

Brussels, 24.9.2018
COM(2018) 656 final

**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE
COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE
COMMITTEE OF THE REGIONS**

**on the implementation of EU waste legislation, including the early warning report for
Member States at risk of missing the 2020 preparation for re-use/recycling target on
municipal waste**

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1. INTRODUCTION

Good waste management is a building block of the circular economy and helps prevent waste from having a negative impact on the environment and health. Proper implementation of the EU's waste legislation will speed up the transition to a circular economy. Local actors have a crucial role in waste management and their involvement in policy development and implementation, as well as support for their activities, is necessary to ensure compliance with EU legislation.

This report reviews the implementation of key elements of this legislation by the Member States, identifies challenges that prevent full compliance and provides recommendations for how to improve the management of certain waste streams.

The report is based on information provided in national implementation reports¹ for the 2013-2015² period on:

- Directive 2008/98/EC on waste ('Waste Framework Directive'),
- Directive 2002/96/EC and Directive 2012/19/EU on waste electrical and electronic equipment ('WEEE Directive'),
- Directive 94/62/EC on packaging and packaging waste ('Packaging Directive'),
- Directive 1999/31/EC on the landfill of waste ('Landfill Directive'), and
- Directive 86/278/EEC on sewage sludge ('Sewage Sludge Directive')³.

This information is complemented by recent in-depth studies on several waste streams, namely municipal waste (the early warning study)^{4,5}, construction and demolition waste⁶, hazardous waste⁷ and waste electrical and electronic equipment⁸.

2. MUNICIPAL WASTE – EARLY WARNING REPORT

In 2016, Europeans generated on average 480 kg of municipal waste per person, 46 % of which was recycled or composted, while a quarter was landfilled⁹. Municipal waste represents only around 10 % of the total waste generated in the EU, but it is one of the most

¹ Detailed information on these reports for individual directives can be found at: <http://ec.europa.eu/environment/waste/reporting/index>.

² The previous implementation report COM/2017/088 final covers the 2010-2012 period. The Commission is legally obliged to issue this report.

³ There are other legal acts for which the Member States have to submit implementation reports to the Commission. However, the deadlines for submission of these questionnaires vary.

⁴ Eunomia Research and Consulting Ltd *et al* (2018), 'Study to identify Member States at risk of non-compliance with the 2020 target of the Waste Framework Directive and to follow-up phase 1 and 2 of the compliance promotion exercise'

⁵ European Topic Centre on Waste and Materials in a Green Economy (ETC/WMGE) for the European Environment Agency (2018), 'Scenarios for municipal waste recycling based on the European Reference Model on Municipal Waste, Contribution to the first Early Warning report'

⁶ BIO by Deloitte (2017), 'Resource efficient use of mixed wastes; Improving management of construction and demolition waste'

⁷ BiPRO GmbH (2017), 'Support to selected Member States in improving hazardous waste management based on assessment of Member States' performance'

⁸ BiPRO GmbH (2018), 'WEEE compliance promotion exercise'

⁹ Eurostat: <http://ec.europa.eu/eurostat/web/waste/data/database>, dataset (env_wasmun)

complex streams to manage due to its diverse composition, its large amount of producers and fragmentation of responsibilities.

Legal obligations on the management of municipal waste (waste from households and similar waste) are laid down in the Waste Framework Directive. These include a 50 % municipal waste preparing for re-use/recycling target¹⁰ to be achieved by 2020. The Directive was recently revised¹¹ to include new and more ambitious targets: 55 % to be achieved by 2025, 60 % by 2030 and 65 % by 2035¹². The revised Directive also introduces a system of early warning reports to assess Member States' progress towards these targets three years ahead of the respective deadlines.

In anticipation of this exercise, and in order to help Member States meet the 2020 target, the Commission has already conducted its first early warning study¹³. Based on an in-depth review of Member States' recycling performance and waste policies, **14 Member States** have been identified as **at risk of missing the 2020 target of 50%**¹⁴. These are: **Bulgaria, Croatia, Cyprus, Estonia, Finland, Greece, Hungary, Latvia, Malta, Poland, Portugal, Romania, Slovakia and Spain.**

Scenario modelling performed for this exercise¹⁵ confirmed this and concluded that if no additional policy action is taken, some of the Member States concerned would probably not even meet the 50 % target by 2025.

