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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 20.11.2009  
SEC(2009) 1586 final

**COMMISSION STAFF WORKING DOCUMENT**

**accompanying the  
COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE  
EUROPEAN PARLIAMENT  
ON IMPLEMENTATION OF THE COMMUNITY 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 2004-2006**

**{COM(2009)633 final}**

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**Directive 2006/12/EC on waste,**  
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### DETAILS ON IMPLEMENTATION OF DIFFERENT DIRECTIVES

The report is based on the replies of Member States to implementation questionnaires<sup>1</sup>. The details and analysis of the replies are contained in the reports prepared by Ecologic and published at: <http://ec.europa.eu/environment/waste/reporting/index.htm>.

#### **1. WASTE FRAMEWORK DIRECTIVE<sup>2</sup>**

Directive 75/442/EEC has been codified as Directive 2006/12/EC, recently revised as 2008/98/EC<sup>3</sup> which has to be transposed by the Member States into their national legislation by 12 December 2010. This report covers the implementation of Directive 2006/12/EC.

The Waste Framework Directive (WFD) is one of the cornerstone pieces of the Community legislation on waste. It lays down the basic definitions, principles and rules related to the management of waste, such as the definition of waste, the polluter pays principle, the waste hierarchy, the prohibition to dump waste illegally or an obligation to manage waste without endangering the environment and human health. The WFD introduce mechanisms aiming to ensure proper waste management such as permit systems for waste management, registration of certain waste operations, obligation for Member States to elaborate waste management plans (WMP).

All Member States to date have drawn up one or more waste management plans, and all indicated the existence of a chapter dedicated to packaging and packaging waste as required by the WFD and the Packaging Directive. These plans vary widely as to their content, structure, degree of detail, and administrative level, depending on the experience of Member States in waste management planning. There are countries featuring one national waste management plan only, countries with both national and regional/local waste management

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<sup>1</sup> See: <http://ec.europa.eu/environment/waste/reporting/index.htm>.

<sup>2</sup> Directive 2006/12/EC on waste, OJ L 114, 27.4.2006, p. 9–21.

<sup>3</sup> OJ L 312, 22.11.2008, p. 3–30.

plans and countries having only regional waste management plans. This diversity makes the evaluation and comparison of the plans difficult: while the plans contain all elements required by the legislation, it is not evident whether the planning reflects the actual needs of a country or a region in terms of waste management infrastructure. The revised WFD will provide clearer requirements for the plans, but further guidance is needed to make this policy implementation instrument more effective.

A limited number of Member States collaborated with other countries in drawing up their WMP, mostly where such cooperation was justified by geographical proximity. According to the WFD, Member States may take measures necessary to prevent movements of waste which do not comply with their waste management plans, and fourteen Member States informed the Commission of taking such measures.

All but three of the responding Member States informed the Commission of having taken measures implementing the waste hierarchy, one of the key principles of the Community waste legislation. However, the lack of reporting of the three Member States in question does not imply that no measures addressing the waste hierarchy have been taken; they were not communicated within this report. It remains unclear from the responses received whether the measures taken by other countries have been effective.

The WFD requires Member States to set up a network of disposal facilities, and most respondents reported that they ensured the existence of such a network, sometimes established in cooperation with the neighbouring regions or countries to optimise its functioning. However, several (especially new) Member States are still in the process of establishing their networks and closing landfills not complying with the Landfill Directive.

Many Member States reported high levels of self-sufficiency in waste disposal reaching levels of 90-100%, with rapid progress in EU-10. Not all Member States have sufficient capacity to deal with their own waste<sup>4</sup> and therefore export it, in line with the WFD, to countries having appropriate waste treatment technologies. The routine export of waste streams for disposal was limited to specific waste streams for which there was no specialised infrastructure in place, in particular hazardous wastes such as PCBs, waste incineration residues, polluted soils. Shipments of hazardous wastes almost doubled between 2001 and 2005 reaching the total of 5.6 million tonnes for EU-25 in 2005, with the share shipped from out of the EU-10 being only a marginal 3%. The biggest waste exporters included the Netherlands, Belgium, Italy, France and Ireland<sup>5</sup>.

