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THE EUROPEAN PARLIAMENT

THE COUNCIL

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**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
AMENDING DIRECTIVE 2008/98/EC ON WASTE**

DIRECTIVE (EU) 2018/...
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 30 May 2018

amending Directive 2008/98/EC on waste

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee¹,

Having regard to the opinion of the Committee of the Regions²,

Acting in accordance with the ordinary legislative procedure³,

¹ OJ C 264, 20.7.2016, p. 98.

² OJ C 17, 18.1.2017, p. 46.

³ Position of the European Parliament of 18 April 2018 (not yet published in the Official Journal) and decision of the Council of 22 May 2018.

Whereas:

- (1) Waste management in the Union should be improved and transformed into sustainable material management, with a view to protecting, preserving and improving the quality of the environment, protecting human health, ensuring prudent, efficient and rational utilisation of natural resources, promoting the principles of the circular economy, enhancing the use of renewable energy, increasing energy efficiency, reducing the dependence of the Union on imported resources, providing new economic opportunities and contributing to long-term competitiveness. In order to make the economy truly circular, it is necessary to take additional measures on sustainable production and consumption, by focusing on the whole life cycle of products in a way that preserves resources and closes the loop. The more efficient use of resources would also bring substantial net savings for Union businesses, public authorities and consumers, while reducing total annual greenhouse gas emissions.
- (2) Improving the efficiency of resource use and ensuring that waste is valued as a resource can contribute to reducing the Union's dependence on the import of raw materials and facilitate the transition to more sustainable material management and to a circular economy model. That transition should contribute to the smart, sustainable and inclusive growth goals set out in the Europe 2020 strategy and create important opportunities for local economies and stakeholders, while helping to increase synergies between the circular economy and energy, climate, agriculture, industry and research policies as well as bringing benefits to the environment in terms of greenhouse gas emission savings and to the economy.

- (3) The targets laid down in Directive 2008/98/EC of the European Parliament and of the Council¹ for preparing for re-use and recycling of waste should be increased to make them better reflect the Union's ambition to move to a circular economy.
- (4) The coherence between Directive 2008/98/EC and related Union legislative acts such as Directive 2009/28/EC of the European Parliament and of the Council² and Regulation (EC) No 1907/2006 of the European Parliament and of the Council³ needs to be ensured.
- (5) Many Member States have not yet completely developed the necessary waste management infrastructure. It is therefore essential to set clear long-term policy objectives in order to guide measures and investments, notably by preventing the creation of structural overcapacities for the treatment of residual waste and lock-ins of recyclable materials at the lower levels of the waste hierarchy.

¹ Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3).

² Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (OJ L 140, 5.6.2009, p. 16).

³ 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).

- (6) Municipal waste constitutes approximately between 7 and 10 % of the total waste generated in the Union. That waste stream, however, is amongst the most complex ones to manage, and the way it is managed generally gives a good indication of the quality of the overall waste management system in a country. The challenges of municipal waste management result from its highly complex and mixed composition, direct proximity of the generated waste to citizens, a very high public visibility and its impact on the environment and human health. As a result, the management of municipal waste requires a highly complex system including an efficient collection scheme, an effective sorting system and a proper tracing of waste streams, the active engagement of citizens and businesses, an infrastructure adjusted to the specific waste composition, and an elaborate financing system. Countries which have developed efficient municipal waste management systems generally perform better in overall waste management, including the attainment of the recycling targets.
- (7) Experience has shown that, irrespective of the allocation of responsibilities for waste management between public and private actors, waste management systems can help to achieve a circular economy and that the decision on the allocation of responsibilities frequently depends on geographical and structural conditions. The rules laid down in this Directive allow for waste management systems where the municipalities have the general responsibility for collecting municipal waste, for systems where such services are contracted out to private operators, or for any other type of allocation of responsibilities between public and private actors. The choice for any such systems, and whether or not to change them, remains the responsibility of Member States.

- (8) Plant-based substances from the agri-food industry and food of non-animal origin no longer intended for human consumption which are destined for oral animal feeding should, in order to avoid duplication of rules, be excluded from the scope of Directive 2008/98/EC if in full compliance with Union feed legislation. Directive 2008/98/EC should therefore not apply to those products and substances when used for feed, and the scope of that Directive needs to be clarified accordingly. Without prejudice to other Union provisions applicable in the field of animal nutrition, animal by-products destined to be used as feed materials in accordance with Regulation (EC) No 767/2009 of the European Parliament and of the Council¹ are already excluded from the scope of Directive 2008/98/EC to the extent that they are covered by other Union legislation.
- (9) Definitions of non-hazardous waste, municipal waste, construction and demolition waste, food waste, material recovery, backfilling and extended producer responsibility scheme need to be included in Directive 2008/98/EC so that the scope of these concepts is clarified.

¹ 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).