Depending on the specific problems and needs of each Member State and their distance from the 2020 target, country-specific **actions** to close the gap have been identified through a process that closely involved the national authorities. The early warning assessment contained in this report also builds on previous compliance promotion activities¹⁶ carried out by the Commission in collaboration with the Member States. **If implemented swiftly** by national and local authorities, these suggested actions will significantly reduce the risk of the targets not being met. The staff working documents accompanying this report outline these actions. A number of relevant common priorities can also be identified.

¹⁰ Article 11(2)(a) of the Waste Framework Directive

¹¹ Directive (EU) 2018/851, further referred to as revised Waste Framework Directive

¹² Article 11(2)(c) to (e) of Directive (EU) 2018/851

¹³ Eunomia (2018) and ETC/WMGE (2018)

¹⁴ Based on their chosen calculation method. For the purpose of verifying compliance with the target pursuant to Article 11(2)(a) of the Waste Framework Directive, Decision 2011/753/EU sets out four alternative calculation methods to report 'preparation for re-use and recycling' rates for household waste.

¹⁵ ETC/WMGE (2018)

¹⁶ http://ec.europa.eu/environment/waste/framework/support_implementation.htm

Box 1: Management of municipal waste

- **Cascade national recycling targets down to the municipal level** with responsibility for waste collection systems, and ensure that there are **consequences for municipalities that fail to meet targets**.
- Introduce measures (incl. taxes) **to phase out landfilling and other forms of residual waste treatment** (e.g. Mechanical Biological Treatment, and incineration) to provide economic incentives to support the waste hierarchy¹⁷.
- Develop guidance with local and regional authorities for municipalities in the form of a **minimum service standard for separate collection**. Organise **technical support and capacity-building programmes** for **municipalities** at national level.
- Introduce **mandatory requirements to sort bio-waste**, and ensure that planned or existing treatment infrastructure matches the collection systems.
- Encourage **co-operation between municipalities** on infrastructure planning and/or service procurement to ensure scale efficiency and that the financial burden is shared.
- **Improve Extended Producer Responsibility (EPR) schemes**, at least in line with the general minimum requirements set out in the revised Waste Framework Directive.
- Introduce **measures to encourage households** to sort waste, including higher collection frequency for separated streams as compared with that for mixed waste.
- **Improve monitoring and reporting**, including by ensuring that data is captured at municipal level.
- Use EU funds more effectively to develop waste infrastructure by ensuring that co-financing **supports prevention, re-use and recycling performance**.

3. CONSTRUCTION AND DEMOLITION WASTE

Construction and demolition waste is the biggest waste stream in the EU by weight, accounting for over 800 million tonnes per year, i.e. around 32 % of the total waste generated.¹⁸

There is a high potential for improving resource efficiency in the management of this stream. It is made up of a mix of different materials including inert, non-inert non-hazardous and hazardous waste. It consists mainly of a mineral fraction (bricks, tiles, concrete, etc.), which is relatively heavy and easily recyclable, but of low value. It also contains materials with positive market value (metals) or potential value if collected separately in clean fractions (such as plastics).

The Waste Framework Directive¹⁹ sets a **2020 target of 70 % preparation for re-use, recycling and other material recovery** for this waste stream. Member States' performances

¹⁷ The waste hierarchy ranks waste management options according to their sustainability and gives top priority to waste prevention, followed by recycling, energy recovery and, at the bottom of the ladder, disposal (e.g. landfilling).

¹⁸ Eurostat, dataset (env_wasgen)

¹⁹ Article 11(2)(b)

vary significantly, with over half reporting that they already met the 2020 target in the 2013-2015 period, and some even achieving over 90% recovery. However, **Cyprus, Greece, Slovakia, and Sweden** are still below 60 %²⁰. There is still some uncertainty regarding the figures reported by some Member States.

A recent study²¹ of how construction and demolition waste is managed across the EU identified the following key actions.