Some Member States (especially EU-10) reported a strikingly high percentage of landfilling, especially for domestic and similar wastes, which means that steps taken to comply with the waste hierarchy were insufficient. While the 2006 WFD did not make the adherence to the waste hierarchy obligatory, the revised WFD sets a clear 5-step waste hierarchy coupled with recycling targets for municipal and construction and demolition waste. Thus, in the short to medium run, the Member States featuring an exceedingly high level of waste disposal in landfills will have to find ways to improve their recycling rate, especially for domestic waste.

In the older Member States, a balance between recycling and incineration was noted, with a residual fraction of waste going to final disposal in landfills.

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<sup>4</sup> Commission Report on the implementation of the Waste Shipment Regulation, COM(2009) 282 final, p. 6.

<sup>5</sup> Ibidem.

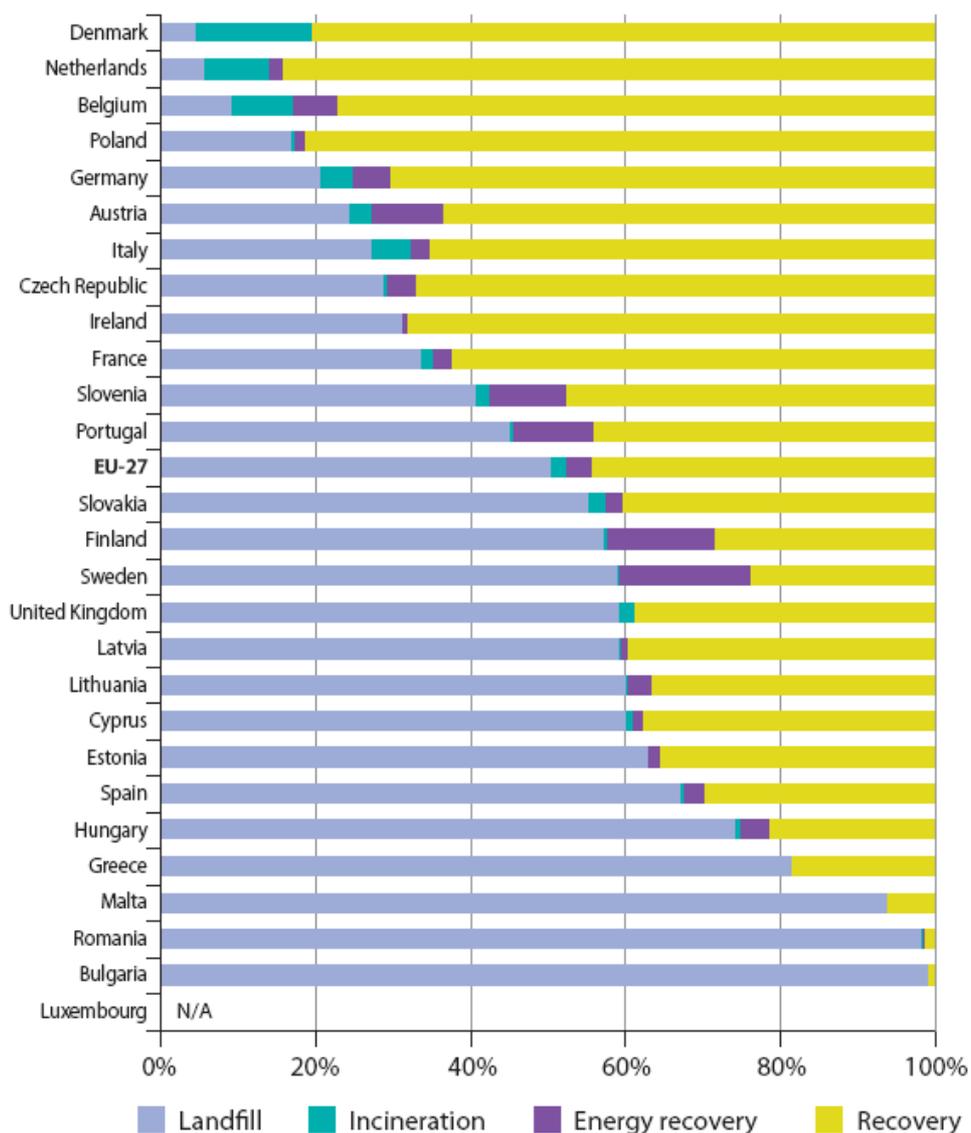


Figure 1. Treatment of waste, 2006 (in percent of total waste treated) Source: Energy, transport and environment indicators 2008 edition, p. 147<sup>6</sup>.

Finland, Sweden, Slovenia, Portugal, Austria, and Belgium are the biggest users of energy recovered from waste. Denmark and the Netherlands reported a considerable percentage of waste incineration without energy recovery while the remaining Member States report a small share of waste incineration without energy recovery (below 10%).

Even though this reporting period covers years 2004 to 2006, some data available for Bulgaria and Romania which joined the EU in 2007 are also presented here for reference. Landfilling is still the predominant mode of waste disposal in most EU Member States, especially EU-12. Cyprus, Poland and Bulgaria report landfill rates of over 90%, but many others report landfill rates over 50%. Member States reporting landfilling below 10% include the Flemish Region of Belgium, Denmark, the Netherlands, Sweden and Germany.

<sup>6</sup> See: [http://epp.eurostat.ec.europa.eu/portal/page/portal/product\\_details/publication?p\\_product\\_code=KS-DK-08-001](http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-DK-08-001).

Only a minority of Member States has opted for exemptions from the waste management permits and adopted rules for such exemptions.

Most Member States reported that all establishments disposing or recovering waste had record-keeping obligations, with some countries limiting the record-keeping obligation to producers of certain wastes. Further contacts with the Member States are needed to confirm whether this provision was properly implemented in practice.