- (10) To ensure that preparing for re-use and recycling targets are based on reliable and comparable data and to enable a more effective monitoring of progress in attaining those targets, the definition of municipal waste in Directive 2008/98/EC should be in line with the definition used for statistical purposes by Eurostat and the Organisation for Economic Co-operation and Development (OECD), on the basis of which Member States have been reporting data for several years. Municipal waste is defined as waste from households and waste from other sources, such as retail, administration, education, health services, accommodation and food services, and other services and activities, which is similar in nature and composition to waste from households. Therefore, municipal waste includes, *inter alia*, waste from park and garden maintenance, such as leaves, grass and tree clippings, and waste from market and street cleaning services, such as the content of litter containers and sweepings except materials such as sand, rock, mud or dust. Member States are to ensure that waste from large commerce and industry which is not similar to waste from households is not included in the scope of municipal waste. Waste from production, agriculture, forestry, fishing, construction and demolition, septic tanks and sewage network and treatment, and end-of-life vehicles are excluded from the scope of municipal waste. Municipal waste is to be understood as corresponding to the types of waste included in chapter 15 01 and chapter 20, with the exception of codes 20 02 02, 20 03 04 and 20 03 06, of the list of waste established by Commission Decision 2014/955/EU¹ in the version in force on ... [date of entry into force of this amending Directive].

¹ Commission Decision 2014/955/EU of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council (OJ L 370, 30.12.2014, p. 44).

Waste falling under other chapters of that list is not to be considered as municipal waste except in cases where municipal waste undergoes treatment and is assigned codes listed in chapter 19 of that list. Member States may use relevant categories in that list for statistical purposes. The definition of municipal waste in this Directive is introduced for the purposes of determining the scope of application of the preparing for re-use and recycling targets and their calculation rules. It is neutral with regard to the public or private status of the operator managing the waste and therefore includes waste from households and other sources that is managed by or on behalf of municipalities or directly by private operators.

- (11) While the definition of construction and demolition waste refers to waste that results from construction and demolition activities in a general way, it also includes waste arising from minor do-it-yourself construction and demolition activities within private households. Construction and demolition waste should be understood as corresponding to the types of waste included in Chapter 17 of the list of waste established by Decision 2014/955/EU in the version in force on ... [date of entry into force of this amending Directive].
- (12) A definition of material recovery should be introduced to cover forms of recovery other than energy recovery and other than the reprocessing of waste into materials used as fuels or other means to generate energy. It includes preparing for re-use, recycling and backfilling and other forms of material recovery such as the reprocessing of waste into secondary raw materials for engineering purposes in construction of roads or other infrastructure. Depending on the specific factual circumstances, such reprocessing can fulfil the definition of recycling if the use of materials is based on proper quality control and meets all relevant standards, norms, specifications and environmental and health protection requirements for the specific use.

- (13) A definition of backfilling should be introduced to clarify that it means any recovery operation of suitable non-hazardous waste for the purposes of reclamation in excavated areas or for engineering purposes in landscaping. The waste used for backfilling should be limited to the amount strictly necessary to achieve those purposes.
- (14) A definition of extended producer responsibility scheme should be introduced to clarify that it means a set of measures taken by Member States requiring producers of products to bear financial or financial and organisational responsibility for the management of the waste stage of a product's life cycle including separate collection, sorting and treatment operations. That obligation can also include organisational responsibility and a responsibility to contribute to waste prevention and to the reusability and recyclability of products. Producers of products can fulfil the obligations of the extended producer responsibility scheme individually or collectively.
- (15) In order to contribute to achieving the objectives laid down in Directive 2008/98/EC, Member States should 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, which includes, *inter alia*, landfill and incineration charges, pay-as-you-throw schemes, extended producer responsibility schemes, facilitation of food donation, and incentives for local authorities, or other appropriate instruments and measures.

- (16) In order to promote sustainable use of resources and industrial symbiosis, Member States should take appropriate measures to facilitate the recognition as a by-product of a substance or an object resulting from a production process the primary aim of which is not the production of that substance or object if the harmonised conditions established at Union level are respected. The Commission should be empowered to adopt implementing acts in order to establish detailed criteria on the application of the by-product status, prioritising replicable practices of industrial symbiosis.
- (17) In order to provide operators in markets for secondary raw materials with more certainty as to the waste or non-waste status of substances or objects and to promote a level playing field, it is important that Member States take appropriate measures to ensure that waste that has undergone a recovery operation is considered to have ceased to be waste if it complies with all the conditions laid down in Article 6(1) of Directive 2008/98/EC as amended by this Directive. Such measures may include the adoption of legislation transposing those conditions supported by procedures for their implementation, such as the establishment of material and application-specific end-of-waste criteria, guidance documents, case-by-case decisions and other procedures for the ad hoc application of the harmonised conditions established at Union level. Such measures should include enforcement provisions to verify that waste that is considered to have ceased to be waste as a result of a recovery operation complies with the law of the Union on waste, chemicals and products, in particular prioritising waste streams that pose a higher risk to human health and the environment due to the nature and volume of those waste streams, waste that is subject to innovative recovery processes or waste that is recovered for subsequent further use in other Member States.

Measures may also include the setting of a requirement on the operators recovering waste or holders of recovered waste materials to demonstrate compliance with the conditions laid down in Article 6(1) of Directive 2008/98/EC as amended by this Directive. In order to prevent illegal shipments of waste and to raise awareness among Member States and economic operators, there should be greater transparency about Member State approaches to end-of-waste status, in particular with regard to their case-by-case decisions and the result of verification by competent authorities, as well as the specific concerns of Member States and competent authorities about certain waste streams. The final determination whether the conditions laid down in Article 5 or in Article 6 of Directive 2008/98/EC as amended by this Directive are fulfilled remains the exclusive responsibility of the Member State based on all relevant information provided by the holder of the material or waste.

