extended producer responsibility scheme as laid down in this Directive, Directive 94/62/EC, Directive 2000/53/EC, Directive 2006/66/EC and Directive 2012/19/EU of the European Parliament and of the Council <sup>(1)</sup>, and set other quantitative targets and/or qualitative objectives that are considered relevant for the extended producer responsibility scheme;
- (c) ensure that a reporting system is in place to gather data on the products placed on the market of the Member State by the producers of products subject to extended producer responsibility and data on the collection and treatment of waste resulting from those products specifying, where appropriate, the waste material flows, as well as other data relevant for the purposes of point (b);
- (d) ensure equal treatment of producers of products regardless of their origin or size, without placing a disproportionate regulatory burden on producers, including small and medium-sized enterprises, of small quantities of products.

2. Member States shall take the necessary measures to ensure that the waste holders targeted by the extended producer responsibility schemes established in accordance with Article 8(1), are informed about waste prevention measures, centres for re-use and preparing for re-use, take-back and collection systems, and the prevention of littering. Member States shall also take measures to create incentives for the waste holders to assume their responsibility to deliver their waste into the separate collection systems in place, notably, where appropriate, through economic incentives or regulations.

3. Member States shall take the necessary measures to ensure that any producer of products or organisation implementing extended producer responsibility obligations on behalf of producers of products:

- (a) has a clearly defined geographical, product and material coverage without limiting those areas to those where the collection and management of waste are the most profitable;
- (b) provides an appropriate availability of waste collection systems within the areas referred to in point (a);
- (c) has the necessary financial means or financial and organisational means to meet its extended producer responsibility obligations;

<sup>(1)</sup> Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) (OJ L 197, 24.7.2012, p. 38).

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- (d) puts in place an adequate self-control mechanism, supported, where relevant, by regular independent audits, to appraise:
  - (i) its financial management, including compliance with the requirements laid down in points (a) and (b) of paragraph 4;
  - (ii) the quality of data collected and reported in accordance with point (c) of paragraph 1 of this Article and with the requirements of Regulation (EC) No 1013/2006;
- (e) makes publicly available information about the attainment of the waste management targets referred to in point (b) of paragraph 1, and, in the case of collective fulfilment of extended producer responsibility obligations, also information about:
  - (i) its ownership and membership;
  - (ii) the financial contributions paid by producers of products per unit sold or per tonne of product placed on the market; and
  - (iii) the selection procedure for waste management operators.

4. Member States shall take the necessary measures to ensure that the financial contributions paid by the producer of the product to comply with its extended producer responsibility obligations:

- (a) cover the following costs for the products that the producer puts on the market in the Member State concerned:
  - costs of separate collection of waste and its subsequent transport and treatment, including treatment necessary to meet the Union waste management targets, and costs necessary to meet other targets and objectives as referred to in point (b) of paragraph 1, taking into account the revenues from re-use, from sales of secondary raw material from its products and from unclaimed deposit fees,
  - costs of providing adequate information to waste holders in accordance with paragraph 2,
  - costs of data gathering and reporting in accordance with point (c) of paragraph 1.

This point shall not apply to extended producer responsibility schemes established pursuant to Directive 2000/53/EC, 2006/66/EC or 2012/19/EU;

- (b) in the case of collective fulfilment of extended producer responsibility obligations, are modulated, where possible, for individual products or groups of similar products, notably by taking into account their durability, reparability, re-usability and recyclability and the presence of hazardous substances, thereby taking a life-cycle approach and aligned with the requirements set by relevant Union law, and where available, based on harmonised criteria in order to ensure a smooth functioning of the internal market; and

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- (c) do not exceed the costs that are necessary to provide waste management services in a cost-efficient way. Such costs shall be established in a transparent way between the actors concerned.

Where justified by the need to ensure proper waste management and the economic viability of the extended producer responsibility scheme, Member States may depart from the division of financial responsibility as laid down in point (a), provided that:

- (i) in the case of extended producer responsibility schemes established to attain waste management targets and objectives established under legislative acts of the Union, the producers of products bear at least 80 % of the necessary costs;
- (ii) in the case of extended producer responsibility schemes established on or after 4 July 2018 to attain waste management targets and objectives solely established in Member State legislation, the producers of products bear at least 80 % of the necessary costs;
- (iii) in the case of extended producer responsibility schemes established before 4 July 2018 to attain waste management targets and objectives solely established in Member State legislation, the producers of products bear at least 50 % of the necessary costs,

and provided that the remaining costs are borne by original waste producers or distributors.

This derogation may not be used to lower the proportion of costs borne by producers of products under extended producer responsibility schemes established before 4 July 2018.

5. Member States shall establish an adequate monitoring and enforcement framework with a view to ensuring that producers of products and organisations implementing extended producer responsibility obligations on their behalf implement their extended producer responsibility obligations, including in the case of distance sales, that the financial means are properly used and that all actors involved in the implementation of the extended producer responsibility schemes report reliable data.

Where, in the territory of a Member State, multiple organisations implement extended producer responsibility obligations on behalf of producers of products, the Member State concerned shall appoint at least one body independent of private interests or entrust a public authority to oversee the implementation of extended producer responsibility obligations.

Each Member State shall allow the producers of products established in another Member State and placing products on its territory to appoint a legal or natural person established on its territory as an authorised representative for the purposes of fulfilling the obligations of a producer related to extended producer responsibility schemes on its territory.

For the purposes of monitoring and verifying compliance with the obligations of the producer of the product in relation to extended producer responsibility schemes, Member States may lay down requirements, such as registration, information and reporting requirements, to be met by a legal or natural person to be appointed as an authorised representative on their territory.

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6. Member States shall ensure a regular dialogue between relevant stakeholders involved in the implementation of extended producer responsibility schemes, including producers and distributors, private or public waste operators, local authorities, civil society organisations and, where applicable, social economy actors, re-use and repair networks and preparing for re-use operators.

7. Member States shall take measures to ensure that extended producer responsibility schemes that have been established before 4 July 2018, comply with this Article by 5 January 2023.

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► **C3** For batteries, as defined in Article 3(1), point (1), of Regulation (EU) 2023/1542 of the European Parliament and of the Council <sup>(1)</sup>, ◀ Member States shall take measures to ensure that extended producer responsibility schemes that have been established before 4 July 2018, comply with this Article by 18 August 2025.

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8. The provision of information to the public under this Article shall be without prejudice to preserving the confidentiality of commercially sensitive information in conformity with the relevant Union and national law.

*Article 9***Prevention of waste**

1. Member States shall take measures to prevent waste generation. Those measures shall, at least:

- (a) promote and support sustainable production and consumption models;
- (b) encourage the design, manufacturing and use of products that are resource-efficient, durable (including in terms of life span and absence of planned obsolescence), repairable, re-usable and upgradable;
- (c) target products containing critical raw materials to prevent that those materials become waste;
- (d) encourage the re-use of products and the setting up of systems promoting repair and re-use activities, including in particular for electrical and electronic equipment, textiles and furniture, as well as packaging and construction materials and products;
- (e) encourage, as appropriate and without prejudice to intellectual property rights, the availability of spare parts, instruction manuals, technical information, or other instruments, equipment or software enabling the repair and re-use of products without compromising their quality and safety;
- (f) reduce waste generation in processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques;

<sup>(1)</sup> Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, amending Directive 2008/98/EC and Regulation (EU) 2019/1020 and repealing Directive 2006/66/EC (OJ L 191, 28.7.2023, p. 1).

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- (g) reduce the generation of food waste in primary production, in processing and manufacturing, in retail and other distribution of food, in restaurants and food services as well as in households as a contribution to the United Nations Sustainable Development Goal to reduce by 50 % the per capita global food waste at the retail and consumer levels and to reduce food losses along production and supply chains by 2030;
- (h) encourage food donation and other redistribution for human consumption, prioritising human use over animal feed and the reprocessing into non-food products;
- (i) promote the reduction of the content of hazardous substances in materials and products, without prejudice to harmonised legal requirements concerning those materials and products laid down at Union level, and ensure that any supplier of an article as defined in point 33 of Article 3 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council <sup>(1)</sup> provides the information pursuant to Article 33(1) of that Regulation to the European Chemicals Agency as from 5 January 2021;
- (j) reduce the generation of waste, in particular waste that is not suitable for preparing for re-use or recycling;
- (k) identify products that are the main sources of littering, notably in natural and marine environments, and take appropriate measures to prevent and reduce litter from such products; where Member States decide to implement this obligation through market restrictions, they shall ensure that such restrictions are proportionate and non-discriminatory;
- (l) aim to halt the generation of marine litter as a contribution towards the United Nations Sustainable Development Goal to prevent and significantly reduce marine pollution of all kinds; and
- (m) develop and support information campaigns to raise awareness about waste prevention and littering.

2. The European Chemicals Agency shall establish a database for the data to be submitted to it pursuant to point (i) of paragraph 1 by 5 January 2020 and maintain it. The European Chemicals Agency shall provide access to that database to waste treatment operators. It shall also provide access to that database to consumers upon request.

3. Member States shall monitor and assess the implementation of the waste prevention measures. For that purpose, they shall use appropriate qualitative or quantitative indicators and targets, notably on the quantity of waste that is generated.

4. Member States shall monitor and assess the implementation of their measures on re-use by measuring re-use on the basis of the

<sup>(1)</sup> Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006, p. 1).



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common methodology established by the implementing act referred to in paragraph 7, as from the first full calendar year after the adoption of that implementing act.

5. Member States shall monitor and assess the implementation of their food waste prevention measures by measuring the levels of food waste on the basis of the methodology established by the delegated act referred to in paragraph 8, as from the first full calendar year after the adoption of that delegated act.

6. By 31 December 2023, the Commission shall examine the data on food waste provided by Member States in accordance with Article 37(3) with a view to considering the feasibility of establishing a Union-wide food waste reduction target to be met by 2030 on the basis of the data reported by Member States in accordance with the common methodology established pursuant to paragraph 8 of this Article. To that end, the Commission shall submit a report to the European Parliament and to the Council, accompanied, if appropriate, by a legislative proposal.