## **2. HAZARDOUS WASTE DIRECTIVE<sup>7</sup>**

Hazardous waste poses greater risk to the environment and human health than non-hazardous waste and thus requires a stricter control regime. Such a regime is laid down in Directive 91/689/EEC. The Directive provides additional record keeping, monitoring and control obligations for hazardous waste from the waste producer to the final disposal or recovery, introduces rules for the mixing of different categories of hazardous wastes with each other or with non-hazardous wastes, introduces permitting requirements for installations dealing with hazardous wastes. The properties which render waste hazardous laid down in the Directive 91/689/EEC and are further specified by the Decision 2000/532/EC on the List of Waste.

All Member States confirmed having informed the Commission about measures transposing the Directive into their national legislation. Most Member States refrained from adding other wastes than those listed in the legislation to the list of hazardous waste, possibly because each such addition would mean adding a new code to the List of Waste and amending the List in a long procedure. Most likely, the code for "wastes not otherwise specified" was used instead. Overall, there seems to be a need for more waste codes (especially for WEEE, batteries, ELV<sup>8</sup>). Possible changes to the system are under discussion with Member States.

Hazardous waste generated by households (e.g. batteries, some toxic chemicals, medicines, etc.) is exempted from the provisions of the Directive since in practice it is impossible to control the management of this waste stream down to each household. Not all Member States distinguish hazardous and non-hazardous domestic waste in their legislation and instead cover all wastes under the stricter hazardous waste regime. Most Member States encourage separate collection of hazardous waste from the rest of household waste and organise awareness raising campaigns to educate their citizens. Ten Member States make municipalities responsible for separate collection and management of domestic hazardous waste. Under the revised WFD, the rules concerning hazardous waste produced by households become clearer: mixed waste produced by households is exempted from the provisions related to the control of hazardous waste, including traceability, the ban on the mixing of hazardous waste, labelling and record keeping requirements. Where hazardous waste fractions of household waste are collected separately, labelling and record keeping provisions do not apply until the waste is accepted for collection, disposal or recovery by a licensed establishment or undertaking.