- (18) Implementing powers should be conferred on the Commission in order to establish detailed criteria on the application of the end-of-waste status. In that context, specific end-of-waste criteria should be considered at least for aggregates, paper, tyres and textiles.

- (19) The application of rules on by-products and end-of-waste should be without prejudice to other provisions of Union law, particularly Article 28 and Article 50(4a) and (4b) of Regulation (EC) No 1013/2006 of the European Parliament and of the Council¹ on shipments of waste, legislation on chemicals and legislation concerning the placing on the market of certain products. End-of-waste status can only be achieved if substances or objects comply with relevant requirements applicable to products. End-of-waste rules can be established in product-specific legislation.
- (20) Member States should take appropriate measures to encourage the development, production, marketing and use 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 and without compromising the free movement of goods in the internal market. Those measures should take into account the impact of products throughout their life cycle, the waste hierarchy and, where appropriate, the potential for multiple recycling.

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

- (21) Extended producer responsibility schemes form an essential part of efficient waste management. However, their effectiveness and performance differ significantly between Member States. It is necessary therefore to set minimum operating requirements for such extended producer responsibility schemes, and to clarify that those requirements also apply to extended producer responsibility schemes established pursuant to other legislative acts of the Union, in particular Directives 2000/53/EC¹, 2006/66/EC² and 2012/19/EU³ of the European Parliament and of the Council, in addition to the requirements already laid down therein, unless explicitly stated otherwise. It is necessary to make a distinction between those general minimum requirements that apply to all schemes and those that only apply to organisations implementing extended producer responsibility obligations on behalf of producers of products. Unless Member States decide otherwise, the general minimum requirements for extended producer responsibility schemes do not apply to schemes that do not fulfil the definition of an extended producer responsibility scheme.

¹ Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles (OJ L 269, 21.10.2000, p. 34).

² Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC (OJ L 266, 26.9.2006, p. 1).

³ 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).

- (22) The general minimum requirements should reduce costs and boost performance, as well as ensure a level-playing field, including for small and medium-sized enterprises and e-commerce enterprises, and avoid obstacles to the smooth functioning of the internal market. They should also contribute to the incorporation of end-of-life costs into product prices and provide incentives for producers, when designing their products, to take better into account recyclability, reusability, reparability and the presence of hazardous substances. Overall, those requirements should improve the governance and transparency of extended producer responsibility schemes and reduce the possibility of conflicts of interest emerging between organisations implementing extended producer responsibility obligations on behalf of producers of products and waste operators that those organisations contract. The requirements should apply to both new and existing extended producer responsibility schemes. A transitional period is however necessary for existing extended producer responsibility schemes to adapt their structures and procedures to the new requirements.
- (23) Public authorities play an important role in the organisation of municipal waste collection and treatment and related communication with citizens. Provisions relating to the financial responsibility of producers of products introduced as part of the general minimum requirements for extended producer responsibility schemes should apply without prejudice to the competence of public authorities as regards the collection and treatment of municipal waste.

- (24) In cases where public authorities are responsible for organising the operational aspects of managing waste from products that are subject to extended producer responsibility schemes, those services should be provided in a cost-efficient manner and the financial responsibility of producers of products should not exceed the costs necessary to provide those services. Such costs should be established in a transparent way between the actors concerned, including producers of products, their organisations and public authorities.
- (25) In order to ensure proper waste management, where producers of products or organisations implementing extended producer responsibility obligations on their behalf are responsible for the management of waste from products that they place on the market, they should ensure continuity of waste management services throughout the year, even if the targets and objectives applicable to them are met. They should also not restrict those services in terms of geographical, product and material coverage to the areas where the collection and management of waste are the most profitable.
- (26) Producers of products should cover the costs necessary to meet the waste management targets and other targets and objectives, including on waste prevention, defined for the relevant extended producer responsibility scheme. Under strict conditions, those costs can be shared with the original waste producers or distributors where justified by the need to ensure proper waste management and the economic viability of the extended producer responsibility scheme.

- (27) The Commission should adopt guidelines on the modulation of financial contributions of producers of products to extended producer responsibility schemes in order to assist Member States in the implementation of this Directive in facilitating the functioning of the internal market. To ensure coherence in the internal market, the Commission should be able to adopt harmonised criteria for that purpose by means of implementing acts.
- (28) Authorised representatives established to fulfil extended producer responsibility obligations of producers of products may be subject to requirements that enable the Member State on whose territory they are established to monitor and verify compliance with those obligations. However, those requirements should not go beyond the requirements that are applicable to the producers of products and organisations implementing extended producer responsibility obligations on their behalf established in that Member State.

- (29) Waste prevention is the most efficient way to improve resource efficiency and to reduce the environmental impact of waste. It is important therefore that Member States take appropriate measures to prevent waste generation and monitor and assess progress in the implementation of such measures. As part of such measures, Member States should facilitate innovative production, business and consumption models that reduce the presence of hazardous substances in materials and products, that encourage the increase of the life span of products and that promote re-use including through the establishment and support of re-use and repair networks, such as those run by social economy enterprises, deposit-refund and return-refill schemes and by incentivising remanufacturing, refurbishment and, where appropriate, repurposing of products as well as sharing platforms. In order to ensure a uniform measurement of the overall progress in the implementation of waste prevention measures, common indicators and targets should be established.
- (30) The promotion of sustainability in production and consumption can contribute significantly to waste prevention. Member States should take steps to make consumers aware of that contribution and encourage them to participate more actively in order to improve resource efficiency. As part of measures to reduce waste generation, Member States should include continuous communication and education initiatives to raise awareness on the issues surrounding waste prevention and littering and may include the use of deposit-refund schemes and the setting of quantitative targets, and provide, as appropriate, adequate economic incentives to producers.

