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**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 the EU waste legislation

**Directive 2006/12/EC on waste,
Directive 91/689/EEC on hazardous waste,
Directive 75/439/EEC on waste oils, Directive 86/278/EEC on sewage sludge,
Directive 94/62/EC on packaging and packaging waste,
Directive 1999/31/EC on the landfill of waste, and
Directive 2002/96/EC on waste electrical and electronic equipment
for the period 2007 - 2009**

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1. INTRODUCTION

This report aims to inform about the implementation of the EU legislation on waste over the period 2007-2009. It covers Directives 2006/12/EC on waste, 91/689/EC on hazardous waste, 75/439/EEC on waste oils, 86/278/EEC on sewage sludge, 94/62/EC on packaging and packaging waste, 1999/31/EC on the landfill of waste, 2002/96/EC on waste electrical and electronic equipment. Separate reports will cover the implementation of Regulation (EC) 1013/2006 on shipments of waste, Directive 2006/21/EC on the management of waste from the extractive industries, and Directive 2000/53/EC on end-of-life vehicles.

The report is based on information supplied by Member States. Detailed reports on each Directive can be accessed at: <http://ec.europa.eu/environment/waste/reporting/index.htm>.

Directives 2006/12/EC on waste, 91/689/EC on hazardous waste, and 75/439/EEC on waste oils have been repealed with effect from 12 December 2010 by the revised Directive 2008/98/EC on waste which incorporates their main provisions. Hence, this is the last report concerning the implementation of these Directives. New Implementation Questionnaire has been established for Directive 2008/98/EC¹. An overview of the changes in the waste acquis is illustrated in Figure 1 in the Annex to this Report.

2. TIMELINESS AND QUALITY OF REPORTING

For the reporting period 2007-2009, almost all of the Member States have complied with their reporting obligations². However, the reporting discipline of Member States still leaves space for improvement: Reports from four Member States were not provided on time, the submitted reports sometimes did not contain replies to all questions, and information was not always complete.

¹ 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, http://ec.europa.eu/environment/waste/reporting/pdf/C_2012_2384.pdf.

² With the exception of France, Greece, Malta and the Belgian regions of Brussels and Wallonia which, at the time of the finalisation of this report, did not provide a full set of implementation reports.

As regards the annual recycling and recovery data on waste electrical and electronic equipment (WEEE) and packaging, most Member States referred to the annual reports submitted to EUROSTAT. For the majority of Member States, no data was available for the year 2009 (which as regards WEEE is in line with the reporting requirements). A complete set of data for 2007 and 2008 for WEEE and packaging was available for overall recycling and recovery rates as well as material or waste stream specific recycling and collection rates.

The quality of reporting and information provided varied considerably. Member States often provided unclear answers. Although in some cases this might be attributed to lack of clarity in formulation of several questions in the implementation questionnaires, Member States' answers were repeatedly vague, for example with frequent references to national legislation, but without indicating further details, even where explanation or details on experiences were explicitly requested.

3. DIRECTIVE 2006/12/EC ON WASTE (WASTE FRAMEWORK DIRECTIVE, WFD)

This Directive, now repealed and replaced by Directive 2008/98/EC on waste, established the basic requirements, definitions and principles regarding waste management in the EU. Adopted in 1975 and substantially revised in 1991, the WFD has been amended numerous times. Directive 2006/12/EC (hereafter the "2006 WFD"), a codified version of a previous Directive 75/442/EEC, was the relevant document for the reporting period 2007 - 2009.

The 2006 WFD introduced crucial definitions on waste management (such as the definition of "waste"), obliged Member States to establish adequate networks of waste disposal installations, introduced a three-step waste management hierarchy promoting waste prevention over its recovery, with disposal as the last resort. The Directive obliged Member States to ensure that waste was recovered or disposed of without endangering human health and the environment, and prohibited the abandonment, dumping or uncontrolled disposal of waste. It required Member States to draw up national waste management plans (WMPs) and introduced an obligation to obtain a permit for waste handling.

All reporting Member States confirmed having incorporated the Directive into their national laws, and complying with its basic requirements, including establishing one or more WMPs and undertaking steps towards self-sufficiency in waste disposal. In addition, all reporting Member States confirmed compliance with the provisions of the 2006 WFD on permit requirements and record keeping.

However, an important deficiency in the application of EU waste law could be identified in terms of waste treatment options chosen. Statistics showed that many Member States were still largely depending on landfilling of household waste, which was not in line with the concept of the waste hierarchy as emphasized by Article 3(1) of the 2006 WFD, and will be in even starker contrast with the requirements of the revised WFD which introduces a five-step waste management hierarchy. In 2009, the treatment methods for municipal waste varied significantly between Member States, ranging from extremely high reliance on landfilling (Bulgaria, Romania, Malta, Lithuania, and Latvia landfilling over 90% of their waste) to below 5% of landfilling (Belgium, Denmark, Germany, the Netherlands, Austria, and Sweden). The highest recycling (including composting³) rate was achieved in Austria (70%),

³ *Composting* is a process which turns biomass into compost with the use of oxygen and certain microorganisms (for detailed explanation of different forms of treatment of biodegradable waste, see

followed by Germany (66%), Belgium and the Netherlands (60%), and Sweden (55%). Sweden, Denmark, the Netherlands, Luxembourg, Belgium, Germany and France had the highest incineration rates (no distinction between incineration with and without energy recovery at the time). These large discrepancies were, to a certain extent, a result of the late implementation of waste legislation in the Member States which joined the EU after 2004. Progress in those countries will therefore have to be carefully monitored as the main indicator of effectiveness of their waste management policies. However, some older Member States have demonstrated consistently low levels of performance (e.g. Greece with 82% of landfilling, Portugal with only 20% of recycling). Progress should be encouraged in these countries through targeted advice and use of Structural and Cohesion funding.