7. The Commission shall adopt implementing acts to establish indicators to measure the overall progress in the implementation of waste prevention measures and shall, by 31 March 2019, adopt an implementing act to establish a common methodology to report on re-use of products. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 39(2).

8. By 31 March 2019, the Commission shall adopt, on the basis of the outcome of the work of the EU Platform on Food Losses and Food Waste, a delegated act in accordance with Article 38a to supplement this Directive by establishing a common methodology and minimum quality requirements for the uniform measurement of levels of food waste.

9. By 31 December 2024, the Commission shall examine data on re-use provided by Member States in accordance with Article 37(3) with a view to considering the feasibility of measures to encourage the re-use of products, including the setting of quantitative targets. The Commission shall also examine the feasibility of setting other waste prevention measures, including waste reduction targets. To that end, the Commission shall submit a report to the European Parliament and to the Council, accompanied, if appropriate, by a legislative proposal.

*Article 10***Recovery**

1. Member States shall take the necessary measures to ensure that waste undergoes preparing for re-use, recycling or other recovery operations, in accordance with Articles 4 and 13.

2. Where necessary to comply with paragraph 1 and to facilitate or improve preparing for re-use, recycling and other recovery operations, waste shall be subject to separate collection and shall not be mixed with other waste or other materials with different properties.

3. Member States may allow derogations from paragraph 2 provided that at least one of the following conditions is met:

(a) collecting certain types of waste together does not affect their potential to undergo preparing for re-use, recycling or other

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recovery operations in accordance with Article 4 and results in output from those operations which is of comparable quality to that achieved through separate collection;

- (b) separate collection does not deliver the best environmental outcome when considering the overall environmental impacts of the management of the relevant waste streams;
- (c) separate collection is not technically feasible taking into consideration good practices in waste collection;
- (d) separate collection would entail disproportionate economic costs taking into account the costs of adverse environmental and health impacts of mixed waste collection and treatment, the potential for efficiency improvements in waste collection and treatment, revenues from sales of secondary raw materials as well as the application of the polluter-pays principle and extended producer responsibility.

Member States shall regularly review derogations under this paragraph taking into account good practices in separate collection of waste and other developments in waste management.

4. Member States shall take measures to ensure that waste that has been separately collected for preparing for re-use and recycling pursuant to Article 11(1) and Article 22 is not incinerated, with the exception of waste resulting from subsequent treatment operations of the separately collected waste for which incineration delivers the best environmental outcome in accordance with Article 4.

5. Where necessary to comply with paragraph 1 of this Article and to facilitate or improve recovery, Member States shall take the necessary measures, before or during recovery, to remove hazardous substances, mixtures and components from hazardous waste with a view to their treatment in accordance with Articles 4 and 13.

6. By 31 December 2021, Member States shall submit a report to the Commission on the implementation of this Article as regards municipal waste and bio-waste, including on the material and territorial coverage of separate collection and any derogations under paragraph 3.

**▼ B***Article 11***▼ M4****Preparing for re-use and recycling**

1. Member States shall take measures to promote preparing for re-use activities, notably by encouraging the establishment of and support for preparing for re-use and repair networks, by facilitating, where compatible with proper waste management, their access to waste held by collection schemes or facilities that can be prepared for re-use but is not destined for preparing for re-use by those schemes or facilities, and by promoting the use of economic instruments, procurement criteria, quantitative objectives or other measures.

Member States shall take measures to promote high-quality recycling and, to this end, subject to Article 10(2) and (3), shall set up separate collection of waste.

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Subject to Article 10(2) and (3), Member States shall set up separate collection at least for paper, metal, plastic and glass, and, by 1 January 2025, for textiles.

Member States shall take measures to promote selective demolition in order to enable removal and safe handling of hazardous substances and facilitate re-use and high-quality recycling by selective removal of materials, and to ensure the establishment of sorting systems for construction and demolition waste at least for wood, mineral fractions (concrete, bricks, tiles and ceramics, stones), metal, glass, plastic and plaster.

2. In order to comply with the objectives of this Directive, and move to a European circular economy with a high level of resource efficiency, Member States shall take the necessary measures designed to achieve the following targets:

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- (a) by 2020, the preparing for re-use and the recycling of waste materials such as at least paper, metal, plastic and glass from households and possibly from other origins as far as these waste streams are similar to waste from households, shall be increased to a minimum of overall 50 % by weight;
- (b) by 2020, the preparing for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials, of non-hazardous construction and demolition waste excluding naturally occurring material defined in category 17 05 04 in the list of waste shall be increased to a minimum of 70 % by weight;

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- (c) by 2025, the preparing for re-use and the recycling of municipal waste shall be increased to a minimum of 55 % by weight;
- (d) by 2030, the preparing for re-use and the recycling of municipal waste shall be increased to a minimum of 60 % by weight;
- (e) by 2035, the preparing for re-use and the recycling of municipal waste shall be increased to a minimum of 65 % by weight.

3. A Member State may postpone the deadlines for attaining the targets referred to in points (c), (d) and (e) of paragraph 2 by up to five years provided that that Member State:

- (a) prepared for re-use and recycled less than 20 % or landfilled more than 60 % of its municipal waste generated in 2013 as reported under the Joint Questionnaire of the OECD and Eurostat; and
- (b) at the latest 24 months before the respective deadline laid down in point (c), (d) or (e) of paragraph 2, notifies the Commission of its intention to postpone the respective deadline and submits an implementation plan in accordance with Annex IVb.

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4. Within three months of receipt of the implementation plan submitted pursuant to point (b) of paragraph 3, the Commission may request a Member State to revise that plan if the Commission considers that the plan does not comply with the requirements set out in Annex IVb. The Member State concerned shall submit a revised plan within three months of receipt of the Commission's request.

5. In the event of postponing the attainment of the targets in accordance with paragraph 3, the Member State concerned shall take the necessary measures to increase the preparing for re-use and the recycling of municipal waste:

- (a) to a minimum of 50 % by 2025 in the event of postponing the deadline for attaining the target referred to in point (c) of paragraph 2;
- (b) to a minimum of 55 % by 2030 in the event of postponing the deadline for attaining the target referred to in point (d) of paragraph 2;
- (c) to a minimum of 60 % by 2035 in the event of postponing the deadline for attaining the target referred to in point (e) of paragraph 2.

6. By 31 December 2024, the Commission shall consider the setting of preparing for re-use and recycling targets for construction and demolition waste and its material-specific fractions, textile waste, commercial waste, non-hazardous industrial waste and other waste streams, as well as preparing for re-use targets for municipal waste and recycling targets for municipal bio-waste. To that end, the Commission shall submit a report to the European Parliament and to the Council, accompanied, if appropriate, by a legislative proposal.

7. By 31 December 2028, the Commission shall review the target laid down in point (e) of paragraph 2. To that end, the Commission shall submit a report to the European Parliament and to the Council, accompanied, if appropriate, by a legislative proposal.

The Commission shall assess co-processing technology that allows the incorporation of minerals in the co-incineration process of municipal waste. Where a reliable methodology can be found, as part of this review, the Commission shall consider whether such minerals may be counted towards recycling targets.

*Article 11a***Rules on the calculation of the attainment of the targets**

1. For the purpose of calculating whether the targets laid down in points (c), (d) and (e) of Article 11(2) and in Article 11(3) have been attained:

- (a) Member States shall calculate the weight of the municipal waste generated and prepared for re-use or recycled in a given calendar year;
- (b) the weight of the municipal waste prepared for re-use shall be calculated as the weight of products or components of products that have become municipal waste and have undergone all necessary checking, cleaning or repairing operations to enable re-use without further sorting or pre-processing;

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(c) the weight of the municipal waste recycled shall be calculated as the weight of waste which, having undergone all necessary checking, sorting and other preliminary operations to remove waste materials that are not targeted by the subsequent reprocessing and to ensure high-quality recycling, enters the recycling operation whereby waste materials are actually reprocessed into products, materials or substances.

2. For the purposes of point (c) of paragraph 1, the weight of the municipal waste recycled shall be measured when the waste enters the recycling operation.

By way of derogation from the first subparagraph, the weight of municipal waste recycled may be measured at the output of any sorting operation provided that:

(a) such output waste is subsequently recycled;

(b) the weight of materials or substances that are removed by further operations preceding the recycling operation and are not subsequently recycled is not included in the weight of waste reported as recycled.

3. Member States shall establish an effective system of quality control and traceability of municipal waste to ensure that the conditions laid down in point (c) of paragraph 1 of this Article and in paragraph 2 of this Article are met. To ensure the reliability and accuracy of the data gathered on recycled waste, the system may consist of electronic registries set up pursuant to Article 35(4), technical specifications for the quality requirements of sorted waste, or average loss rates for sorted waste for various waste types and waste management practices respectively. Average loss rates shall only be used in cases where reliable data cannot be obtained otherwise and shall be calculated on the basis of the calculation rules established in the delegated act adopted pursuant to paragraph 10 of this Article.

4. For the purpose of calculating whether the targets laid down in points (c), (d) and (e) of Article 11(2) and in Article 11(3) have been attained, the amount of municipal biodegradable waste that enters aerobic or anaerobic treatment may be counted as recycled where that treatment generates compost, digestate, or other output with a similar quantity of recycled content in relation to input, which is to be used as a recycled product, material or substance. Where the output is used on land, Member States may count it as recycled only if this use results in benefits to agriculture or ecological improvement.

As from 1 January 2027, Member States may count municipal bio-waste entering aerobic or anaerobic treatment as recycled only if, in accordance with Article 22, it has been separately collected or separated at source.

5. For the purposes of calculating whether the targets laid down in points (c), (d) and (e) of Article 11(2) and in Article 11(3) have been attained, the amount of waste materials that have ceased to be waste as a result of a preparatory operation before being reprocessed may be counted as recycled provided that such materials are destined for

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subsequent reprocessing into products, materials or substances to be used for the original or other purposes. However, end-of-waste materials to be used as fuels or other means to generate energy, or to be incinerated, backfilled or landfilled, shall not be counted towards the attainment of the recycling targets.