- (31) Member States should take measures to promote prevention and reduction of food waste in line with the 2030 Agenda for Sustainable Development, adopted by the United Nations (UN) General Assembly on 25 September 2015, and in particular its target of halving per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses, by 2030. Those measures should aim to prevent and reduce 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. In order to contribute and ensure to be on track towards the attainment of the UN Sustainable Development Goal, Member States should aim to achieve an indicative Union-wide food waste reduction target of 30 % by 2025 and 50 % by 2030. Having regard to the environmental, social and economic benefits of preventing food waste, Member States should establish specific food waste prevention measures, including awareness campaigns to demonstrate how to prevent food waste, in their waste prevention programmes. Member States should measure progress made in the reduction of food waste. To measure that progress and to facilitate the exchange of good practices across the Union both between Member States and between food business operators, a common methodology for such measurement should be established. Based on those methodologies, reporting on food waste levels should take place on an annual basis.
- (32) In order to prevent food waste, Member States should provide incentives for the collection of unsold food products at all stages of the food supply chain and for their safe redistribution, including to charitable organisations. Consumer awareness of the meaning of ‘use-by’ and ‘best-before’ dates should also be improved in order to reduce food waste.

- (33) Litter, whether in cities, on land, in rivers and seas or elsewhere, has direct and indirect detrimental impacts on the environment, the well-being of citizens and the economy, and the costs to clean it up present an unnecessary economic burden for society. Member States should take measures aimed at preventing all forms of abandonment, dumping, uncontrolled management or other forms of discarding of waste. Member States should also take measures to clean up litter present in the environment, irrespective of its source or size and regardless of whether waste has been discarded wilfully or by negligence. Measures to prevent and reduce litter from products that are the main sources of littering in the natural and marine environments could consist of, *inter alia*, improvements in waste management infrastructure and practices, economic instruments and awareness raising campaigns. When considering a measure having restrictive effects on intra-Union trade, Member States should be able to demonstrate that the measure in question is adequate to attain the objective of preventing and reducing littering in the natural and marine environment, does not go beyond what is necessary to attain that objective and does not constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.
- (34) The fight against litter should be a shared effort between competent authorities, producers and consumers. Consumers should be incentivised to change their behaviour including through education and awareness raising, while producers should promote the sustainable use of and contribute to appropriate end-of-life management of their products.

(35) Litter in the marine environment is a particularly pressing problem, and Member States should take measures that aim at halting the generation of marine litter in the Union, thereby contributing to the goal of the 2030 Agenda for Sustainable Development adopted by the UN General Assembly on 25 September 2015 to prevent and significantly reduce by 2025 marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. Since marine litter, in particular for plastic waste, stems to a large extent from land-based activities caused mainly by poor solid waste management practices and infrastructure, littering by citizens and lack of public awareness, specific measures should be laid down in waste prevention programmes and waste management plans. Those measures should contribute to the goal of achieving good environmental status in the marine environment by 2020 as laid down in Directive 2008/56/EC of the European Parliament and of the Council¹. In accordance with that Directive, Member States are required to establish specific strategies and measures and update them every six years. They are also required to regularly report, starting in 2018, on the progress to maintain or achieve the goal of good environmental status. Measures to tackle litter in Directive 2008/98/EC should therefore be coordinated with the measures required under Directive 2008/56/EC and Directive 2000/60/EC of the European Parliament and of the Council².

¹ 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).

² 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).

- (36) Certain raw materials are of a high importance to the economy of the Union and their supply is associated with a high risk. In order to ensure security of supply of those raw materials and in line with the Raw Materials Initiative established by the Commission in its Communication of 4 November 2008 on ‘The raw materials initiative - meeting our critical needs for growth and jobs in Europe’ and the objectives and targets of the European Innovation Partnership on Raw Materials, Member States should take measures to promote the re-use of products constituting the main sources of critical raw materials to prevent that those materials become waste. In that context, the Commission has established a list of such materials for the Union in its Communication of 13 September 2017 on ‘the 2017 list of Critical Raw Materials for the EU’ and that list is subject to regular review.
- (37) To further support effective implementation of the Raw Materials Initiative, Member States should also take measures to achieve the best possible management of waste containing significant amounts of critical raw materials, taking economic and technological feasibility and environmental and health benefits into account. They should also include in their waste management plans nationally appropriate measures regarding collection, sorting and recovery of waste containing significant amounts of those raw materials. The measures should be included in the waste management plans when they are updated for the first time following the entry into force of this Directive. The Commission should provide information about the relevant product groups and waste streams at Union level. The provision of that information does not preclude, however, Member States from taking measures for other raw materials considered as important to their national economy.