Some progress in municipal waste management could be observed in comparison with the previous reporting period, which is probably to be explained by improved waste management infrastructure established over the past years. The implementation of waste-stream specific EU Directives (such as the Packaging Directive, the WEEE Directive or the Batteries Directive) and measures aiming at fulfilling the targets contained therein were driving factors, too, since infrastructure, collection schemes, information campaigns etc. introduced to comply with this legislation would have contributed to an overall improvement of waste management. However, overall figures on waste management in general, and on municipal waste management in particular, remain unsatisfying, bearing in mind the aim of the EU to move towards a European recycling society as now emphasized by the revised WFD 2008/98/EC. There are still huge recycling potentials leaving more than half of the existing resources embedded in waste unused, and immediate efforts need to be taken to step up introducing modern, resource-efficient waste management systems.

4. DIRECTIVE 91/689/EEC ON HAZARDOUS WASTE

The Hazardous Waste Directive – now repealed, with its main provisions forming part of Directive 2008/98/EC on waste – introduced a uniform definition of hazardous waste and ensured environmentally sound management of this waste stream. A number of controls, in addition to those laid down in the 2006 WFD, were imposed in respect of the management of hazardous waste, including a mixing ban of hazardous waste, traceability requirements and the notification to the Commission of wastes exhibiting hazardous properties but not listed as such.

All reporting Member States have transposed the relevant provisions of the Hazardous Waste Directive into their national laws. However, the information provided by the reporting Member States was not in all cases precise and exhaustive. In particular, concerns continue to exist as regards the enforcement of the mixing ban and the related exemptions. There are doubts whether inspections based on specific cases and complaints as reported by some Member States were sufficient to comply with the requirement for appropriate periodic inspections. Additionally, it is not always obvious whether the inspections as well as the reporting requirements really covered producers of hazardous waste or generally undertakings or establishments involved in waste management.

Box 2 of Commission Staff Working Document accompanying the Communication from the Commission on future steps in bio-waste management in the European Union, SEC(2010) 577 final, at: http://ec.europa.eu/environment/waste/compost/pdf/sec_biowaste.pdf.)

5. DIRECTIVE 75/439/EEC ON THE DISPOSAL OF WASTE OILS

The Waste Oils Directive has also been repealed as of 12 December 2010 - waste oils are now covered by Directive 2008/98/EC on waste.

All Member States transposed the Waste Oils Directive into national legislation. The assessment of the Member States' reports demonstrated that appropriate permitting and control mechanisms were put in place in order to prevent the negative environmental and health impacts from the management of waste oils.

In 2008 and 2009, a mix of treatment methods was applied across the EU. Seven Member States gave priority to regeneration of waste oils over their combustion and landfilling, four Member States focused on combustion, and one chose landfilling as a management option. Two Member States were exporting a remarkable share of their waste oils. Eight Member States could not be analysed in detail due to missing data. The remaining five Member States opted for a mix of all three treatment options.

A number of Member States identified some constraints preventing the regeneration or combustion of waste oils. The most common reasons were small quantities of oil produced and collected and, consequently, the lack of processing capacities. From an economic point of view, investments into waste oil treatment infrastructure did not seem reasonable for those countries.

6. DIRECTIVE 86/278/EEC ON SEWAGE SLUDGE

The Sewage Sludge Directive aims at encouraging the use of sewage sludge in agriculture and preventing its harmful effects on soil, vegetation, animals and human health. The Directive contains a number of requirements on the quality of sludge for use in agriculture, the quality of the soil on which sludge is to be used, or the limitation of sludge application for certain purposes and in certain time periods. The main objective of these requirements is to limit heavy metal concentrations in soils. For this purpose, limit values have been defined for heavy metals in soils to which sludge is applied, and for the maximum annual quantities of such heavy metals which may be introduced into soil through sludge use in agriculture.

The transposition and implementation of this Directive continues to be unproblematic, and no major changes took place since the last reporting period. Interestingly, there is a wide variation between Member States in national limit values for heavy metals: while some Member States have adopted the thresholds of the Directive, others have decided to enact much stricter limit values.

The analysis of the data reported by the Member States on sludge produced and used in agriculture shows that the aim to encourage the use of sludge in agriculture has been reached. Although the generation of sludge was slightly reduced (< 1%) from 2007 to 2009, the Member States report an increase of the use of sludge in agriculture by approximately 8% in the same period of time.