Box 2: Management of construction and demolition waste

- **Promote waste prevention** through smart design, extending the lifetime of constructions, reuse and improving planning and logistics on construction sites.
- Promote **selective demolition and sorting at source**.
- Make use of **EU guidance** (pre-demolition audits and management protocol)²².
- Use **economic instruments** to divert this waste stream from landfills.
- **Limit backfilling operations** to those that are in line with the definition included in the Waste Framework Directive.
- Encourage uptake of recycled products through **quality certificates** and/or **end-of-waste criteria**.
- Expand use of **green public procurement** requiring recycled content.
- Improve the **quality of statistics**.

4. HAZARDOUS WASTE

Hazardous waste is a relatively small waste stream (less than 4 % of total waste)²³, but its proper management is crucial in order to prevent it from having a serious negative impact on the environment and human health.

The Waste Framework Directive includes requirements on labelling, record-keeping, traceability and control obligations from production to final destination, as well as a ban on mixing of hazardous waste with other waste, substances or materials.

The analysis of hazardous waste management across the EU²⁴, including on PCBs/PCTs²⁵, suggests that there are serious gaps in the implementation of key legal obligations. These include inadequate planning, data inconsistencies and statistical gaps between generation and treatment, and misclassification of waste. The study provides detailed, country-specific recommendations, which can be summarised in a more general list of priority actions.

²⁰ ARGUS (2017), 'Compliance reporting on Waste Framework Directive – material recovery rates for construction & demolition waste for reporting period 2013 – 2015'; Validation report 2017

²¹ BIO by Deloitte (2017); Eurostat, dataset ([cei_wm040](#))

²² <https://ec.europa.eu/docsroom/documents/20509/attachments/1/translations/en/renditions/native>

²³ Eurostat; dataset (env_wasgen)

²⁴ BiPRO (2015), 'Support to selected Member States in improving hazardous waste management based on assessment of Member States' performance' - 10 Member States analysed; and BiPRO (2017) - 14 Member States analysed

²⁵ Polychlorinated biphenyls/polychlorinated terphenyls

Box 3: Management of hazardous waste

- Improve the **quality of waste management plans** based on reliable and comparable information, so that hazardous waste is more thoroughly covered and information on treatment capacities is included.
- Adopt fully fledged, reliable and interoperable **electronic record-keeping and tracing systems**, integrated within national statistics systems and EU waste shipment data.
- Reflect the **waste hierarchy and the mixing ban** in national legislation, guidance on treatment options, and permit conditions, and ensure their enforcement.
- Create, publish, disseminate and use **clear and harmonised guidance on waste classification** and management, including on the waste hierarchy. Make use of the Commission's technical guidance on the classification of waste²⁶.
- Set up a **comprehensive system of unannounced and coordinated inspections**. Take action against unauthorised operators at all levels.
- Set out and fully enforce the **shared responsibility of waste producers**²⁷ and other chain operators for hazardous waste management.
- Continue working to eliminate **PCBs/PCTs** from closed and open applications.

5. WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

Around 10 million tonnes²⁸ (0.4% of the total waste produced) of waste electrical and electronic equipment (WEEE) is estimated to have been generated in the EU in 2014 – a figure which is expected to climb to more than 12 million tonnes by 2020²⁹. This waste stream is made up of a complex mixture of materials and components, including various substances which, if not properly managed, pose high risks to the environment and human health. Moreover, producing modern electronics requires scarce and valuable resources to be used.

Directive 2012/19/EU aims at improving the collection, treatment and recycling of WEEE. During the 2013-2015 period, the amount of waste equipment collected from private households in the EU28 grew by 8 %. In 2014, an average of 6.21 kg of waste equipment per person was collected from private households. In 2015, 23 Member States met the minimum collection target of 4 kg of household WEEE per person³⁰, with Sweden and Denmark collecting as much as 12 kg while **Cyprus, Latvia, Malta and Romania missed the target** by a considerable margin.^{31 32}

²⁶ Available in all EU languages at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2018.124.01.0001.01.ENG&toc=OJ:C:2018:124:TOC

²⁷ As set out in Article 15(2) of the Waste Framework Directive

²⁸ Based on 'WEEE calculation tools' available at http://ec.europa.eu/environment/waste/weee/data_en.htm

²⁹ United National University (2007), 2008 Review of Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)

³⁰ The target applied until the end of 2015.