6. For the purposes of calculating whether the targets laid down in points (c), (d) and (e) of Article 11(2) and in Article 11(3) have been attained, Member States may take into account the recycling of metals separated after incineration of municipal waste provided that the recycled metals meet certain quality criteria laid down in the implementing act adopted pursuant to paragraph 9 of this Article.

7. Waste sent to another Member State for the purposes of preparing for re-use, recycling or backfilling in that other Member State may only be counted towards the attainment of the targets laid down in Article 11 (2) and (3) by the Member State in which that waste was collected.

8. Waste exported from the Union for preparing for re-use or recycling shall count towards the attainment of the targets laid down in Article 11(2) and (3) of this Directive by the Member State in which it was collected only if the requirements of paragraph 3 of this Article are met and if, in accordance with Regulation (EC) No 1013/2006, the exporter can prove that the shipment of waste complies with the requirements of that Regulation 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.

9. In order to ensure uniform conditions for the application of this Article, the Commission shall adopt by 31 March 2019 implementing acts establishing rules for the calculation, verification and reporting of data, in particular as regards:

- (a) a common methodology for the calculation of the weight of metals that have been recycled in accordance with paragraph 6, including quality criteria for the recycled metals, and
- (b) bio-waste separated and recycled at source.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 39(2).

10. By 31 March 2019, the Commission shall adopt a delegated act in accordance with Article 38a in order to supplement this Directive by establishing rules for the calculation, verification and reporting of the weight of materials or substances which are removed after a sorting operation and which are not subsequently recycled, based on average loss rates for sorted waste.

*Article 11b***Early warning report**

1. The Commission shall, in cooperation with the European Environment Agency, draw up reports on the progress towards the attainment of the targets laid down in points (c), (d) and (e) of Article 11(2) and in Article 11(3) at the latest three years before each deadline laid down therein.

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2. The reports referred to in paragraph 1 shall include the following:
  - (a) an estimation of the attainment of the targets by each Member State;
  - (b) a list of Member States at risk of not attaining the targets within the respective deadlines, accompanied by appropriate recommendations for the Member States concerned;
  - (c) examples of best practices that are used throughout the Union which could provide guidance for progressing towards attaining the targets.

*Article 12***Disposal**

1. Member States shall ensure that, where recovery in accordance with Article 10(1) is not undertaken, waste undergoes safe disposal operations which meet the provisions of Article 13 on the protection of human health and the environment.
2. By 31 December 2024, the Commission shall carry out an assessment of the disposal operations listed in Annex I, in particular in light of Article 13, and shall submit a report to the European Parliament and to the Council, accompanied, if appropriate, by a legislative proposal, with a view to regulating disposal operations, including through possible restrictions, and to consider a disposal reduction target, to ensure environmentally sound waste management.

**▼B***Article 13***Protection of human health and the environment**

Member States shall take the necessary measures to ensure that waste management is carried out without endangering human health, without harming the environment and, in particular:

- (a) without risk to water, air, soil, plants or animals;
- (b) without causing a nuisance through noise or odours; and
- (c) without adversely affecting the countryside or places of special interest.

**▼M4***Article 14***Costs**

1. In accordance with the polluter-pays principle, the costs of waste management, including for the necessary infrastructure and its operation, shall be borne by the original waste producer or by the current or previous waste holders.
2. Without prejudice to Articles 8 and 8a, Member States may decide that the costs of waste management are to be borne partly or wholly by the producer of the product from which the waste came and that the distributors of such product may share these costs.



CHAPTER III  
WASTE MANAGEMENT

*Article 15*

**Responsibility for waste management**

1. Member States shall take the necessary measures to ensure that any original waste producer or other holder carries out the treatment of waste himself or has the treatment handled by a dealer or an establishment or undertaking which carries out waste treatment operations or arranged by a private or public waste collector in accordance with Articles 4 and 13.

2. When the waste is transferred from the original producer or holder to one of the natural or legal persons referred to in paragraph 1 for preliminary treatment, the responsibility for carrying out a complete recovery or disposal operation shall not be discharged as a general rule.

Without prejudice to Regulation (EC) No 1013/2006, Member States may specify the conditions of responsibility and decide in which cases the original producer is to retain responsibility for the whole treatment chain or in which cases the responsibility of the producer and the holder can be shared or delegated among the actors of the treatment chain.

3. Member States may decide, in accordance with Article 8, that the responsibility for arranging waste management is to be borne partly or wholly by the producer of the product from which the waste came and that distributors of such product may share this responsibility.

4. Member States shall take the necessary measures to ensure that, within their territory, the establishments or undertakings which collect or transport waste on a professional basis deliver the waste collected and transported to appropriate treatment installations respecting the provisions of Article 13.

*Article 16*

**Principles of self-sufficiency and proximity**

1. Member States shall take appropriate measures, in cooperation with other Member States where this is necessary or advisable, to establish an integrated and adequate network of waste disposal installations and of installations for the recovery of mixed municipal waste collected from private households, including where such collection also covers such waste from other producers, taking into account best available techniques.

By way of derogation from Regulation (EC) No 1013/2006, Member States may, in order to protect their network, limit incoming shipments of waste destined to incinerators that are classified as recovery, where it has been established that such shipments would result in national waste having to be disposed of or waste having to be treated in a way that is not consistent with their waste management plans. Member States shall notify the Commission of any such decision. Member States may also limit outgoing shipments of waste on environmental grounds as set out in Regulation (EC) No 1013/2006.



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2. The network shall be designed to enable the Community as a whole to become self-sufficient in waste disposal as well as in the recovery of waste referred to in paragraph 1, and to enable Member States to move towards that aim individually, taking into account geographical circumstances or the need for specialised installations for certain types of waste.

3. The network shall enable waste to be disposed of or waste referred to in paragraph 1 to be recovered in one of the nearest appropriate installations, by means of the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public health.

4. The principles of proximity and self-sufficiency shall not mean that each Member State has to possess the full range of final recovery facilities within that Member State.

*Article 17***Control of hazardous waste**

Member States shall take the necessary action to ensure that the production, collection and transportation of hazardous waste, as well as its storage and treatment, are carried out in conditions providing protection for the environment and human health in order to meet the provisions of Article 13, including action to ensure traceability from production to final destination and control of hazardous waste in order to meet the requirements of Articles 35 and 36.

*Article 18***Ban on the mixing of hazardous waste**

1. Member States shall take the necessary measures to ensure that hazardous waste is not mixed, either with other categories of hazardous waste or with other waste, substances or materials. Mixing shall include the dilution of hazardous substances.

2. By way of derogation from paragraph 1, Member States may allow mixing provided that:

- (a) the mixing operation is carried out by an establishment or undertaking which has obtained a permit in accordance with Article 23;
- (b) the provisions of Article 13 are complied with and the adverse impact of the waste management on human health and the environment is not increased; and
- (c) the mixing operation conforms to best available techniques.

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3. Where hazardous waste has been unlawfully mixed in breach of this Article, Member States shall ensure, without prejudice to Article 36, that separation is carried out where technically feasible and necessary to comply with Article 13.

Where separation is not required pursuant to the first subparagraph of this paragraph, Member States shall ensure that the mixed waste is treated in a facility that has obtained a permit in accordance with Article 23 to treat such a mixture.

**▼B***Article 19***Labelling of hazardous waste**

1. Member States shall take the necessary measures to ensure that, in the course of collection, transport and temporary storage, hazardous waste is packaged and labelled in accordance with the international and Community standards in force.
2. Whenever hazardous waste is transferred within a Member State, it shall be accompanied by an identification document, which may be in electronic format, containing the appropriate data specified in Annex IB to Regulation (EC) No 1013/2006.

**▼M4***Article 20***Hazardous waste produced by households**

1. By 1 January 2025, Member States shall set up separate collection for hazardous waste fractions produced by households to ensure that they are treated in accordance with Articles 4 and 13 and do not contaminate other municipal waste streams.
2. Articles 17, 18, 19 and 35 shall not apply to mixed waste produced by households.
3. Articles 19 and 35 shall not apply to separate fractions of hazardous waste produced by households until they are accepted for collection, disposal or recovery by an establishment or an undertaking which has obtained a permit or has been registered in accordance with Article 23 or 26.
4. By 5 January 2020, the Commission shall draw up guidelines to assist and facilitate Member States in the separate collection of hazardous waste fractions produced by households.

**▼B***Article 21***Waste oils**

1. Without prejudice to the obligations related to the management of hazardous waste laid down in Articles 18 and 19, Member States shall take the necessary measures to ensure that:

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- (a) waste oils are collected separately, unless separate collection is not technically feasible taking into account good practices;
- (b) waste oils are treated, giving priority to regeneration or alternatively to other recycling operations delivering an equivalent or a better overall environmental outcome than regeneration, in accordance with Articles 4 and 13;
- (c) waste oils of different characteristics are not mixed and waste oils are not mixed with other kinds of waste or substances, if such mixing impedes their regeneration or another recycling operation delivering an equivalent or a better overall environmental outcome than regeneration.

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2. For the purposes of separate collection of waste oils and their proper treatment, Member States may, according to their national conditions, apply additional measures such as technical requirements, producer responsibility, economic instruments or voluntary agreements.

3. If waste oils, according to national legislation, are subject to requirements of regeneration, Member States may prescribe that such waste oils shall be regenerated if technically feasible and, where Articles 11 or 12 of Regulation (EC) No 1013/2006 apply, restrict the transboundary shipment of waste oils from their territory to incineration or co-incineration facilities in order to give priority to the regeneration of waste oils.

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4. By 31 December 2022, the Commission shall examine data on waste oils provided by Member States in accordance with Article 37(4) with a view to considering the feasibility of adopting measures for the treatment of waste oils, including quantitative targets on the regeneration of waste oils and any further measures to promote the regeneration of waste oils. To that end, the Commission shall submit a report to the European Parliament and to the Council, accompanied, if appropriate, by a legislative proposal.