- (38) When products, materials and substances become waste, the presence of hazardous substances may render that waste unsuitable for recycling or the production of secondary raw materials of high quality. Therefore, in line with the 7th Environment Action Programme, which calls for the development of non-toxic material cycles, it is necessary to promote measures to reduce the content of hazardous substances in materials and products, including recycled materials, and to ensure that sufficient information about the presence of hazardous substances and especially substances of very high concern is communicated throughout the whole life cycle of products and materials. In order to achieve those objectives, it is necessary to improve the coherence among the law of the Union on waste, on chemicals and on products and to provide a role for the European Chemicals Agency to ensure that the information about the presence of substances of very high concern is available throughout the whole life cycle of products and materials, including at the waste stage.
- (39) Improving resource use could bring substantial net savings for Union businesses, public authorities and consumers while reducing total annual greenhouse gas emissions. For that reason, the Commission should propose, by the end of 2018, a lead indicator and a dashboard of sub-indicators on resource efficiency in order to monitor the progress towards the target of increasing resource efficiency at Union level.

- (40) Fostering a sustainable bio-economy can contribute to decreasing the Union's dependence on imported raw materials. Bio-based recyclable products and compostable bio-degradable products could represent therefore an opportunity to stimulate further research and innovation and to substitute fossil fuel-based feedstock with renewable resources.
- (41) In order to avoid waste treatment which locks in resources at the lower levels of the waste hierarchy, increase preparing for re-use and recycling rates, enable high-quality recycling and boost the uptake of quality secondary raw materials, Member States should ensure enhanced compliance with the obligation to collect waste separately, as laid down in Articles 10(2) and 11(1) of Directive 2008/98/EC, including the obligation to set up separate collection for at least paper, metal, plastic and glass waste that Member States had to meet by 2015, and should introduce separate collection of bio-waste, hazardous waste produced by households and textile waste. Where appropriate, hazardous bio-waste and packaging waste containing hazardous substances should be subject to specific collection requirements.

- (42) Separate collection could be achieved through door-to-door collection, bring and reception systems or other collection arrangements. While the obligation to separately collect waste requires that waste be kept separate by type and nature, it should be possible to collect certain types of waste together provided that this does not impede high-quality recycling or other recovery of waste, in line with the waste hierarchy. Member States should also be allowed to deviate from the general obligation to separately collect waste in other duly justified cases, for instance where the separate collection of specific waste streams in remote and scarcely populated areas causes negative environmental impacts that outweigh its overall environmental benefits or entails disproportionate economic costs. When assessing any cases in which economic costs might be disproportionate, Member States should take into account the overall economic benefits of separate collection, including in terms of avoided direct costs and costs of adverse environmental and health impacts associated with the collection and treatment of mixed waste, revenues from sales of secondary raw materials and the possibility to develop markets for such materials, as well as contributions by waste producers and producers of products, which could further improve the cost-efficiency of waste management systems.
- (43) The targets for preparing for re-use and recycling of municipal waste should be increased in order to deliver substantial environmental, economic and social benefits and to accelerate the shift towards a circular economy.

- (44) Through a progressive increase of the existing targets for preparing for re-use and recycling of municipal waste, it should be ensured that economically valuable waste materials are effectively prepared for re-use or recycled, while ensuring a high-level protection of human health and the environment, and that economically valuable materials found in waste are channelled back into the European economy, thus advancing the Raw Materials Initiative and the creation of a circular economy.
- (45) Large differences exist among Member States with respect to their waste management performance, particularly as regards recycling of municipal waste. In order to take account of those differences, those Member States which in 2013 prepared for re-use and recycled less than 20 % of their municipal waste or landfilled more than 60 % of their municipal waste according to data reported under the Joint Questionnaire of the OECD and Eurostat should be allowed to decide to extend the time for complying with the preparing for re-use and recycling targets established for 2025, 2030 and 2035. In light of average annual progression rates observed in Member States over the past 15 years, those Member States would need to increase their recycling capacity to levels that are well above past averages to meet those targets. In order to ensure that steady progress towards the targets is made and that implementation gaps are tackled in due time, Member States that make use of additional time should meet interim-targets and, based on detailed criteria, establish an implementation plan.

- (46) In order to ensure the reliability of data, it is important to lay down more precisely the rules according to which Member States should report what is effectively recycled and prepared for re-use and can be counted towards the attainment of the targets. The calculation of the recycling targets should be based on the weight of municipal waste which enters recycling. As a general rule, the actual measurement of the weight of municipal waste counted as recycled should be at the point where municipal waste enters the recycling operation. Nevertheless, in order to limit administrative burdens, Member States should, under strict conditions and by way of derogation from the general rule, be allowed to establish the weight of municipal waste recycled on the basis of measuring the output of any sorting operation. Losses of materials which occur before the waste enters the recycling operation, for instance due to sorting or other preliminary operations, should not be included in the waste amounts reported as recycled. Those losses can be established on the basis of electronic registries, technical specifications, detailed rules on the calculation of average loss rates for various waste streams or other equivalent measures. Member States should report on such measures in the quality check reports accompanying the data on waste recycling which they report to the Commission. The average loss rates should preferably be established at the level of individual sorting facilities and should be linked to the different main types of waste, different sources (such as household or commercial), different collection schemes and different types of sorting processes. Average loss rates should only be used in cases where no other reliable data are available, in particular in the context of shipment and export of waste. Losses in weight of materials or substances due to physical or chemical transformation processes inherent in the recycling operation whereby waste materials are actually reprocessed into products, materials or substances should not be deducted from the weight of the waste reported as recycled.