All Member States confirmed having established systems to record hazardous waste streams and identify each site on which it is disposed, but only a few described how the record keeping is monitored. Many responses do not focus on the tipping aspect only but on the reporting requirements in general. A prohibition to mix different hazardous wastes, as well as to mix hazardous and non-hazardous waste, was implemented by all Member States but only

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<sup>7</sup> Directive 91/689/EEC on hazardous waste, OJ L 377, 31.12.1991, p. 20-27.

<sup>8</sup> See Oekopol study, p. III-44, at: [http://ec.europa.eu/environment/waste/pdf/low\\_review\\_oekopol.pdf](http://ec.europa.eu/environment/waste/pdf/low_review_oekopol.pdf).

eight reported detailed mixing criteria. The reports are imprecise as regards the exemptions from the mixing ban.

All undertakings which recover hazardous waste need to have a permit, unless exempted under specific national rules and registered. The possibility of exemptions was taken up only exceptionally and these cases were notified to the Commission in line with the Directive.

Producers and establishments carrying out disposal and recovery operations of hazardous waste shall be subject to periodic inspections. All Member States have laid down national rules in this respect, but in most cases inspections are carried out on a case-by-case basis or on the basis of complaints, without a general minimum frequency established by law (only eight Member States require a certain inspection frequency) which can raise doubts whether the controls comply with the Directive's requirement of "appropriate periodic inspections". Such practice is also not in line with the non-binding recommendations of IMPEL<sup>9</sup>. The obligation to keep registers and records for producers and transporters of hazardous waste was fulfilled by all Member States, with some lack of clarity as to whether the record keeping actually refers to producers in the case of some responses. All but one Member State confirmed having set rules for proper packaging and labelling of hazardous waste in the course of its collection, transport and temporary storage.

### **3. WASTE OILS DIRECTIVE<sup>10</sup>**

Waste oils are classified as hazardous waste since they display some hazardous properties. Such oils can heavily contaminate the environment when not properly managed. The Waste Oils Directive creates a harmonised system for the collection, storage, recovery and disposal of waste oils, such as lubricant oils for vehicles, turbines, gearboxes and engines, hydraulic oils, etc. The Directive also aims to protect the environment against the harmful effects of illegal dumping and treatment of waste oils.

All Member States have transposed the Directive into their national legislation. In all but five Member States measures were laid down to ensure that the regeneration of waste oils does not constitute a threat for the environment and human health and that the resulting regenerated oils do not constitute toxic and dangerous waste and do not contain PCBs/PCTs.

All but nine Member States adopted stricter measures than those prescribed in the Directive on limit values for toxic substances in waste oil used as fuel or combustion requirements.

Only eight Member States reported high (over 70%) waste oil regeneration rates meaning that the majority of Member States did not fully adhere to the waste oils treatment hierarchy set out in the Directive which gives priority to their regeneration, followed by combustion and safe destruction (including controlled storage or tipping). In seven Member States the regeneration rate ranges from 0 to 30% of waste oils collected. There is also a group of countries heavily relying on combustion of this waste stream. The Czech Republic reports a tipping rate of nearly 40% while the rest of the Member States remains below 10%. In those Member States where no regeneration or combustion was possible, measures needed to be

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<sup>9</sup> IMPEL guidance and recommendations on the minimum criteria for environmental inspections (see: [http://ec.europa.eu/environment/impel/impel\\_guidance\\_doc.htm](http://ec.europa.eu/environment/impel/impel_guidance_doc.htm)).

<sup>10</sup> Directive 75/439/EEC on the disposal of waste oils, OJ L 194 , 25.07.1975, p. 23-25.

taken to protect the environment, consisting mainly of additional requirements for safe disposal or storage of waste oils.