*Article 22***Bio-waste**

1. Member States shall ensure that, by 31 December 2023 and subject to Article 10(2) and (3), bio-waste is either separated and recycled at source, or is collected separately and is not mixed with other types of waste.

Member States may allow waste with similar biodegradability and compostability properties which complies with relevant European standards or any equivalent national standards for packaging recoverable through composting and biodegradation, to be collected together with bio-waste.

2. Member States shall take measures in accordance with Articles 4 and 13, to:

(a) encourage the recycling, including composting and digestion, of bio-waste in a way that fulfils a high level of environment protection and results in output which meets relevant high-quality standards;

(b) encourage home composting; and

(c) promote the use of materials produced from bio-waste.

3. By 31 December 2018, the Commission shall request the European standardisation organisations to develop European standards for bio-waste entering organic recycling processes, for compost and for digestate, based on best available practices.



CHAPTER IV  
**PERMITS AND REGISTRATIONS**

*Article 23*

**Issue of permits**

1. Member States shall require any establishment or undertaking intending to carry out waste treatment to obtain a permit from the competent authority.

Such permits shall specify at least the following:

- (a) the types and quantities of waste that may be treated;
- (b) for each type of operation permitted, the technical and any other requirements relevant to the site concerned;
- (c) the safety and precautionary measures to be taken;
- (d) the method to be used for each type of operation;
- (e) such monitoring and control operations as may be necessary;
- (f) such closure and after-care provisions as may be necessary.

2. Permits may be granted for a specified period and may be renewable.

3. Where the competent authority considers that the intended method of treatment is unacceptable from the point of view of environmental protection, in particular when the method is not in accordance with Article 13, it shall refuse to issue the permit.

4. It shall be a condition of any permit covering incineration or co-incineration with energy recovery that the recovery of energy take place with a high level of energy efficiency.

5. Provided that the requirements of this Article are complied with, any permit produced pursuant to other national or Community legislation may be combined with the permit required under paragraph 1 to form a single permit, where such a format obviates the unnecessary duplication of information and the repetition of work by the operator or the competent authority.

*Article 24*

**Exemptions from permit requirements**

Member States may exempt from the requirement laid down in Article 23(1) establishments or undertakings for the following operations:

- (a) disposal of their own non-hazardous waste at the place of production; or
- (b) recovery of waste.

*Article 25*

**Conditions for exemptions**

1. Where a Member State wishes to allow exemptions, as provided for in Article 24, it shall lay down, in respect of each type of activity, general rules specifying the types and quantities of waste that may be covered by an exemption, and the method of treatment to be used.

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Those rules shall be designed to ensure that waste is treated in accordance with Article 13. In the case of disposal operations referred to in point (a) of Article 24 those rules should consider best available techniques.

2. In addition to the general rules provided for in paragraph 1, Member States shall lay down specific conditions for exemptions relating to hazardous waste, including types of activity, as well as any other necessary requirement for carrying out different forms of recovery and, where relevant, the limit values for the content of hazardous substances in the waste as well as the emission limit values.

3. Member States shall inform the Commission of the general rules laid down pursuant to paragraphs 1 and 2.

*Article 26***Registration**

Where the following are not subject to permit requirements, Member States shall ensure that the competent authority keeps a register of:

- (a) establishments or undertakings which collect or transport waste on a professional basis;
- (b) dealers or brokers; and
- (c) establishments or undertakings which are subject to exemptions from the permit requirements pursuant to Article 24.

Where possible, existing records held by the competent authority shall be used to obtain the relevant information for this registration process in order to reduce the administrative burden.

*Article 27***Minimum standards****▼M4**

1. The Commission shall adopt delegated acts in accordance with Article 38a in order to supplement this Directive by setting out technical minimum standards for treatment activities, including for sorting and recycling of waste, which require a permit pursuant to Article 23 where there is evidence that a benefit in terms of the protection of human health and the environment would be gained from such minimum standards.

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2. Such minimum standards shall cover only those waste treatment activities that are not covered by Directive 96/61/EC or are not appropriate for coverage by that Directive.

3. Such minimum standards shall:

- (a) be directed to the main environmental impacts of the waste treatment activity;
- (b) ensure that the waste is treated in accordance with Article 13;
- (c) take into account best available techniques; and
- (d) as appropriate, include elements regarding the quality of treatment and the process requirements.

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4. The Commission shall adopt delegated acts in accordance with Article 38a in order to supplement this Directive by setting out the minimum standards for activities that require registration pursuant to points (a) and (b) of Article 26 where there is evidence that a benefit in terms of the protection of human health and the environment or in avoiding disruption to the internal market would be gained from such minimum standards.

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CHAPTER V  
PLANS AND PROGRAMMES

*Article 28*

**Waste management plans**

1. Member States shall ensure that their competent authorities establish, in accordance with Articles 1, 4, 13 and 16, one or more waste management plans.

Those plans shall, alone or in combination, cover the entire geographical territory of the Member State concerned.

2. The waste management plans shall set out an analysis of the current waste management situation in the geographical entity concerned, as well as the measures to be taken to improve environmentally sound preparing for re-use, recycling, recovery and disposal of waste and an evaluation of how the plan will support the implementation of the objectives and provisions of this Directive.

3. The waste management plans shall contain, as appropriate and taking into account the geographical level and coverage of the planning area, at least the following:

(a) the type, quantity and source of waste generated within the territory, the waste likely to be shipped from or to the national territory, and an evaluation of the development of waste streams in the future;

**▼ M4**

(b) existing major disposal and recovery installations, including any special arrangements for waste oils, hazardous waste, waste containing significant amounts of critical raw materials, or waste streams addressed by specific Union legislation;

(c) an assessment of the need for closure of existing waste installations, and for additional waste installation infrastructure in accordance with Article 16.

Member States shall ensure that an assessment of the investments and other financial means, including for local authorities, required to meet those needs is carried out. This assessment shall be included in the relevant waste management plans or in other strategic documents covering the entire territory of the Member State concerned;

(ca) information on the measures to attain the objective laid down in Article 5(3a) of Directive 1999/31/EC or in other strategic documents covering the entire territory of the Member State concerned;

**▼ M4**

- (cb) an assessment of existing waste collection schemes, including the material and territorial coverage of separate collection and measures to improve its operation, of any derogations granted in accordance with Article 10(3), and of the need for new collection schemes;

**▼ B**

- (d) sufficient information on the location criteria for site identification and on the capacity of future disposal or major recovery installations, if necessary;
- (e) general waste management policies, including planned waste management technologies and methods, or policies for waste posing specific management problems;

**▼ M4**

- (f) measures to combat and prevent all forms of littering and to clean up all types of litter;
- (g) appropriate qualitative or quantitative indicators and targets, including on the quantity of generated waste and its treatment and on municipal waste that is disposed of or subject to energy recovery.

**▼ B**

4. The waste management plan may contain, taking into account the geographical level and coverage of the planning area, the following:

- (a) organisational aspects related to waste management including a description of the allocation of responsibilities between public and private actors carrying out the waste management;
- (b) an evaluation of the usefulness and suitability of the use of economic and other instruments in tackling various waste problems, taking into account the need to maintain the smooth functioning of the internal market;
- (c) the use of awareness campaigns and information provision directed at the general public or at a specific set of consumers;
- (d) historical contaminated waste disposal sites and measures for their rehabilitation.

**▼ M4**

5. Waste management plans shall conform to the waste planning requirements laid down in Article 14 of Directive 94/62/EC, to the targets laid down in Article 11(2) and (3) of this Directive and to the requirements laid down in Article 5 of Directive 1999/31/EC, and for the purposes of litter prevention, to the requirements laid down in Article 13 of Directive 2008/56/EC of the European Parliament and of the Council <sup>(1)</sup> and Article 11 of Directive 2000/60/EC of the European Parliament and of the Council <sup>(2)</sup>.

<sup>(1)</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for Community action in the field of marine environmental policy (Marine Strategy Framework Directive) (OJ L 164, 25.6.2008, p. 19).

<sup>(2)</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

**▼ B***Article 29***Waste prevention programmes****▼ M4**

1. Member States shall establish waste prevention programmes setting out at least the waste prevention measures as laid down in Article 9(1) in accordance with Articles 1 and 4.

Such programmes shall be integrated either into the waste management plans required under Article 28 or into other environmental policy programmes, as appropriate, or shall function as separate programmes. If any such programme is integrated into the waste management plan or into those other programmes, the waste prevention objectives and measures shall be clearly identified.

2. When establishing such programmes, Member States shall, where relevant, describe the contribution of instruments and measures listed in Annex IVa to waste prevention and shall evaluate the usefulness of the examples of measures indicated in Annex IV or other appropriate measures. The programmes shall also describe existing waste prevention measures and their contribution to waste prevention.

**▼ B**

The aim of such objectives and measures shall be to break the link between economic growth and the environmental impacts associated with the generation of waste.

**▼ M4**

2a. Member States shall adopt specific food waste prevention programmes within their waste prevention programmes.

**▼ B**

5. The Commission shall create a system for sharing information on best practice regarding waste prevention and shall develop guidelines in order to assist the Member States in the preparation of the Programmes.

*Article 30***Evaluation and review of plans and programmes**

1. Member States shall ensure that the waste management plans and waste prevention programmes are evaluated at least every sixth year and revised as appropriate and, where relevant, in accordance with Articles 9 and 11.

**▼ M4**

2. The European Environment Agency shall publish, every two years, a report containing a review of the progress made in the completion and implementation of waste prevention programmes, including an assessment of the evolution as regards the prevention of waste generation for each Member State and for the Union as a whole, and as regards the decoupling of waste generation from economic growth and the transition towards a circular economy.



**▼B***Article 31***Public participation**

Member States shall ensure that relevant stakeholders and authorities and the general public have the opportunity to participate in the elaboration of the waste management plans and waste prevention programmes, and have access to them once elaborated, in accordance with Directive 2003/35/EC or, if relevant, Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment <sup>(1)</sup>. They shall place the plans and programmes on a publicly available website.