(47) With the alignment of the definitions contained in European Parliament and Council Directive 94/62/EC¹, Directive 2000/53/EC, Directive 2006/66/EC, Directive 2008/98/EC, and Directive 2012/19/EU, the provision in Article 6 of Directive 2008/98/EC on considering waste that ceases to be waste for the purposes of the recovery and recycling targets set in those Directives is no longer necessary. Materials that cease to be waste through a recovery or recycling operation are to be counted for the attainment of the respective recovery or recycling targets set in those Directives in line with the applicable calculation methods. Where waste materials cease to be waste as a result of a preparatory operation before being actually reprocessed, such materials can be counted as recycled provided that they are destined for subsequent reprocessing into products, materials or substances, whether for the original or other purposes. End-of-waste materials which are to be used as fuels or other means to generate energy, which are backfilled or disposed of, or which are to be used in any operation that has the same purpose as recovery of waste other than preparing for re-use and recycling, should not be counted towards the attainment of the recycling targets.

¹ European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste (OJ L 365, 31.12.1994, p. 10).

- (48) Where the calculation of the recycling rate is applied to aerobic or anaerobic treatment of biodegradable waste, the amount of waste that enters aerobic or anaerobic treatment can be counted as recycled provided that such treatment generates output which is to be used as a recycled product, material or substance. While the output of such treatment is most commonly compost or digestate, other output could also be taken into account provided that it contains comparable quantities of recycled content in relation to the amount of the treated biodegradable waste. In other cases, in line with the definition of recycling, the reprocessing of biodegradable waste into materials which are to be used as fuels or other means to generate energy, which are disposed of, or which are to be used in any operation that has the same purpose as recovery of waste other than preparing for re-use and recycling, should not be counted towards the attainment of the recycling targets.
- (49) Member States should be able, for the purposes of calculating whether the preparing for re-use and recycling targets are attained, to take into account the recycling of metals that are separated after incineration of municipal waste. In order to ensure a uniform calculation of this data, the Commission should adopt detailed rules on the quality criteria for recycled metals and on the calculation, verification and reporting of data.

- (50) In the case of exports of waste from the Union for preparing for re-use or recycling, Member States should make effective use of the inspection powers provided for in Article 50(4c) of Regulation (EC) No 1013/2006 to require documentary evidence to ascertain whether a shipment is destined for recovery operations which are in compliance with Article 49 of that Regulation and therefore managed in an environmentally sound manner at a facility operating in accordance with human health and environmental protection standards that are broadly equivalent to standards established in Union legislation. In carrying out that task, Member States could cooperate with other relevant actors, such as the competent authorities in the country of destination, independent third-party verification bodies or organisations implementing extended producer responsibility obligations on behalf of producers of products established under extended producer responsibility schemes, which could carry out physical and other checks of facilities in third countries. In the quality check report accompanying the data on the attainment of the targets, Member States should report on the measures to implement the obligation to ensure that waste exported from the Union is treated in broadly equivalent conditions to those required under relevant Union environmental law.
- (51) In order to ensure better, more timely and more uniform implementation of this Directive and anticipate any implementation weaknesses, a system of early warning reports should be established to detect shortcomings and allow taking action ahead of the deadlines for meeting the targets.

- (52) Industrial waste, certain parts of commercial waste and extractive waste are extremely diversified in terms of composition and volume, and very different depending on the economic structure of a Member State, the structure of the industry or commerce sector that generates the waste and the industrial or commercial density in a given geographical area. Hence, for most industrial and extractive waste, an industry-oriented approach using Best Available Techniques reference documents and similar instruments to address the specific issues related to the management of a given type of waste has been considered a suitable solution. However, industrial and commercial packaging waste should continue to be covered by the requirements of Directives 94/62/EC and 2008/98/EC, including their respective improvements. With a view to exploring further the potential to increase the preparing for re-use and recycling of commercial waste, non-hazardous industrial waste and other key waste streams, the Commission should consider the setting of targets for those waste streams.
- (53) With a view to ensuring that the objectives of Union waste law continue to be met, it is important that the Commission reviews the disposal operations listed in Annex I to Directive 2008/98/EC. That review should be carried out in the light of Article 13 of that Directive while taking into account relevant information, such as developments at international level, in particular in relation to the Basel Convention of 22 March 1989 on the control of transboundary movements of hazardous wastes and their disposal¹.

¹ OJ L 39, 16.2.1993, p. 3.

- (54) Hazardous waste that is produced by households, such as hazardous waste from paints, varnishes, solvents or cleaning products, should also be collected separately in order to avoid contamination of municipal waste with hazardous waste fractions that could lower recycling quality and to ensure the environmentally sound management of that hazardous waste. In that regard, specific collection obligations are already in place for waste electrical and electronic equipment and waste batteries and accumulators produced by households.
- (55) The separate collection of waste oils and preventing their mixing with other kinds of waste or substances are essential to ensure that their treatment delivers the best overall environmental outcome. In treating waste oils, priority should be given to regeneration or alternatively to other recycling operations delivering an equivalent or a better overall environmental outcome than regeneration. With a view to further improving the management of waste oils, the Commission should consider, and, if appropriate, propose measures to improve the treatment of waste oils, including quantitative targets on their regeneration. During that review, attention should be paid to the treatment options regarding the regeneration of waste oils as well as to the quality and final use of the regenerated and recycled products.
- (56) In order to avoid waste treatment which locks in resources at the lower levels of the waste hierarchy, to enable high-quality recycling and to boost the uptake of quality secondary raw materials, Member States should ensure that bio-waste is separately collected and undergoes recycling in a way that fulfils a high level of environmental protection and the output of which meets relevant high quality standards.