In the first quarter of 2013, the Commission will carry out an ex-post evaluation of a number of waste stream Directives, including the Sewage Sludge Directive.

7. DIRECTIVE 94/62/EC ON PACKAGING AND PACKAGING WASTE

The Packaging Directive aims to harmonise national measures in order to prevent or reduce the impact of packaging and packaging waste on the environment and to ensure the smooth functioning of the Internal Market. It contains provisions on prevention of packaging waste, on re-use of packaging and on recovery and recycling of packaging waste. The Directive sets recycling and recovery targets, obliges Member States to introduce collection schemes for packaging waste and introduces minimum requirements which all packaging has to meet to be put on the EU market. Several Member States were granted transitional periods for achieving the recovery and recycling targets.

In general, all reporting Member States have properly transposed the requirements of the Directive into their national laws. Based on the information provided by the Member States and the Eurostat statistics, it can be assumed that the overall implementation level continues to be satisfactory. Only two Member States have indicated that their national legislation has been modified during the reporting period.

Between 2007 and 2009, the amount and composition of packaging waste generated remained quite stable, with a slight increase by weight in 2007 and 2008. In 2009, there was a significant decrease in the amount of packaging waste generated below the 2005 levels, although it is not possible to precisely indicate the reasons triggering this development.

Greece, Ireland and Portugal have been granted transitional periods regarding the targets for treatment of packaging waste until 2011 because of the large number of small islands, the presence of rural and mountain areas and the low level of packaging consumption respectively. In addition, Directive 2005/20/EC and the Treaties of Accession grant a later deadline to meet the targets for the countries which have acceded the European Union in 2004 (the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia, Slovakia) and 2007 (Romania and Bulgaria).

The total recovery and recycling rates increased significantly compared to the previous reporting period, mainly due to the introduction of packaging waste collection and treatment systems in the new Member States. Between 2007 and 2009, the total recovery and recycling rates underwent a slight but steady increase at EU-27 level.

The vast majority of Member States attained the targets for overall recovery and recycling as well as the material-specific recycling targets, with some exceptions. In 2009, four Member States did not meet one or more of the defined targets. Some Member States did not achieve a target in one year but were able to reach it in the previous or subsequent year, which seems to suggest that no systematic structural deficits in waste management infrastructure exist in those Member States. However, other Member States consistently failed to achieve the overall recovery/recycling targets or material-specific targets over the reporting period, and this problem needs to be addressed individually.

The majority of Member States took measures to prevent the formation of packaging waste; nevertheless, encouraging the prevention of packaging waste and developing packaging re-use systems remains a continuous task for Member States.

All reporting Member States indicated the establishment of separate collection schemes for packaging waste⁴. The systems differ as to their degree of efficiency and availability for the population and the cost for the citizen. Some of the Member States that acceded in 2004 have only recently started to put relevant infrastructure in place via pilot projects in urban areas. Member States implemented a number of different initiatives for awareness-raising of consumers and businesses on environmentally sound management of packaging waste, including separate collection. Where such systems were put in place, the performance of separate collection (and subsequent quality of recycling) was significantly better.

Implementation and practical enforcement of the requirements set by the Directive vary considerably between the Member States, which is confirmed by the evaluation of statistical data. The Packaging Directive is also subject to the planned ex-post evaluation to be launched in 2013.

8. DIRECTIVE 1999/31/EC ON THE LANDFILL OF WASTE

The Landfill Directive is intended to prevent or reduce the adverse effects of the landfill of waste on the environment and human health. It sets stringent technical requirements for landfill sites, specific requirements for waste acceptance on the sites, and introduces landfill categories depending on the waste intended to be disposed of. The Directive obliges Member States to ensure that competent national authorities issue permits to operate the sites. The key provisions include targets for a gradual diversion of biodegradable municipal waste⁵ from landfills in order to reduce methane⁶, coupled with technical requirements for capture and treatment of landfill gas.

Landfilling has always been the least desired waste management option. This has been confirmed by the 2008 WFD. Many Member States have taken measures to eliminate it completely, and were very successful in this respect (landfilling rates for municipal waste had fallen below 5% in Belgium, Denmark, Germany, the Netherlands, Austria and Sweden). However, in many countries landfilling is a predominant (if not the only available) municipal waste management option for. Significant efforts need to be made by the latter countries to change the situation and drastically reduce landfilling.

Member States reported to have transposed most requirements of the Directive into their national laws. All Member States reported having taken measures to reduce the landfilling of municipal waste, including prevention programmes, and to have adopted national strategies and measures to reduce the amount of biodegradable waste going to landfills. Data provided on the amount of biodegradable waste going to landfills show that the amount of such waste is continuously reduced: out of the 19 Member States for which data can be compared with that from the previous report, 11 were able to reduce the amount of biodegradable municipal waste going to landfills.

⁴ *Separate collection schemes for packaging waste* are understood as systems set up to provide for the return and/or collection of used packaging and/or packaging waste from the consumer, other final user, or from the waste stream in order to channel it to the most appropriate waste management alternatives (Art 7(1)(a) of the Packaging Directive).