*Article 32***Cooperation**

Member States shall cooperate as appropriate with the other Member States concerned and the Commission to draw up the waste management plans and the waste prevention programmes in accordance with Articles 28 and 29.

*Article 33***Information to be submitted to the Commission**

1. Member States shall inform the Commission of the waste management plans and waste prevention programmes referred to in Articles 28 and 29, once adopted, and of any substantial revisions to the plans and programmes.

**▼M4**

2. The Commission shall adopt implementing acts to establish the format for notifying the information on the adoption and substantial revisions of the waste management plans and the waste prevention programmes. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 39(2).

**▼B**

## CHAPTER VI

**INSPECTIONS AND RECORDS***Article 34***Inspections**

1. Establishments or undertakings which carry out waste treatment operations, establishments or undertakings which collect or transport waste on a professional basis, brokers and dealers, and establishments or undertakings which produce hazardous waste shall be subject to appropriate periodic inspections by the competent authorities.

2. Inspections concerning collection and transport operations shall cover the origin, nature, quantity and destination of the waste collected and transported.

<sup>(1)</sup> OJ L 197, 21.7.2001, p. 30.

**▼ B**

3. Member States may take account of registrations obtained under the Community Eco-Management and Audit Scheme (EMAS), in particular regarding the frequency and intensity of inspections.

*Article 35***Record keeping****▼ M4**

1. The establishments and undertakings referred to in Article 23(1), the producers of hazardous waste, and the establishments and undertakings which collect or transport hazardous waste on a professional basis, or act as dealers and brokers of hazardous waste, shall keep a chronological record of:

- (a) the quantity, nature and origin of that waste and the quantity of products and materials resulting from preparing for re-use, recycling or other recovery operations; and
- (b) where relevant, the destination, frequency of collection, mode of transport and treatment method foreseen in respect of the waste.

They shall make that data available to the competent authorities through the electronic registry or registries to be established pursuant to paragraph 4 of this Article.

**▼ B**

2. For hazardous waste, the records shall be preserved for at least three years except in the case of establishments and undertakings transporting hazardous waste which must keep such records for at least 12 months.

Documentary evidence that the management operations have been carried out shall be supplied at the request of the competent authorities or of a previous holder.

3. Member States may require the producers of non-hazardous waste to comply with paragraphs 1 and 2.

**▼ M4**

4. Member States shall set up an electronic registry or coordinated registries to record the data on hazardous waste referred to in paragraph 1 covering the entire geographical territory of the Member State concerned. Member States may establish such registries for other waste streams, in particular for those waste streams for which targets are set in legislative acts of the Union. Member States shall use the data on waste reported by industrial operators in the European Pollutant Release and Transfer Register set up under Regulation (EC) No 166/2006 of the European Parliament and of the Council <sup>(1)</sup>.

5. The Commission may adopt implementing acts to establish minimum conditions for the operation of such registries. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 39(2).

<sup>(1)</sup> Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC (OJ L 33, 4.2.2006, p. 1).

**▼B***Article 36***Enforcement and penalties****▼M4**

1. Member States shall take the necessary measures to prohibit the abandonment, dumping or uncontrolled management of waste, including littering.

**▼B**

2. Member States shall lay down provisions on the penalties applicable to infringements of the provisions of this Directive and shall take all measures necessary to ensure that they are implemented. The penalties shall be effective, proportionate and dissuasive.

## CHAPTER VII

## FINAL PROVISIONS

**▼M4***Article 37***Reporting**

1. Member States shall report the data concerning the implementation of points (a) to (e) of Article 11(2) and Article 11(3) for each calendar year to the Commission.

They shall report the data electronically within 18 months of the end of the reporting year for which the data are collected. The data shall be reported in the format established by the Commission in accordance with paragraph 7 of this Article.

The first reporting period shall start in the first full calendar year after the adoption of the implementing act that establishes the format for reporting, in accordance with paragraph 7 of this Article.

2. For the purposes of verifying compliance with point (b) of Article 11(2), Member States shall report the amount of waste used for backfilling and other material recovery operations separately from the amount of waste prepared for re-use or recycled. Member States shall report the reprocessing of waste into materials that are to be used for backfilling operations as backfilling.

For the purposes of verifying compliance with points (c), (d) and (e) of Article 11(2) and Article 11(3), Member States shall report the amount of waste prepared for re-use separately from the amount of waste recycled.

3. Member States shall report the data concerning the implementation of Article 9(4) and (5) to the Commission every year.

They shall report the data electronically within 18 months of the end of the reporting year for which the data are collected. The data shall be reported in the format established by the Commission in accordance with paragraph 7 of this Article.

The first reporting period shall start in the first full calendar year after the adoption of the implementing act that establishes the format for reporting, in accordance with paragraph 7 of this Article.

▼ **M4**

4. Member States shall report the data on mineral or synthetic lubrication or industrial oils placed on the market and waste oils separately collected and treated for each calendar year to the Commission.

They shall report the data electronically within 18 months of the end of the reporting year for which the data are collected. The data shall be reported in the format established by the Commission in accordance with paragraph 7.

The first reporting period shall start in the first full calendar year after the adoption of the implementing act that establishes the format for reporting, in accordance with paragraph 7.

5. The data reported by Member States in accordance with this Article shall be accompanied by a quality check report and a report on the measures taken pursuant to Article 11a(3) and (8), including detailed information about the average loss rates where applicable. That information shall be reported in the format for reporting established by the Commission in accordance with paragraph 7 of this Article.

6. The Commission shall review the data reported in accordance with this Article and publish a report on the results of its review. The report shall assess the organisation of the data collection, the sources of data and the methodology used in Member States as well as the completeness, reliability, timeliness and consistency of that data. The assessment may include specific recommendations for improvement. The report shall be drawn up after the first reporting of the data by Member States and every four years thereafter.

7. By 31 March 2019, the Commission shall adopt implementing acts laying down the format for reporting the data referred to in paragraphs 1, 3, 4 and 5 of this Article. For the purposes of reporting on the implementation of points (a) and (b) of Article 11(2), Member States shall use the format established in Commission Implementing Decision of 18 April 2012 establishing a questionnaire for Member States reports on the implementation of Directive 2008/98/EC of the European Parliament and of the Council on waste. For the purpose of reporting on food waste, the methodology developed under Article 9(8) shall be taken into account when developing the format for reporting. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 39(2) of this Directive.

#### *Article 38*

#### **Exchange of information and sharing of best practices, interpretation and adaptation to technical progress**

1. The Commission shall organise a regular exchange of information and sharing of best practices among Member States, including, where appropriate, with regional and local authorities, on the practical implementation and enforcement of the requirements of this Directive, including on:

- (a) the application of the calculation rules set out in Article 11a and the development of measures and systems to trace municipal waste streams from sorting to recycling;
- (b) adequate governance, enforcement, cross-border cooperation;
- (c) innovation in the field of waste management;

**▼M4**

- (d) national by-product and end-of-waste criteria, as referred to in Article 5(3) and in Article 6(3) and (4), facilitated by a Union-wide electronic register to be established by the Commission;
- (e) the economic instruments and other measures used in accordance with Article 4(3) in order to boost the achievement of the objectives laid down in that Article;
- (f) measures laid down in Article 8(1) and (2);
- (g) prevention and the setting up of systems which promote re-use activities and the extension of life span;
- (h) the implementation of the obligations with regard to separate collection;
- (i) the instruments and incentives towards achieving the targets laid down in points (c), (d) and (e) of Article 11(2).

The Commission shall make the results of the exchange of information and sharing of best practices publicly available.

2. The Commission may develop guidelines for the interpretation of the requirements set out in this Directive, including on the definition of waste, prevention, re-use, preparing for re-use, recovery, recycling, disposal, and on the application of the calculation rules set out in Article 11a.

The Commission shall develop guidelines on the definitions of municipal waste and backfilling.

The Commission is empowered to adopt delegated acts in accordance with Article 38a to amend this Directive by specifying the application of the formula for incineration facilities referred to in point R1 of Annex II. Local climatic conditions may be taken into account, such as the severity of the cold and the need for heating insofar as they influence the amounts of energy that can technically be used or produced in the form of electricity, heating, cooling or processing steam. Local conditions of the outermost regions as recognised in the third paragraph of Article 349 of the Treaty on the Functioning of the European Union and of the territories mentioned in Article 25 of the 1985 Act of Accession may also be taken into account.

3. The Commission is empowered to adopt delegated acts in accordance with Article 38a to amend Annexes IV and V in the light of scientific and technical progress.

*Article 38a*

**Exercise of the delegation**

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The power to adopt delegated acts referred to in Articles 7(1), 9(8), 11a(10), 27(1), 27(4), 38(2) and 38(3) shall be conferred on the Commission for a period of five years from 4 July 2018. The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the five-year period. The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.

**▼M4**

3. The delegation of power referred to in Articles 7(1), 9(8), 11a(10), 27(1), 27(4), 38(2) and 38(3) may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law Making <sup>(1)</sup>.

5. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

6. A delegated act adopted pursuant to Articles 7(1), 9(8), 11a(10), 27(1), 27(4), 38(2) and 38(3) shall enter into force only if no objection has been expressed either by the European Parliament or by the Council within a period of two months of notification of that act to the European Parliament and to the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.

*Article 39***Committee procedure**

1. The Commission shall be assisted by a committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011 of the European Parliament and of the Council <sup>(2)</sup>.

2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Where the committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation (EU) No 182/2011 shall apply.

**▼B***Article 40***Transposition**

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 12 December 2010.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

<sup>(1)</sup> OJ L 123, 12.5.2016, p. 1.

<sup>(2)</sup> Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13).

**▼B**

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 41***Repeal and transitional provisions**

Directives 75/439/EEC, 91/689/EEC and 2006/12/EC are hereby repealed with effect from 12 December 2010.