³¹ Latvia missed the target in 2015, while the other Member States did not meet it in 2014 (the latest data reported) or in preceding years.

³² Eurostat; dataset (env_waselee)

Since 2016, each Member State has been required to meet a collection target of 45 % of equipment sold, and from 2019, that target will be 65 % of equipment sold or 85 % of electronic waste generated annually³³. Member States will be able to choose one of these two equivalent ways of measuring the target.

The Commission conducted a compliance promotion exercise³⁴ on WEEE to identify the main implementation gaps and to share good practices. This study produced both, recommendations applicable to all Member States and country-specific advice for certain Member States.

Box 4: Management of waste electrical and electronic equipment

- Involve **all relevant levels of government** (municipal, regional, national)
- **Introduce (or intensify) controls at all stages of the management chain**, and organise inspections targeting illegal or non-compliant activities.
- **Improve data quality**, including through quality checks and by reinforcing traceability procedures to account for all waste equipment.
- **Improve EPR schemes**, at least in line with the general minimum requirements in the revised Waste Framework Directive.
- **Improve collection** by:
 - expanding collection infrastructure;
 - improving consumer awareness;
 - clarifying the transfer of ownership of waste equipment in the management chain; and
 - requiring all collectors to cooperate with a compliance scheme.
- **Enforce the proper treatment requirements** set out in the Directive; consider adopting minimum quality standards for the treatment of WEEE.
- Implement/develop **mechanisms for exchanging product-related information** relevant for recycling and preparation for re-use between producers and recyclers (e.g. I4R - Information for Recyclers - platform³⁵).
- **Establish a ‘preparation for re-use’ network** of registered and authorised/certified operators at national level.
- Consider adopting a **separate ‘preparation for re-use’ target** at national level.

6. PACKAGING WASTE

In 2015, the total packaging waste generated in the EU amounted to around 85 million tonnes, which is around 3.4 % of the total waste generated³⁶. The amount of waste generated has been slowly increasing in the recent years.

³³ The 2016 data was not available at the time of drafting of this report.

³⁴ BiPRO (2018)

³⁵ <https://i4r-platform.eu/>

³⁶ Eurostat; dataset (env_wasgen) and (env_waspac)

The Packaging Directive sets specific targets for packaging waste to be met by the end of 2008 (with time extensions for some Member States – all ceased to apply in 2015): overall recovery and recycling targets (60 % and 55 %, respectively) alongside material-specific recycling targets (60 % for paper and cardboard, 60 % for glass, 50 % for metal, 22.5 % for plastic and 15 % for wood).

Since 2005, the average overall packaging recycling rate in the EU has steadily increased (to 65.8 % in 2015³⁷). However, between 2013 and 2015 the amount of packaging waste generated grew by 6 % across the EU, suggesting that **more work on waste prevention is needed**. The early warning study also highlighted inconsistencies in packaging data for several Member States, indicating that the amounts of packaging put on the market may be underreported.

The revised Packaging Directive³⁸ introduced more ambitious overall recycling targets for packaging (65 % in 2025 and 70 % in 2030), and higher material-specific targets (such as 55 % in 2030 for plastic). This will require increased efforts across the EU to organise **separate collection schemes** more efficiently in order to capture more recyclables, including through improved EPR schemes.

Most Member States are meeting current overall recycling targets, although **Hungary** (since 2012) and **Malta** (since 2013³⁹) **missed** them by a considerable margin. Several Member States missed one or more material-specific targets: for paper and cardboard (**Malta**), wood (**Croatia, Malta, Cyprus, Finland**), metal (**Croatia, Malta**), and glass (**Greece, Malta, Cyprus, Hungary, Portugal, Poland, and Romania**). The Commission has engaged with the Member States concerned and developed targeted advice via the compliance promotion and other activities to improve performance.