⁵ *Biodegradable waste* means any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard (Art 2(m) of the Landfill Directive).

⁶ Biodegradable waste decomposing in landfills generates methane, a powerful greenhouse gas around 20 times more potent than CO₂ in terms of greenhouse effect.

All Member States have defined waste acceptance criteria for different landfill classes. The technical requirements of the Directive (monitoring of leachate⁷, surface, groundwater and gas emissions) are generally well transposed into national legislation. However, comprehensive data on practical enforcement of these requirements by landfill operators are not always available. According to the available data, at the end of the reporting period 2007 - 2009, there was still a considerable number of non-compliant landfills in operation, although their number has decreased in comparison with the previous report (especially in the case of landfills for non-hazardous waste). The majority of Member States indicated that all landfills in operation, including landfills for inert waste, complied with the requirements of the Directive. Four Member States reported only a small share of compliant landfills, with the rest requiring upgrading and modernisation.

The Commission will review the targets for diversion of biodegradable waste from landfills and present a report to the European Parliament and the Council in 2014, if appropriate accompanied by a proposal.

9. DIRECTIVE 2002/96/EC ON WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE DIRECTIVE)

The WEEE Directive aims at promoting and optimising the collection, re-use, recycling and recovery of waste from electrical and electronic equipment (WEEE), ensuring a high level of environmental and health protection. It provides for the establishment of collection schemes for the return of old devices and focuses on producer responsibility as a key policy mechanism for reducing quantities of WEEE going to final disposal. The Directive aims at improving product design with a view to preventing WEEE generation and increasing its re-usability and recoverability, and provides for the financing of systems for recovery and treatment of WEEE by producers. It emphasises that WEEE should be carefully managed due to its often hazardous properties and its material value as resource. Therefore, the Directive defines mandatory targets for Member States concerning the collection of WEEE from households and sets targets for re-use/recycling and recovery for different WEEE categories to contribute to the efficient use of this resource (some Member States were granted transitional periods for achieving the targets).

In 2008, the Commission launched a recast of the WEEE Directive in order to adapt the collection targets to the reality of the different Member States, to strengthen provisions against illegal shipments, and to reduce administrative burdens. The new WEEE Directive was adopted on 4 July 2012⁸.

All Member States have transposed the relevant provisions of the WEEE Directive into their national laws.

Based on the national implementation reports for the period 2007 to 2009 and the data submitted on target achievement, it appears that the level of compliance with the Directive was in general satisfactory. In the reporting years 2007 and 2008, the EU-15 countries had to be compliant with the targets laid down in the Directive. In 2008, also Slovenia had to fulfil

⁷ *Leachate* means any liquid percolating through the deposited waste and emitted from or contained within a landfill (see Art 2(i) of the Landfill Directive).

⁸ Directive 2012/19/EU of the European Parliament and of the Council, OJ L 197/38 of 24.07.2012 of 4 July 2012 on waste electrical and electronic equipment (WEEE)

this requirement. The other Member States will have to show compliance from the reporting year 2009 onwards. The data were reported by all Member States. Of those countries that needed to be compliant in 2008, only Italy and Slovenia were significantly below the current collection target of 4kg⁹. A positive trend for collection and recovery is clearly visible from the yearly data reported up to now.

All reporting Member States indicated the establishment of collection systems for WEEE. Municipal collection was the dominant option chosen - private individual systems exist only in a few cases in addition to the collective ones. National systems differ in their complexity and efficiency, proximity and availability to inhabitants. In addition, the level of development differs from country to country and between rural and urban areas.

An increasing amount of WEEE was collected, re-used/recycled and recovered over this reporting period in all Member States for which data was available. The vast majority of Member States was able to reach the collection targets foreseen by the Directive¹⁰, and to reach the category-specific re-use/recycling and recovery targets. Where Member States failed to comply with the targets of the Directive, usually they did not comply with selected targets only (and not with the whole set of targets). In 2007 and 2008, the waste-stream specific re-use/recycling targets were not met by up to three reporting Member States.

10. CONCLUSIONS

It follows from Member States' reports for the period 2007 to 2009 that EU legislation on waste is to a large extent properly transposed into national legislation.

According to the information provided by Member States and the available statistical figures, the level of implementation of the WEEE and Packaging Directives is by and large satisfactory, with only a few Member States missing single targets.

No major problems and deficits could be identified with respect to the implementation of Directives related to the management of waste oils and sewage sludge.

However, for other Directives, there are important problems with practical implementation and enforcement. This conclusion can be drawn not only from Member States' implementation reports, but also from other sources of information such as Eurostat data, the Commission's own studies, or the number of complaints and infringements related to waste management. The level of enforcement varies considerably regarding the different Directives, with the Hazardous Waste Directive, the 2006 WFD, and the Landfill Directive raising biggest concerns.

⁹ Member States shall ensure that by 31 December 2006 at the latest a rate of separate collection of at least four kilograms on average per inhabitant per year of WEEE from private households is achieved (Art 5(5) of the WEEE Directive).