However, from 12 December 2008, the following shall apply:

(a) Article 10(4) of Directive 75/439/EEC shall be replaced by the following:

‘4. The reference method of measurement to determine the PCB/PCT content of waste oils shall be fixed by the Commission. That measure, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(4) of Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste (\*).

(\*) OJ L 114, 27.4.2006, p. 9.’;

(b) Directive 91/689/EEC is hereby amended as follows:

(i) Article 1(4) shall be replaced by the following:

‘4. For the purpose of this Directive “hazardous waste” means:

- waste classified as hazardous waste featuring on the list established by Commission Decision 2000/532/EC (\*) on the basis of Annexes I and II to this Directive. This waste must have one or more of the properties listed in Annex III. The list shall take into account the origin and composition of the waste and, where necessary, limit values of concentration. This list shall be periodically reviewed and, if necessary revised. Those measures, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(4) of Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste (\*\*),
- any other waste which is considered by a Member State to display any of the properties listed in Annex III. Such cases shall be notified to the Commission and reviewed with a view to adapting the list. Those measures, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(4) of Directive 2006/12/EC.

(\*) OJ L 226, 6.9.2000, p. 3.  
(\*\*) OJ L 114, 27.4.2006, p. 9.’;

**▼B**

- (ii) Article 9 shall be replaced by the following:

*Article 9*

The measures necessary for adapting the Annexes of this Directive to scientific and technical progress and for revising the list of wastes referred to in Article 1(4), designed to amend non-essential elements of this Directive, inter alia by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(4) of Directive 2006/12/EC.’;

- (c) Directive 2006/12/EC is hereby amended as follows:

- (i) Article 1(2) shall be replaced by the following:

‘2. For the purposes of paragraph 1, point (a), Commission Decision 2000/532/EC (\*) featuring the list of waste belonging to the categories listed in Annex I to this Directive shall apply. This list shall be periodically reviewed and, if necessary, revised. Those measures, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(4).

(\*) OJ L 226, 6.9.2000, p. 3.’;

- (ii) Article 17 shall be replaced by the following:

*Article 17*

The measures necessary for adapting the Annexes to scientific and technical progress, designed to amend non-essential elements of this Directive, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(4).’;

- (iii) Article 18(4) shall be replaced by the following:

‘4. Where reference is made to this paragraph, Article 5a(1) to (4) and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.’.

References to the repealed Directives shall be construed as references to this Directive and shall be read in accordance with the correlation table set out in Annex V.

*Article 42***Entry into force**

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

*Article 43***Addressees**

This Directive is addressed to the Member States.





## ANNEX I

## DISPOSAL OPERATIONS

- D 1 Deposit into or on to land (e.g. landfill, etc.)
- D 2 Land treatment (e.g. biodegradation of liquid or sludgy discards in soils, etc.)
- D 3 Deep injection (e.g. injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc.)
- D 4 Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.)
- D 5 Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)
- D 6 Release into a water body except seas/oceans
- D 7 Release to seas/oceans including sea-bed insertion
- D 8 Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12
- D 9 Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcination, etc.)
- D 10 Incineration on land
- D 11 Incineration at sea (\*)
- D 12 Permanent storage (e.g. emplacement of containers in a mine, etc.)
- D 13 Blending or mixing prior to submission to any of the operations numbered D 1 to D 12 (\*\*)
- D 14 Repackaging prior to submission to any of the operations numbered D 1 to D 13
- D 15 Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced) (\*\*\*)

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(\*) This operation is prohibited by EU legislation and international conventions.

(\*\*) If there is no other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, inter alia, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12.

(\*\*\*) Temporary storage means preliminary storage according to point (10) of Article 3.

**▼B***ANNEX II***RECOVERY OPERATIONS**

R 1 Use principally as a fuel or other means to generate energy (\*)

R 2 Solvent reclamation/regeneration

**▼M4**

R 3 Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes) (\*\*)

R 4 Recycling/reclamation of metals and metal compounds (\*\*\*)

R 5 Recycling/reclamation of other inorganic materials (\*\*\*\*)

**▼B**

R 6 Regeneration of acids or bases

(\*) This includes incineration facilities dedicated to the processing of municipal solid waste only where their energy efficiency is equal to or above:

— 0,60 for installations in operation and permitted in accordance with applicable Community legislation before 1 January 2009,

— 0,65 for installations permitted after 31 December 2008,

using the following formula:

$$\text{Energy efficiency} = (E_p - (E_f + E_i)) / (0,97 \times (E_w + E_f))$$

In which:

$E_p$  means annual energy produced as heat or electricity. It is calculated with energy in the form of electricity being multiplied by 2,6 and heat produced for commercial use multiplied by 1,1 (GJ/year)

$E_f$  means annual energy input to the system from fuels contributing to the production of steam (GJ/year)

$E_w$  means annual energy contained in the treated waste calculated using the net calorific value of the waste (GJ/year)

$E_i$  means annual energy imported excluding  $E_w$  and  $E_f$  (GJ/year)

0,97 is a factor accounting for energy losses due to bottom ash and radiation.

This formula shall be applied in accordance with the reference document on Best Available Techniques for waste incineration.

► **M2** The energy efficiency formula value will be multiplied by a climate correction factor (CCF) as shown below:

1. CCF for installations in operation and permitted in accordance with applicable Union legislation before 1 September 2015.

$$\text{CCF} = 1 \text{ if } \text{HDD} \geq 3\,350$$

$$\text{CCF} = 1,25 \text{ if } \text{HDD} \leq 2\,150$$

$$\text{CCF} = - (0,25/1\,200) \times \text{HDD} + 1,698 \text{ when } 2\,150 < \text{HDD} < 3\,350$$

2. CCF for installations permitted after 31 August 2015 and for installations under 1 after 31 December 2029:

$$\text{CCF} = 1 \text{ if } \text{HDD} \geq 3\,350$$

$$\text{CCF} = 1,12 \text{ if } \text{HDD} \leq 2\,150$$

$$\text{CCF} = - (0,12/1\,200) \times \text{HDD} + 1,335 \text{ when } 2\,150 < \text{HDD} < 3\,350$$

(The resulting value of CCF will be rounded at three decimal places).

► **C1** The value of HDD (Heating Degree Days) should be taken as the average of annual HDD values for the incineration facility location, calculated for a period of 20 consecutive years before the year for which CCF is calculated. For the calculation of the value of HDD the following method established by Eurostat should be applied: HDD is equal to  $(18 \text{ }^\circ\text{C} - T_m) \times d$  if  $T_m$  is lower than or equal to  $15 \text{ }^\circ\text{C}$  (heating threshold) and is nil if  $T_m$  is greater than  $15 \text{ }^\circ\text{C}$ ; where  $T_m$  is the mean  $(T_{\text{min}} + T_{\text{max}})/2$  outdoor temperature over a period of  $d$  days. Calculations are to be executed on a daily basis ( $d = 1$ ), added up to a year. ◀ ◀

(\*\*) This includes preparing for re-use, gasification and pyrolysis using the components as chemicals and recovery of organic materials in the form of backfilling.

(\*\*\*) This includes preparing for re-use.

(\*\*\*\*) This includes preparing for re-use, recycling of inorganic construction materials, recovery of inorganic materials in the form of backfilling, and soil cleaning resulting in recovery of the soil.

**▼B**

- R 7 Recovery of components used for pollution abatement
- R 8 Recovery of components from catalysts
- R 9 Oil re-refining or other reuses of oil
- R 10 Land treatment resulting in benefit to agriculture or ecological improvement
- R 11 Use of waste obtained from any of the operations numbered R 1 to R 10
- R 12 Exchange of waste for submission to any of the operations numbered R 1 to R 11 (\*)
- R 13 Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced) (\*\*)

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(\*) If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, inter alia, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11.

(\*\*) Temporary storage means preliminary storage according to point (10) of Article 3.

▼ M1

## ANNEX III

## PROPERTIES OF WASTE WHICH RENDER IT HAZARDOUS

**HP 1** ‘**Explosive:**’ waste which is capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic waste, explosive organic peroxide waste and explosive self-reactive waste is included.

When a waste contains one or more substances classified by one of the hazard class and category codes and hazard statement codes shown in Table 1, the waste shall be assessed for HP 1, where appropriate and proportionate, according to test methods. If the presence of a substance, a mixture or an article indicates that the waste is explosive, it shall be classified as hazardous by HP 1.

Table 1: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents for the classification of wastes as hazardous by HP 1:

Hazard Class and Category Code(s)	Hazard statement Code(s)
Unst. Expl.	H 200
Expl. 1.1	H 201
Expl. 1.2	H 202
Expl. 1.3	H 203
Expl. 1.4	H 204
Self-react. A	H 240
Org. Perox. A	
Self-react. B	H 241
Org. Perox. B	

**HP 2** ‘**Oxidising:**’ waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials.

When a waste contains one or more substances classified by one of the hazard class and category codes and hazard statement codes shown in Table 2, the waste shall be assessed for HP 2, where appropriate and proportionate, according to test methods. If the presence of a substance indicates that the waste is oxidising, it shall be classified as hazardous by HP 2.

Table 2: Hazard Class and Category Code(s) and Hazard statement Code(s) for the classification of wastes as hazardous by HP 2:

Hazard Class and Category Code(s)	Hazard statement Code(s)
Ox. Gas 1	H 270
Ox. Liq. 1	H 271
Ox. Sol. 1	

▼ **M1**

Hazard Class and Category Code(s)	Hazard statement Code(s)
Ox. Liq. 2, Ox. Liq. 3	H 272
Ox. Sol. 2, Ox. Sol. 3	

**HP 3** ‘Flammable:’

- flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C;
- flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;
- flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;
- flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;
- water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;
- other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.

When a waste contains one or more substances classified by one of the following hazard class and category codes and hazard statement codes shown in Table 3, the waste shall be assessed, where appropriate and proportionate, according to test methods. If the presence of a substance indicates that the waste is flammable, it shall be classified as hazardous by HP 3.