7. LANDFILLING

Landfilling is the least preferable waste treatment option. While amounts of landfilled municipal waste have steadily fallen in the EU as a whole (dropping by 18% during the 2013-2016 period⁴⁰), the average landfilling rate for municipal waste in the EU still stood at 24 % in 2016. Large differences across the EU persist: in 2016 **10 Member States still landfilled over 50 % of municipal waste**, while five reported rates **above 70 %**.

The Landfill Directive obliged Member States to reduce landfilling of municipal biodegradable waste to a maximum of 75 % by 2006, 50 % by 2009 and 35 % by 2016, compared to a 1995 baseline⁴¹. The revised Directive⁴² requires Member States to reduce the landfilling of municipal waste to a maximum of 10 % by 2035, and it introduces a ban on the landfilling of separately collected waste, including biodegradable waste.

As regards meeting the targets for biodegradable waste reduction, the completeness of the data submitted by Member States varies. According to the reported data, in 2015, half of Member States had already met the 35 % target for 2016. **Croatia** missed its 75 % target which was due in 2013. **Cyprus, the Czech Republic, Greece, Latvia and Slovakia** missed

³⁷ Ibid

³⁸ Directive (EU) 2018/852

³⁹ Data for 2015 not yet reported.

⁴⁰ Eurostat; dataset (emv_wasmun)

⁴¹ Article 5(2) of the Landfill Directive allows for a four-year time extension in cases where, in 1995, Member States landfilled more than 80 % of their municipal waste.

⁴² Directive (EU) 2018/850

the 50 % target, also due in 2013. **Malta**, which has a high overall municipal waste landfill rate, **has not reported** recent data. The Commission has engaged with the Member States concerned and developed targeted advice via the compliance promotion and other activities to improve performance.

A recent study carried out for the Commission⁴³ found that 15 Member States were not fully meeting the obligation laid down in the Directive⁴⁴ to treat waste before landfilling.

Despite the closures of non-compliant landfills reported by the Member States, the number of facilities that are **not in line with the requirements** of the Directive remains a matter of concern.

8. SEWAGE SLUDGE

The Sewage Sludge Directive seeks to control the use of sewage sludge in agriculture. It sets limit values for concentrations of heavy metals in sludge intended for agricultural use and soil treatment.

The Directive has been in force for over 30 years and is well implemented across the EU. **All Member States have set concentration limit values** for heavy metals in soil that are **in line with the requirements of the Directive - or indeed much stricter**.

9. CONCLUSIONS

EU waste legislation is driving considerable improvements in waste management. Full implementation of that legislation is crucial, however, if the EU is to reap the environmental and economic benefits of the circular economy and compete in a world of increasingly scarce resources..

The early warning reports on municipal waste and the Commission's compliance promotion efforts described in this report point to continuous progress in Member States, but also to serious gaps and challenges that must be swiftly addressed.

Good progress is possible if the Member States concerned take action urgently to implement the actions identified in this report and the accompanying country-specific reports. More effective separate collection, efficient EPR schemes, economic instruments such as landfill and incineration taxes and improved data quality are all crucial to ensuring compliance with EU waste legislation, now and in the future.

In follow-up to this report, the Commission will undertake high level circular economy/waste visits to the Member States at risk of not meeting the 2020 municipal waste targets. In this respect, the Commission will engage with relevant stakeholders including associations of local and regional actors.

The Commission will continue to dedicate significant resources to supporting Member States in their implementation efforts, including through technical assistance (e.g. via the Environmental Implementation Review⁴⁵ and exchange of best practices⁴⁶) and with EU

⁴³ Milieu (2017), 'Study to assess the implementation by the EU Member States of certain provisions of Directive 1999/31/EC on the landfill of waste'

⁴⁴ Article 6(a) of the Landfill Directive

⁴⁵ http://ec.europa.eu/environment/eir/index_en.htm

⁴⁶ TAIEX-EIR Peer2Peer - http://ec.europa.eu/environment/eir/p2p/index_en.htm

funds. It is up to national authorities, however, to intensify the process of necessary policy reform and step up action on the ground.