¹⁰ For the targets applicable to different categories of WEEE, see Art 7 (2) and Annex IA of the WEEE Directive, as well as Figure 8 in the Annex to this report and Table 3 in the specific implementation report on the WEEE Directive at: <http://ec.europa.eu/environment/waste/reporting/index.htm>.

With respect to the Hazardous Waste Directive, doubts in terms of practical enforcement concern the mixing ban¹¹ and the related exemptions defined by the Directive¹² and, in a broader perspective, the understanding of “periodic” inspections and the related establishments affected by inspections in some Member States.

Regarding the Landfill Directive, whereas its strict requirements are often transposed into national law and measures are taken to reduce biodegradable waste going to landfill, the number of non-compliant landfills that are still in operation remains a matter of concern. Another serious problem is the overall rate of landfilling, whilst some Member States have shown that reduction to near zero rates is feasible, several others largely depend on this least favourable waste management option. This requires particular attention in view of the policy priority of the Roadmap for a Resource Efficient Europe to virtually eliminate landfilling.

As regards the 2006 WFD, available statistics, the number of infringement cases, previous implementation reports and the Commission's own studies show a continuous deficit in implementation and enforcement. Concerns remain about the proper implementation of the waste management hierarchy, even in its three-step version, with a high degree of dependence on landfilling leading to untapped recycling and recovery potentials, although some progress could be observed during this reporting period. The most important barriers to better implementation on Member State level include the lack of commitment and resources for implementation control and enforcement, in combination with structural, institutional and constitutional constraints¹³. Tackling these obstacles, as well as adding stronger national inspections and better knowledge about waste management would bring major improvements.

The waste management hierarchy has been modified in Directive 2008/98/EC on waste with a stronger emphasis on prevention, re-use and recycling. The introduction of new recycling and recovery targets into this Directive will be an important factor to drive towards better use of materials contained in waste instead of disposing them. At the same time, the revised Directive allows Member States to depart from the hierarchy where this is justified by life-cycle thinking on the overall impacts of the generation and management of waste. This will allow Member States to take a broader approach towards identifying and implementing waste management options that deliver the best outcome for the environment¹⁴.

A recent study¹⁵ published by the Commission shows that full implementation of EU waste legislation would save €72 billion a year, increase the annual turnover of the EU waste management and recycling sector by €42 billion and create over 400,000 jobs by 2020. Illegal waste operations or missing infrastructure in Member States are causing missed opportunities for economic growth which we cannot afford, and leading to environmental threats. It is

¹¹ Member States shall take the necessary measures to require that establishment and undertaking which dispose of, recover, collect or transport hazardous waste do not mix different categories of hazardous waste or mix hazardous waste with non-hazardous waste (Art 2(2) of the Hazardous Waste Directive).

¹² Note that the provisions on mixing ban and preconditions for possible exemptions are considerably modified within Directive 2008/98/EC.

¹³ See Commission study "Implementing EU legislation for green growth", final report of 29 November 2011, available at: <http://ec.europa.eu/environment/waste/studies/pdf/study%2012%20FINAL%20REPORT.pdf>.

¹⁴ See Commission guidelines on how to apply life-cycle thinking-based approaches (e.g. LCA) to waste management at: <http://lct.jrc.ec.europa.eu/assessment/publications>.

¹⁵ "Implementing EU legislation for green growth", final report of 29 November 2011, available at: <http://ec.europa.eu/environment/waste/studies/pdf/study%2012%20FINAL%20REPORT.pdf>.

therefore paramount to take decisive steps to bridge the implementation gap in waste management and move towards a resource efficient society.