Table 3: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents for the classification of wastes as hazardous by HP 3:

Hazard Class and Category Code(s)	Hazard statement Code(s)
Flam. Gas 1	H220
Flam. Gas 2	H221
Aerosol 1	H222
Aerosol 2	H223
Flam. Liq. 1	H224
Flam. Liq.2	H225
Flam. Liq. 3	H226
Flam. Sol. 1	H228
Flam. Sol. 2	

▼ **M1**

Hazard Class and Category Code(s)	Hazard statement Code(s)
Self-react. CD	H242
Self-react. EF	
Org. Perox. CD	
Org. Perox. EF	
Pyr. Liq. 1	H250
Pyr. Sol. 1	
Self-heat.1	H251
Self-heat. 2	H252
Water-react. 1	H260
Water-react. 2	H261
Water-react. 3	

**HP 4** ‘Irritant — skin irritation and eye damage:’ waste which on application can cause skin irritation or damage to the eye.

When a waste contains one or more substances in concentrations above the cut-off value, that are classified by one of the following hazard class and category codes and hazard statement codes and one or more of the following concentration limits is exceeded or equalled, the waste shall be classified as hazardous by HP 4.

The cut-off value for consideration in an assessment for Skin corr. 1A (H314), Skin irrit. 2 (H315), Eye dam. 1 (H318) and Eye irrit. 2 (H319) is 1 %.

If the sum of the concentrations of all substances classified as Skin corr. 1A (H314) exceeds or equals 1 %, the waste shall be classified as hazardous according to HP 4.

If the sum of the concentrations of all substances classified as H318 exceeds or equals 10 %, the waste shall be classified as hazardous according to HP 4.

If the sum of the concentrations of all substances classified H315 and H319 exceeds or equals 20 %, the waste shall be classified as hazardous according to HP 4.

Note that wastes containing substances classified as H314 (Skin corr.1A, 1B or 1C) in amounts greater than or equal to 5 % will be classified as hazardous by HP 8. HP 4 will not apply if the waste is classified as HP 8.

**HP 5** **Spécific Target Organ Toxicity (STOT)/Aspiration Toxicity:**’ waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.

**▼ M1**

When a waste contains one or more substances classified by one or more of the following hazard class and category codes and hazard statement codes shown in Table 4, and one or more of the concentration limits in Table 4 is exceeded or equalled, the waste shall be classified as hazardous according to HP 5. When substances classified as STOT are present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 5.

When a waste contains one or more substances classified as Asp. Tox. 1 and the sum of those substances exceeds or equals the concentration limit, the waste shall be classified as hazardous by HP 5 only where the overall kinematic viscosity (at 40 °C) does not exceed 20.5 mm<sup>2</sup>/s. <sup>(1)</sup>

Table 4: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 5

Hazard Class and Category Code(s)	Hazard statement Code(s)	Concentration limit
STOT SE 1	H370	1 %
STOT SE 2	H371	10 %
STOT SE 3	H335	20 %
STOT RE 1	H372	1 %
STOT RE 2	H373	10 %
Asp. Tox. 1	H304	10 %

**HP 6** ‘Acute Toxicity:’ waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.

If the sum of the concentrations of all substances contained in a waste, classified with an acute toxic hazard class and category code and hazard statement code given in Table 5, exceeds or equals the threshold given in that table, the waste shall be classified as hazardous by HP 6. When more than one substance classified as acute toxic is present in a waste, the sum of the concentrations is required only for substances within the same hazard category.

The following cut-off values shall apply for consideration in an assessment:

— For Acute Tox. 1, 2 or 3 (H300, H310, H330, H301, H311, H331): 0.1 %;

— For Acute Tox. 4 (H302, H312, H332): 1 %.

Table 5: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 6

<sup>(1)</sup> The kinematic viscosity shall only be determined for fluids.

▼ **M1**

Hazard Class and Category Code(s)	Hazard statement Code(s)	Concentration limit
Acute Tox.1 (Oral)	H300	0,1 %
Acute Tox. 2 (Oral)	H300	0,25 %
Acute Tox. 3 (Oral)	H301	5 %
Acute Tox 4 (Oral)	H302	25 %
Acute Tox.1 (Dermal)	H310	0,25 %
Acute Tox.2 (Dermal)	H310	2,5 %
Acute Tox. 3 (Dermal)	H311	15 %
Acute Tox 4 (Dermal)	H312	55 %
Acute Tox 1 (Inhal.)	H330	0,1 %
Acute Tox.2 (Inhal.)	H330	0,5 %
Acute Tox. 3 (Inhal.)	H331	3,5 %
Acute Tox. 4 (Inhal.)	H332	22,5 %

**HP 7** ‘**Carcinogenic:**’ waste which induces cancer or increases its incidence.

When a waste contains a substance classified by one of the following hazard class and category codes and hazard statement codes and exceeds or equals one of the following concentration limits shown in Table 6, the waste shall be classified as hazardous by HP 7. When more than one substance classified as carcinogenic is present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 7.

Table 6: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 7

Hazard Class and Category Code(s)	Hazard statement Code(s)	Concentration limit
Carc. 1A	H350	0,1 %
Carc. 1B		
Carc. 2	H351	1,0 %

**HP 8** ‘**Corrosive:**’ waste which on application can cause skin corrosion.

When a waste contains one or more substances classified as Skin corr.1A, 1B or 1C (H314) and the sum of their concentrations exceeds or equals 5 %, the waste shall be classified as hazardous by HP 8.

The cut-off value for consideration in an assessment for Skin corr. 1A, 1B, 1C (H314) is 1.0 %.

**HP 9** ‘**Infectious:**’ waste containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms.



**▼ M1**

The attribution of HP 9 shall be assessed by the rules laid down in reference documents or legislation in the Member States.

**HP 10 Toxic for reproduction:** waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring.

When a waste contains a substance classified by one of the following hazard class and category codes and hazard statement codes and exceeds or equals one of the following concentration limits shown in Table 7, the waste shall be classified hazardous according to HP 10. When more than one substance classified as toxic for reproduction is present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 10.

Table 7: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 10

Hazard Class and Category Code(s)	Hazard statement Code(s)	Concentration limit
Repr. 1A	H360	0,3 %
Repr. 1B		
Repr. 2	H361	3,0 %

**HP 11 ‘Mutagenic:** waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell.

When a waste contains a substance classified by one of the following hazard class and category codes and hazard statement codes and exceeds or equals one of the following concentration limits shown in Table 8, the waste shall be classified as hazardous according to HP 11. When more than one substance classified as mutagenic is present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 11.

Table 8: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 11

Hazard Class and Category Code(s)	Hazard statement Code(s)	Concentration limit
Muta. 1A,	H340	0,1 %
Muta. 1B		
Muta. 2	H341	1,0 %

**▼ M1**

**HP 12** ‘**Release of an acute toxic gas:**’ waste which releases acute toxic gases (Acute Tox. 1, 2 or 3) in contact with water or an acid.

When a waste contains a substance assigned to one of the following supplemental hazards EUH029, EUH031 and EUH032, it shall be classified as hazardous by HP 12 according to test methods or guidelines.

**HP 13** ‘**Sensitising:**’ waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.

When a waste contains a substance classified as sensitising and is assigned to one of the hazard statement codes H317 or H334 and one individual substance equals or exceeds the concentration limit of 10 %, the waste shall be classified as hazardous by HP 13.

**▼ M3**

**HP 14** ‘**Ecotoxic:**’ waste which presents or may present immediate or delayed risks for one or more sectors of the environment.

Waste which fulfils any of the following conditions shall be classified as hazardous by HP 14:

— Waste which contains a substance classified as ozone depleting assigned the hazard statement code H420 in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council<sup>(1)</sup> and the concentration of such a substance equals or exceeds the concentration limit of 0,1 %.

$$[c(\text{H420}) \geq 0,1 \text{ \%}]$$

— Waste which contains one or more substances classified as aquatic acute assigned the hazard statement code H400 in accordance with Regulation (EC) No 1272/2008 and the sum of the concentrations of those substances equals or exceeds the concentration limit of 25 %. A cut-off value of 0,1 % shall apply to such substances.

$$[\Sigma c (\text{H400}) \geq 25 \text{ \%}]$$

— Waste which contains one or more substances classified as aquatic chronic 1, 2 or 3 assigned to the hazard statement code(s) H410, H411 or H412 in accordance with Regulation (EC) No 1272/2008, and the sum of the concentrations of all substances classified as aquatic chronic 1 (H410) multiplied by 100 added to the sum of the concentrations of all substances classified as aquatic chronic 2 (H411) multiplied by 10 added to the sum of the concentrations of all substances classified as aquatic chronic 3 (H412) equals or exceeds the concentration limit of 25 %. A cut-off value of 0,1 % applies to substances classified as H410 and a cut-off value of 1 % applies to substances classified as H411 or H412.

$$[100 \times \Sigma c (\text{H410}) + 10 \times \Sigma c (\text{H411}) + \Sigma c (\text{H412}) \geq 25 \text{ \%}]$$

<sup>(1)</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1).

**▼ M3**

— Waste which contains one or more substances classified as aquatic chronic 1, 2, 3 or 4 assigned the hazard statement code(s) H410, H411, H412 or H413 in accordance with Regulation (EC) No 1272/2008, and the sum of the concentrations of all substances classified as aquatic chronic equals or exceeds the concentration limit of 25 %. A cut-off value of 0,1 % applies to substances classified as H410 and a cut-off value of 1 % applies to substances classified as H411, H412 or H413.

$$[\Sigma c \text{ H410} + \Sigma c \text{ H411} + \Sigma c \text{ H412} + \Sigma c \text{ H413} \geq 25 \%]$$

Where:  $\Sigma$  = sum and c = concentrations of the substances.

**▼ M1**

**HP 15 ‘Waste capable of exhibiting a hazardous property listed above not directly displayed by the original waste’.**

When a waste contains one or more substances assigned to one of the hazard statements or supplemental hazards shown in Table 9, the waste shall be classified as hazardous by HP 15, unless the waste is in such a form that it will not under any circumstance exhibit explosive or potentially explosive properties.