The Commission has launched infringement cases against Member States violating the hierarchy set out in the Directive, with the ruling of the Court against Germany. Other cases have been deferred when the proposal for the new WFD removed an absolute priority for regeneration. After the adoption of the WFD, these infringement procedures have been withdrawn. The implementation practice illustrated in Figure 2 below reflects the economic constraints related to waste oils regeneration which, coupled with the lack of clear environmental gains from the regeneration compared to combustion, have led to the revision of this provision in the WFD.

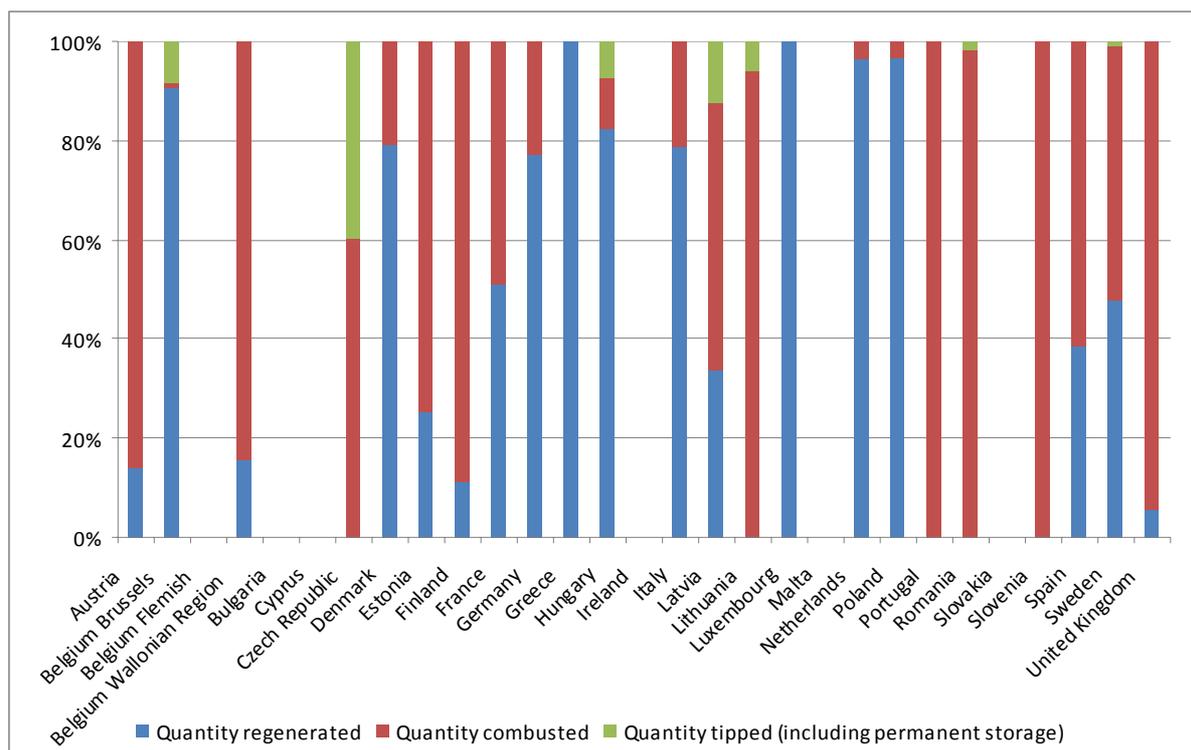


Figure 2. Treatment of waste oils in 2005. Source: Report on the Implementation of Directive 75/439/EEC on Waste Oils, Ecologic, May 2009, p. 38.

Methods for proper management of waste oils were publically disseminated in twenty Member States, either by public authorities or by waste producers. Nineteen Member States reported having in place permitting procedures that guarantee environmental and health protection, some coupled with control and monitoring systems.