Annex

Figure 1. Overview of EU waste legislation – state of play as of July 2012

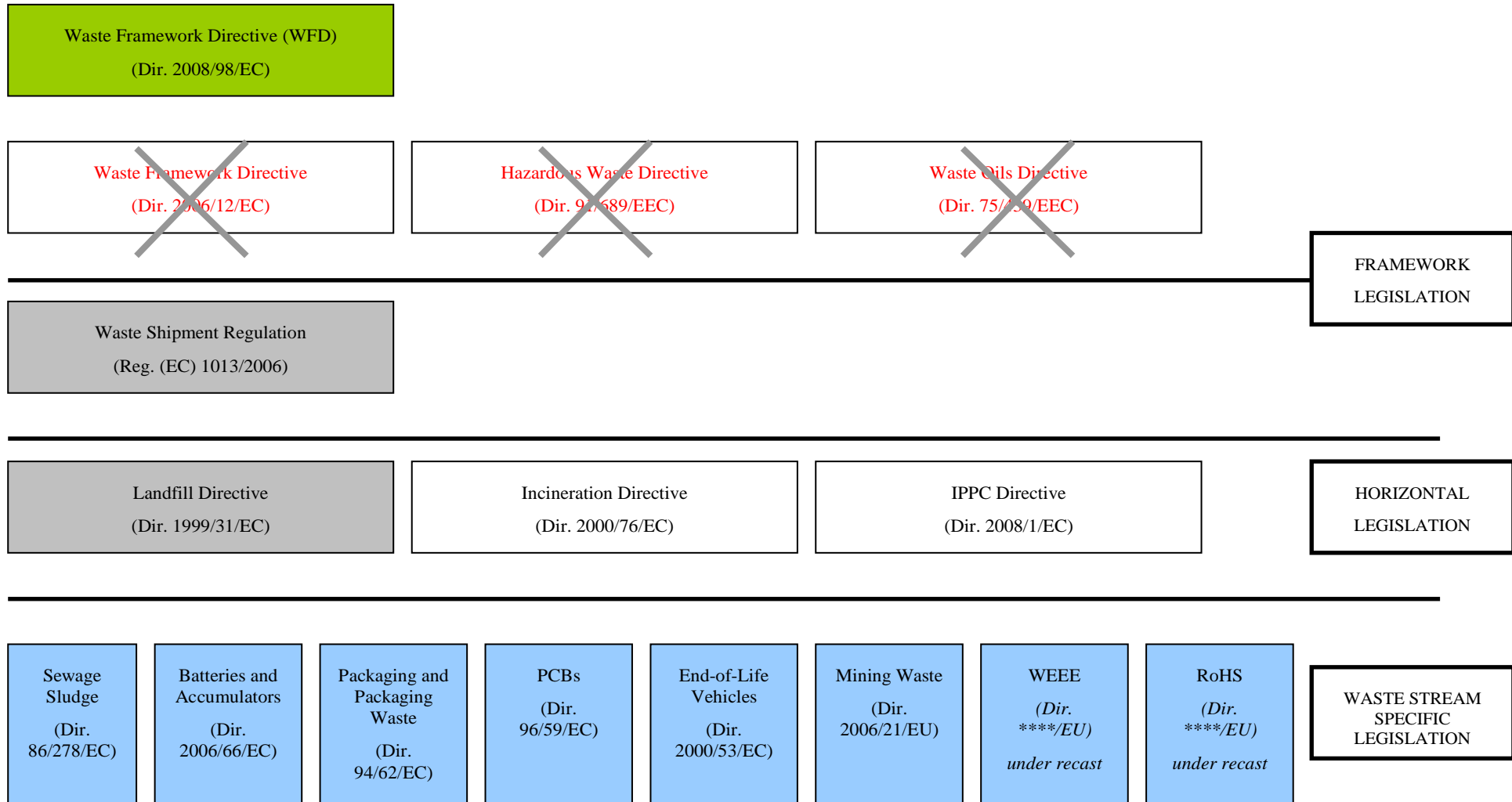
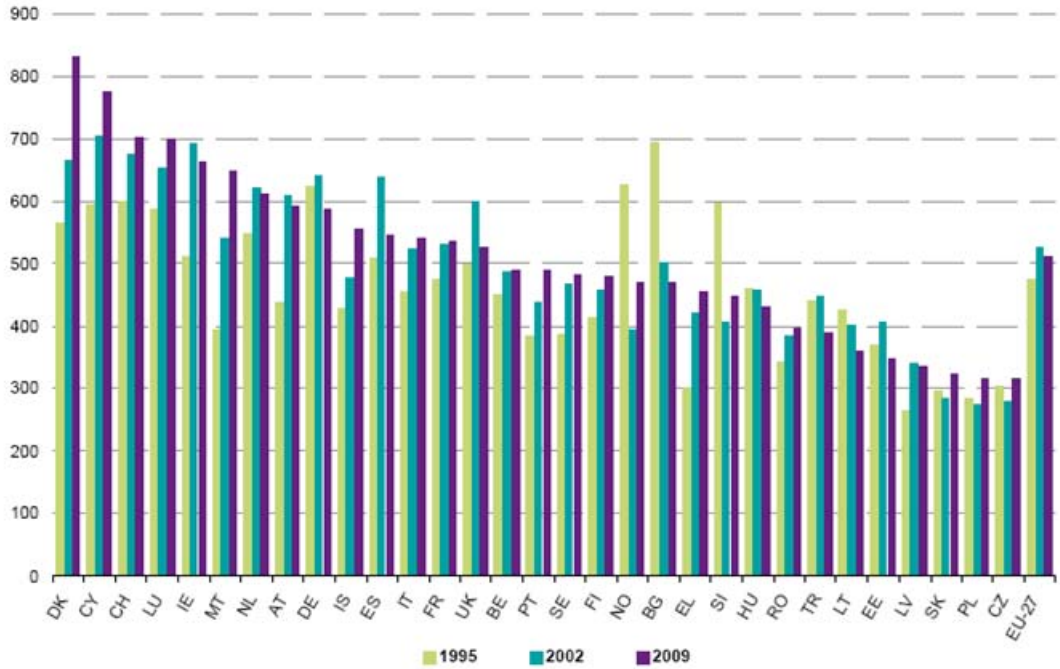


Figure 2. Municipal waste generated by country in 1995, 2002, and 2009, sorted by 2009 level (kg per capita)



Notes: Relevant breaks in series:
 Sharp decreases for Estonia (2001), Spain (2004), Lithuania (1999), Hungary (2000), Portugal (2002), Slovenia (2002) and Norway (2001).
 Sharp increases for Latvia (2002) and Slovakia (2002).