Table 9: Hazard statements and supplemental hazards for waste constituents for the classification of wastes as hazardous by HP 15

Hazard Statement(s)/Supplemental Hazard(s)	
May mass explode in fire	H205
Explosive when dry	EUH001
May form explosive peroxides	EUH019
Risk of explosion if heated under confinement	EUH044

In addition, Member States may characterise a waste as hazardous by HP 15 based on other applicable criteria, such as an assessment of the leachate.

**▼ M3****▼ C2**

*Test methods:*

The methods to be used are described in Commission Regulation (EC) No 440/2008 <sup>(1)</sup> and in other relevant CEN notes or other internationally recognised test methods and guidelines.

<sup>(1)</sup> ► **C2** Commission Regulation (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (OJ L 142, 31.5.2008, p. 1). ◀

*ANNEX IV***EXAMPLES OF WASTE PREVENTION MEASURES REFERRED TO IN ARTICLE 29****Measures that can affect the framework conditions related to the generation of waste**

1. The use of planning measures, or other economic instruments promoting the efficient use of resources.
2. The promotion of research and development into the area of achieving cleaner and less wasteful products and technologies and the dissemination and use of the results of such research and development.
3. The development of effective and meaningful indicators of the environmental pressures associated with the generation of waste aimed at contributing to the prevention of waste generation at all levels, from product comparisons at Community level through action by local authorities to national measures.

**Measures that can affect the design and production and distribution phase**

4. The promotion of eco-design (the systematic integration of environmental aspects into product design with the aim to improve the environmental performance of the product throughout its whole life cycle).
5. The provision of information on waste prevention techniques with a view to facilitating the implementation of best available techniques by industry.
6. Organise training of competent authorities as regards the insertion of waste prevention requirements in permits under this Directive and Directive 96/61/EC.
7. The inclusion of measures to prevent waste production at installations not falling under Directive 96/61/EC. Where appropriate, such measures could include waste prevention assessments or plans.
8. The use of awareness campaigns or the provision of financial, decision making or other support to businesses. Such measures are likely to be particularly effective where they are aimed at, and adapted to, small and medium sized enterprises and work through established business networks.
9. The use of voluntary agreements, consumer/producer panels or sectoral negotiations in order that the relevant businesses or industrial sectors set their own waste prevention plans or objectives or correct wasteful products or packaging.
10. The promotion of creditable environmental management systems, including EMAS and ISO 14001.

**Measures that can affect the consumption and use phase**

11. Economic instruments such as incentives for clean purchases or the institution of an obligatory payment by consumers for a given article or element of packaging that would otherwise be provided free of charge.
12. The use of awareness campaigns and information provision directed at the general public or a specific set of consumers.
13. The promotion of creditable eco-labels.

**▼B**

14. Agreements with industry, such as the use of product panels such as those being carried out within the framework of Integrated Product Policies or with retailers on the availability of waste prevention information and products with a lower environmental impact.
15. In the context of public and corporate procurement, the integration of environmental and waste prevention criteria into calls for tenders and contracts, in line with the Handbook on environmental public procurement published by the Commission on 29 October 2004.
16. The promotion of the reuse and/or repair of appropriate discarded products or of their components, notably through the use of educational, economic, logistic or other measures such as support to or establishment of accredited repair and reuse-centres and networks especially in densely populated regions.

**▼ M4***ANNEX IVa***EXAMPLES OF ECONOMIC INSTRUMENTS AND OTHER MEASURES TO PROVIDE INCENTIVES FOR THE APPLICATION OF THE WASTE HIERARCHY REFERRED TO IN ARTICLE 4(3) <sup>(1)</sup>**

1. Charges and restrictions for the landfilling and incineration of waste which incentivise waste prevention and recycling, while keeping landfilling the least preferred waste management option;
2. ‘Pay-as-you-throw’ schemes that charge waste producers on the basis of the actual amount of waste generated and provide incentives for separation at source of recyclable waste and for reduction of mixed waste;
3. Fiscal incentives for donation of products, in particular food;
4. Extended producer responsibility schemes for various types of waste and measures to increase their effectiveness, cost efficiency and governance;
5. Deposit-refund schemes and other measures to encourage efficient collection of used products and materials;
6. Sound planning of investments in waste management infrastructure, including through Union funds;
7. Sustainable public procurement to encourage better waste management and the use of recycled products and materials;
8. Phasing out of subsidies which are not consistent with the waste hierarchy;
9. Use of fiscal measures or other means to promote the uptake of products and materials that are prepared for re-use or recycled;
10. Support to research and innovation in advanced recycling technologies and remanufacturing;
11. Use of best available techniques for waste treatment;
12. Economic incentives for regional and local authorities, in particular to promote waste prevention and intensify separate collection schemes, while avoiding support to landfilling and incineration;
13. Public awareness campaigns, in particular on separate collection, waste prevention and litter reduction, and mainstreaming these issues in education and training;
14. Systems for coordination, including by digital means, between all competent public authorities involved in waste management;
15. Promoting continuous dialogue and cooperation between all stakeholders in waste management and encouraging voluntary agreements and company reporting on waste.

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<sup>(1)</sup> While these instruments and measures may provide incentives for waste prevention, which is the highest step in the waste hierarchy, a comprehensive list of more specific examples of waste prevention measures is set out in Annex IV.

**▼ M4***ANNEX IVb***IMPLEMENTATION PLAN TO BE SUBMITTED PURSUANT TO ARTICLE 11(3)**

The implementation plan to be submitted pursuant to Article 11(3) shall contain the following:

1. assessment of the past, current and projected rates of recycling, landfilling and other treatment of municipal waste and the streams of which it is composed;
2. assessment of the implementation of waste management plans and waste prevention programmes in place pursuant to Articles 28 and 29;
3. reasons for which the Member State considers that it might not be able to attain the relevant target laid down in Article 11(2) within the deadline set therein and an assessment of the time extension necessary to meet that target;
4. measures necessary to attain the targets set out in Article 11(2) and (5) that are applicable to the Member State during the time extension, including appropriate economic instruments and other measures to provide incentives for the application of the waste hierarchy as set out in Article 4(1) and Annex IVa;
5. a timetable for the implementation of the measures identified in point 4, determination of the body competent for their implementation and an assessment of their individual contribution to attaining the targets applicable in the event of a time extension;
6. information on funding for waste management in line with the polluter-pays principle;
7. measures to improve data quality, as appropriate, with a view to better planning and monitoring performance in waste management.



## ANNEX V

## CORRELATION TABLE

Directive 2006/12/EC	This Directive
Article 1(1)(a)	Article 3(1)
Article 1(1)(b)	Article 3(5)
Article 1(1)(c)	Article 3(6)
Article 1(1)(d)	Article 3(9)
Article 1(1)(e)	Article 3(19)
Article 1(1)(f)	Article 3(15)
Article 1(1)(g)	Article 3(10)
Article 1(2)	Article 7
Article 2(1)	Article 2(1)
Article 2(1)(a)	Article 2(1)(a)
Article 2(1)(b)	Article 2(2)
Article 2(1)(b)(i)	Article 2(1)(d)
Article 2(1)(b)(ii)	Article 2(2)(d)
Article 2(1)(b)(iii)	Article 2(1)(f) and (2)(c)
Article 2(1)(b)(iv)	Article 2(2)(a)
Article 2(1)(b)(v)	Article 2(1)(e)
Article 2(2)	Article 2(4)
Article 3(1)	Article 4
Article 4(1)	Article 13
Article 4(2)	Article 36(1)
Article 5	Article 16
Article 6	—
Article 7	Article 28
Article 8	Article 15
Article 9	Article 23
Article 10	Article 23
Article 11	Articles 24 and 25
Article 12	Article 26
Article 13	Article 34
Article 14	Article 35
Article 15	Article 14



▼B

Directive 2006/12/EC	This Directive
Article 16	Article 37
Article 17	Article 38
Article 18(1)	Article 39(1)
—	Article 39(2)
Article 18(2)	—
Article 18(3)	Article 39(3)
Article 19	Article 40
Article 20	—
Article 21	Article 42
Article 22	Article 43
Annex I	—
Annex IIA	Annex I
Annex IIB	Annex II

Directive 75/439/EEC	This Directive
Article 1(1)	Article 3(18)
Article 2	Articles 13 and 21
Article 3(1) and (2)	—
Article 3(3)	Article 13
Article 4	Article 13
Article 5(1)	—
Article 5(2)	—
Article 5(3)	—
Article 5(4)	Articles 26 and 34
Article 6	Article 23
Article 7(a)	Article 13
Article 7(b)	—
Article 8(1)	—
Article 8(2)(a)	—
Article 8(2)(b)	—
Article 8(3)	—
Article 9	—
Article 10(1)	Article 18

▼B

Directive 75/439/EEC	This Directive
Article 10(2)	Article 13
Article 10(3) and (4)	—
Article 10(5)	Articles 19, 21, 25, 34 and 35
Article 11	—
Article 12	Article 35
Article 13(1)	Article 34
Article 13(2)	—
Article 14	—
Article 15	—
Article 16	—
Article 17	—
Article 18	Article 37
Article 19	—
Article 20	—
Article 21	—
Article 22	—
Annex I	—

Directive 91/689/EEC	This Directive
Article 1(1)	—
Article 1(2)	—
Article 1(3)	—
Article 1(4)	Articles 3(2) and 7
Article 1(5)	Article 20
Article 2(1)	Article 23
Article 2(2)-(4)	Article 18
Article 3	Articles 24, 25 and 26
Article 4(1)	Article 34(1)
Article 4(2)(3)	Article 35
Article 5(1)	Article 19(1)
Article 5(2)	Article 34(2)
Article 5(3)	Article 19(2)
Article 6	Article 28

**▼B**

Directive 91/689/EEC	This Directive
Article 7	—
Article 8	—
Article 9	—
Article 10	—
Article 11	—
Article 12	—
Annexes I and II	—
Annex III	Annex III