- (57) This Directive sets long-term objectives for the Union's waste management and gives economic operators and Member States a clear direction for the investments needed to achieve those objectives. In developing their national waste management plans and planning investments in waste management infrastructure, Member States should assess and take into account the required investments and other financial means, including for local authorities. That assessment should be included in the waste management plan or other strategic documents. In that context, Member States should make sound use of investments, including through Union Funds, by prioritising prevention including re-use, preparing for re-use and recycling, in line with the waste hierarchy. The Commission should assist competent authorities in developing an effective financial framework, including through the use of Union Funds where appropriate, to implement the requirements of this Directive in accordance with the waste hierarchy and to support innovation in technologies and waste management.
- (58) Proper management of hazardous waste still presents a problem in the Union, and data on its treatment are partly missing. It is therefore necessary to strengthen record keeping and traceability mechanisms through the establishment of electronic registries for hazardous waste in Member States. Electronic data collection should be extended to other types of waste, where appropriate, in order to simplify record-keeping for businesses and administrations and improve the monitoring of waste flows in the Union.

- (59) Implementation reports prepared by Member States every three years have not proved to be an effective tool for verifying compliance or ensuring good implementation, and are generating unnecessary administrative burdens. It is therefore appropriate to repeal provisions obliging Member States to produce such reports. Instead, compliance monitoring should be exclusively based on the data which Member States report every year to the Commission.
- (60) Data reported by Member States are essential for the Commission to assess compliance with Union waste law by Member States. The quality, reliability and comparability of data should be improved by introducing a single entry point for all waste data, deleting obsolete reporting requirements, benchmarking national reporting methodologies and introducing a data quality check report. Therefore, when reporting on the attainment of the targets set out in legislative acts of the Union on waste, Member States should use the most recent rules developed by the Commission and methodologies developed by the respective national competent authorities responsible for implementing this Directive.
- (61) To facilitate adequate interpretation and implementation of the requirements set out in Directive [2008/98/EC](#), it is appropriate to develop and periodically review guidelines concerning those requirements and to ensure the exchange of information and sharing of best practices among Member States on the practical implementation and enforcement of those requirements. Such guidelines, information exchange and sharing of best practices should, *inter alia*, facilitate a common understanding and application in practice of the definition of ‘waste’, including the term ‘discard’, and should take into account circular business models in which, for instance, a substance or object is transferred from one holder to another holder without the intention to discard.

- (62) In order to supplement or amend Directive 2008/98/EC, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in respect of Articles 7(1), 9(8), 11a(10), 27(1), 27(4), 38(2) and 38(3) of that Directive, as amended by this Directive. It is of particular importance that the Commission carries out appropriate consultations during its preparatory work, including at expert level, and that those consultations be conducted in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making¹. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the Council receive all documents at the same time as Member States' experts, and their experts systematically have access to meetings of Commission expert groups dealing with the preparation of delegated acts.
- (63) In order to ensure uniform conditions for the implementation of Directive 2008/98/EC, implementing powers should be conferred on the Commission in respect of Articles 5(2), 6(2), 8(5), 9(7), 11a(9), 33(2), 35(5) and 37(7) thereof as amended by this Directive. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council².

¹ OJ L 123, 12.5.2016, p. 1.

² 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).

- (64) Since the objectives of this Directive, namely to improve waste management in the Union, and thereby to contribute to the protection, preservation and improvement of the quality of the environment, the health of the oceans and the safety of seafood by reducing marine litter, and to the prudent and rational utilisation of natural resources across the Union, cannot be sufficiently achieved by the Member States, but can rather, by reason of the scale and effects of the measures, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives.
- (65) Directive 2008/98/EC should therefore be amended accordingly.
- (66) In accordance with the Joint Political Declaration of 28 September 2011 of Member States and the Commission on explanatory documents¹, Member States have undertaken to accompany, in justified cases, the notification of their transposition measures with one or more documents explaining the relationship between the components of a directive and the corresponding parts of national transposition instruments. With regard to this Directive, the legislator considers the transmission of such documents to be justified.
- (67) This Directive has been adopted taking into account the commitments set out in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making and it should be implemented and applied in accordance with the guidance contained in that Agreement,

HAVE ADOPTED THIS DIRECTIVE:

¹ OJ C 369, 17.12.2011, p. 14.

Article 1
Amendments

Directive 2008/98/EC is amended as follows:

- (1) Article 1 is replaced by the following:

‘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.’;

- (2) in Article 2(2), the following point is added:

‘(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* and that do not consist of or contain animal by-products.

* 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).’;

(3) Article 3 is amended as follows:

(a) the following points are inserted:

‘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;
- (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;’;

(b) point 4 is replaced by the following:

‘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;’;

(c) the following point is inserted:

‘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* that has become waste;

* 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).’;

(d) point 9 is replaced by the following:

‘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;’;

(e) in point 12, point (c) is replaced by the following:

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

(f) the following point is inserted:

‘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.’;

(g) the following point is inserted:

‘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.’;

(h) the following point is added:

‘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.’;

(4) in Article 4, the following paragraph is added:

‘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.’;

(5) Article 5 is amended as follows:

(a) in paragraph 1, the introductory part is replaced by the following:

‘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:’;

(b) paragraph 2 is replaced by the following:

‘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.’;

(c) the following paragraph is added:

‘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* where so required by that Directive.