Source: Eurostat (online data code: [env_wasmun](#))

Figure 3. Municipal waste landfilled, incinerated, recycled and composted in EU-27, 1995 to 2009

	1995	2009	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Change 1995-2009
million tonnes																
Landfill	141	138	140	137	138	139	135	131	124	117	109	108	106	100	96	-32 %
Incineration	31	32	33	34	36	38	39	41	41	43	47	49	50	50	51	63 %
Recycling	22	23	28	30	37	38	40	46	47	49	51	54	57	59	59	172 %
Composting	13	15	16	18	21	27	28	32	34	36	38	40	42	44	45	239 %
kg per capita																
Landfill	296	290	293	285	287	288	278	269	254	239	221	219	213	201	191	-35 %
Incineration	65	66	70	71	76	79	81	85	84	89	95	99	100	99	101	56 %
Recycling	46	48	58	62	77	78	83	95	97	100	105	109	116	118	118	159 %
Composting	28	31	33	37	44	55	56	65	69	74	78	82	85	88	89	224 %

Source: Eurostat (online data code: [env_wasmun](#))

Figure 4. Treatment of municipal waste 2009 (source: DG ENV, based on EUROSTAT data)

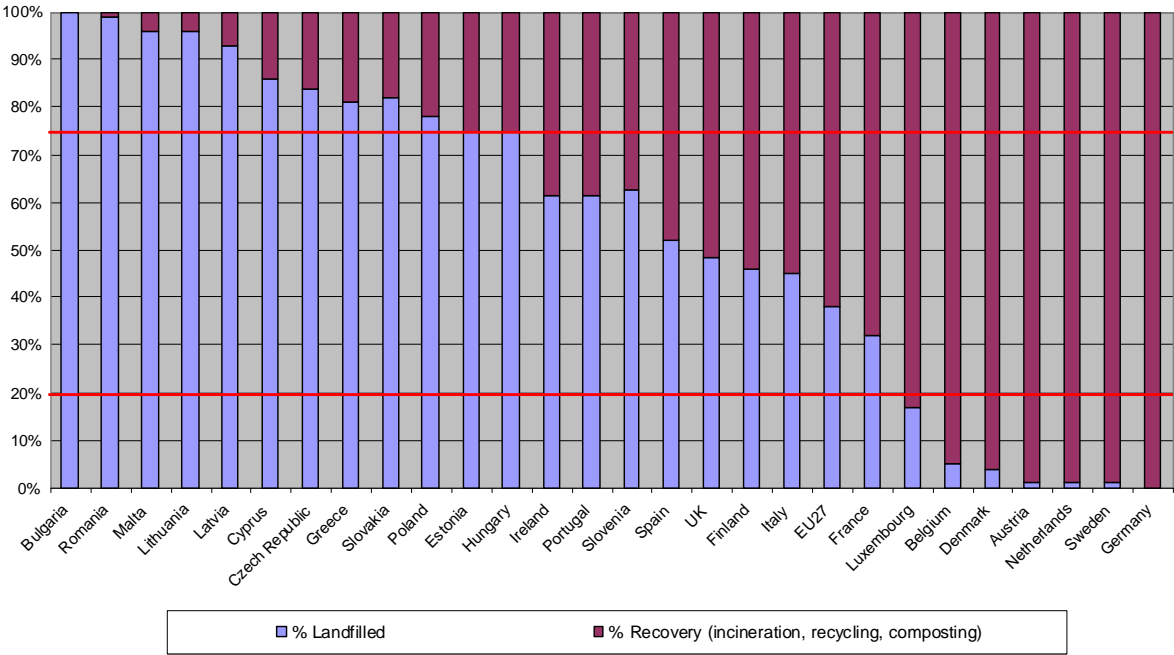
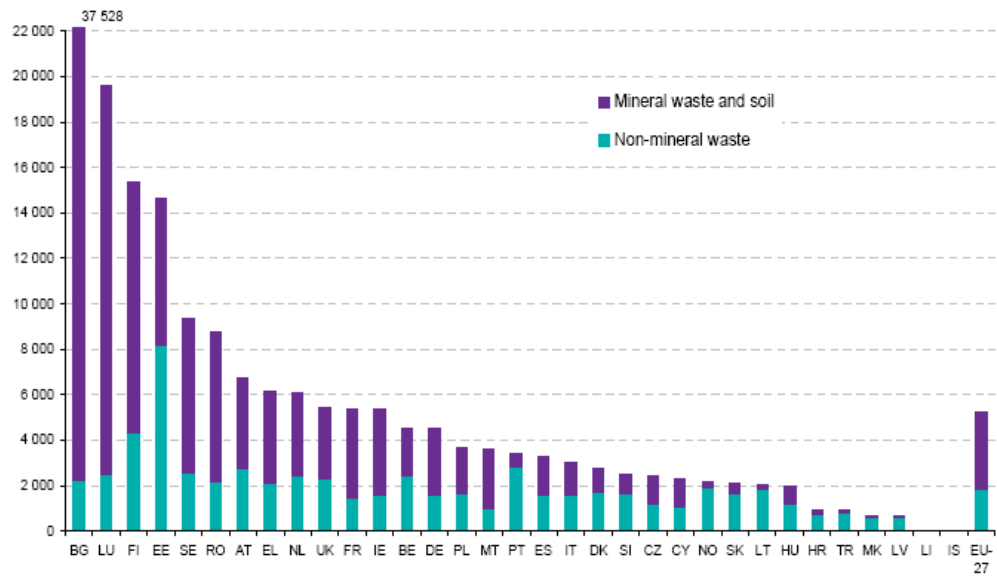
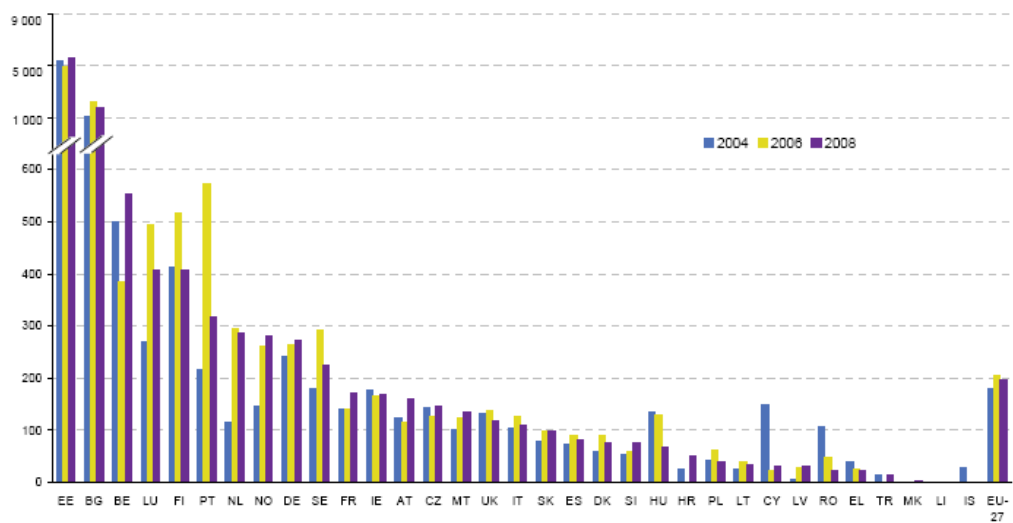