* 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).’;

(6) Article 6 is amended as follows:

(a) paragraph 1 is amended as follows:

(i) the introductory part and point (a) are replaced by the following:

'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:

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

(ii) the second subparagraph is deleted;

(b) paragraphs 2, 3 and 4 are replaced by the following:

'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.

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.’;

(c) the following paragraph is added:

‘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.’;

(7) Article 7 is amended as follows:

(a) in paragraph 1, the first sentence is replaced by the following:

‘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.’;

(b) paragraph 2 is replaced by the following:

‘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.’;

(c) paragraph 5 is deleted;

(8) Article 8 is amended as follows:

(a) in paragraph 1, the following subparagraphs are added:

‘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.’;

(b) paragraph 2 is replaced by the following:

- ‘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.

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.’;

(c) the following paragraph is added:

‘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).’;

(9) the following article is inserted:

‘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:
 - (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*, 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;

- (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
- (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 ... [date of entry into force of this amending Directive] 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 ... [date of entry into force of this amending Directive] 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 ... [date of entry into force of this amending Directive].

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.

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 ... [date of entry into force of this amending Directive], comply with this Article by ... [54 months after the date of entry into force of this amending Directive].
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.

* 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).’;

(10) Article 9 is replaced by the following:

‘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;
- (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* provides the information pursuant to Article 33(1) of that Regulation to the European Chemicals Agency as from ... [30 months after the date of entry into force of this amending Directive];
- (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 ... [18 months after the date of entry into force of this amending Directive] 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 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.

* 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).’;

- (11) Article 10 is replaced by the following:

‘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 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.’;

(12) Article 11 is amended as follows:

(a) the title is replaced by the following:

‘Preparing for re-use and recycling’;

(b) paragraph 1 is replaced by the following:

‘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.

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.’;

(c) paragraph 2 is amended as follows:

(i) the introductory part is replaced by the following:

‘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:’;

(ii) the following points are added:

‘(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.’;
- (d) paragraphs 3, 4 and 5 are replaced by the following:
 - ‘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.
 - 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.’;
- (e) the following paragraphs are added:
 - ‘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.’;

- (13) the following articles are inserted:

‘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;

- (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 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.
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.’;

(14) Article 12 is replaced by the following:

‘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.’;

(15) Article 14 is replaced by the following:

‘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.’;

(16) in Article 18, paragraph 3 is replaced by the following:

- ‘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.’;

(17) Article 20 is replaced by the following:

‘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 ... [18 months after the date of entry into force of this amending Directive], the Commission shall draw up guidelines to assist and facilitate Member States in the separate collection of hazardous waste fractions produced by households.’;

(18) Article 21 is amended as follows:

(a) in paragraph 1, points (a), (b) and (c) are replaced by the following:

- ‘(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.’;

(b) the following paragraph is added:

- ‘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.’;

(19) Article 22 is replaced by the following:

‘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.’;

(20) Article 27 is amended as follows:

(a) paragraph 1 is replaced by the following:

‘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.’;

(b) paragraph 4 is replaced by the following:

‘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.’;

(21) Article 28 is amended as follows:

(a) paragraph 3 is amended as follows:

(i) points (b) and (c) are replaced by the following:

‘(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;’;

(ii) the following points are inserted:

‘(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;

- (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;’;
- (iii) the following points are added:
 - ‘(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) paragraph 5 is replaced by the following:
 - ‘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* and Article 11 of Directive 2000/60/EC of the European Parliament and of the Council**.

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- * 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).
- ** 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).’;

(22) Article 29 is amended as follows:

(a) paragraph 1 is replaced by the following:

- ‘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.’;

(b) in paragraph 2, the first subparagraph is replaced by the following:

‘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.’;

(c) the following paragraph is inserted:

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

(d) paragraphs 3 and 4 are deleted;

(23) in Article 30, paragraph 2 is replaced by the following:

‘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.’;

(24) in Article 33, paragraph 2 is replaced by the following:

‘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).’;

(25) Article 35 is amended as follows:

(a) paragraph 1 is replaced by the following:

‘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) the following paragraphs are added:

- ‘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*.
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).

* 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).’;

(26) in Article 36, paragraph 1 is replaced by the following:

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

(27) Article 37 is replaced by the following:

‘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.

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.’;

(28) Article 38 is replaced by the following:

‘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;
 - (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.’;

(29) the following article is inserted:

‘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 ... [date of entry into force of this amending Directive]. 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.
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* .
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.

* OJ L 123, 12.5.2016, p. 1.’;

- (30) Article 39 is replaced by the following:

‘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*.
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.

* 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).';

(31) In Annex II, operations R 3, R 4 and R 5 are replaced by the following:

'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****

** 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.';

(32) The text set out in the Annex to this Directive is inserted as Annexes IVa and IVb.

Article 2
Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by ... [24 months after the date of entry into force of this Directive]. They shall immediately inform the Commission thereof.

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

2. Member States shall communicate to the Commission the text of the main measures of national law which they adopt in the field covered by this Directive. The Commission shall inform the other Member States thereof.

Article 3
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 4
Addressees

This Directive is addressed to the Member States.

Done at Strasbourg,

For the European Parliament
The President

For the Council
The President

ANNEX

The following Annexes are inserted:

‘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)¹

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;

¹ 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.

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.

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.’.