Figure 5. Waste generation for mineral and non-mineral waste 2008 (kg per capita)



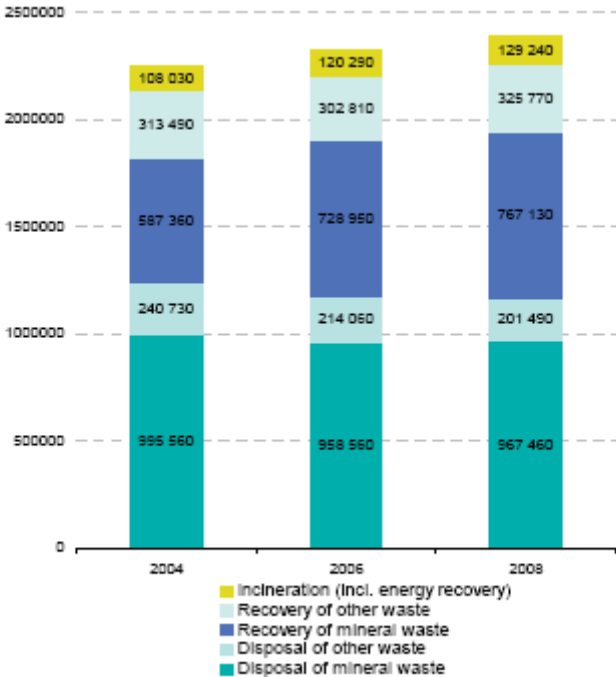
Source: Eurostat (online data code: [env_wasgen_tsdpc210](#) and [demo_qind](#))

Figure 6. Hazardous waste generation 2004 to 2008 (kg per capita)



Source: Eurostat (online data code: [env_wasgen](#) and [demo_qind](#))

Figure 7. Development of waste treatment in EU-27 by waste category 2004 to 2008 (1000 tonnes)



Source: Eurostat (online data code: [env_wastrt](#))

Figure 8. Overview of the targets regarding WEEE sent for treatment according to Article 7(2) of the WEEE Directive 2002/96/EC

The treatment shall include at a minimum the removal of all fluids. The Directive provides in Article 7 specific recycling and recovery targets, which vary according to the specific categories of equipment.	Rate of Reuse and Recycling (by an average weight per appliance)	Rate of Recovery (by an average weight per appliance)
Electronic waste stream:		
Large Household Appliances	75%	80%
Automatic Dispensers	75%	80%
IT and telecommunications equipment	65%	75%
Consumer Equipment	65%	75%
Small household appliances	70%	50%
Lighting Equipment	70%	50%
Electrical and Electronic tools (with the exception of large-scale stationary industrial tools)	70%	50%
Toys, leisure	70%	50%
Monitoring and control instruments	70%	50%
Gas discharge lamps	80%	