#### 4. SEWAGE SLUDGE DIRECTIVE<sup>11</sup>

The Sewage Sludge Directive seeks to encourage a safe use of sewage sludge in agriculture and to regulate its use in such a way as to prevent harmful effects on soil, vegetation, animals and humans. To this end, it prohibits the use of untreated sludge on agricultural land unless it is injected or incorporated into the soil. To provide protection against potential health risks

<sup>11</sup> Directive 86/278/EEC on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture, OJ L 181, 4.7.1986, p. 6–12.

from residual pathogens, the Directive restricts the application of sludge to soil in which fruit and vegetable crops are growing or grown or to animal forage. The Directive also requires that sludge should be used in such a way that account is taken of the nutrient requirements of plants and that the quality of the soil and of the surface and groundwater is not impaired. It specifies rules for the sampling and analysis of sludges and soils, sets out record keeping requirements and limit values for concentrations of heavy metals in sewage sludge and soil.

All Member States reported having adopted measures transposing the Directive into their national legislation, and most of them adopted stricter requirements for the use of sewage sludge in agriculture than those prescribed in the European legislation. All but two Member States adopted measures ensuring that sewage sludge is not used on soils where concentrations of one or more heavy metals exceed the prescribed limit values.

Residual sludges from septic tanks and sludges other than those from sewage plants treating domestic or urban waste waters may also be used in agriculture under nationally regulated conditions. Most Member States opted for equal requirements for all sludges or banned the use of sludge from septic tanks.

The limit values for heavy metals in soil on which sludge can be applied, in the sludge to be applied, and thresholds for heavy metals which can be introduced into the soil vary significantly between Member States. All these limit values are set on the basis of the minimum conditions specified in the Directive but some Member States adopted much more stringent values than others. The differences are surprisingly large given that they occur in similar geographical areas (e.g. between the Baltic States or between the Nordic countries). A majority of Member States preferred to lay down maximum quantities of sludge which may be applied to soil per year instead of setting limit values for metals introduced into the soil.

All Member States described the methods for sludge treatment before it is used in agriculture. Only a few decided to allow the use of untreated sludge if it is injected or worked into the soil. Most countries introduced bans or restrictions on the application of sludge on grassland or forage crops before grazing or harvesting. The conditions of these restrictions vary, as do the methods for sampling and analysis of sludge and soil and the frequency of the analyses.

## **5. PACKAGING AND PACKAGING WASTE DIRECTIVE<sup>12</sup>**

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 functioning of the Internal Market. It contains provisions on the prevention of packaging waste, on the re-use of packaging and on the recovery and recycling of packaging waste.

All Member States have transposed the Directive into their national legislation and notified the Commission thereof.

The total amount of packaging waste in the EU increased during the period covered by this report, but a part of this increase was due to the accession of the new Member States. The share of packaging made of glass, paper and board, metals and wood decreased, while the share of plastics slightly increased.

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<sup>12</sup> Directive 94/62/EC on packaging and packaging waste, OJ L 365, 31.12.1994, p. 10–23.

One of the major provisions of the Packaging Directive includes the recycling and recovery targets for packaging waste. All Member States have published information about these targets, ranging from the publication of a legal act transposing the Directive to elaborate information campaigns. Many Member States made use of economic instruments and producer responsibility schemes in order to attain the targets of the Directive. Such instruments included, for instance, taxes levied on packaging, charges for final disposal of packaging or for membership in a collection/recovery scheme, financial sanctions to economic operators involved in packaging management if re-use and recovery targets are not met, deposit/return schemes for packaging, and obligations for economic operators to bear collection and recovery costs.

Steady progress towards meeting the targets has been maintained, with a good overall result<sup>13</sup>. The rates of packaging waste recovery and recycling remained relatively stable between 2004 and 2006, with a slight overall decrease, but it should be recalled that a big enlargement took place during the reporting period expanding the EU from 15 to 25 Member States in 2004 by countries with largely underdeveloped waste collection and recycling systems. On average, overall recovery and incineration at waste incineration plants decreased from 66% in 2004 to 60% in 2006, while the average recycling rate decreased from 54% in 2004 to 49% in 2006, including a drop in glass recycling from 58% to 53%, a decrease in the recycling of paper and board from 76% to 70%, metals from 57% to 56%, and an increase in plastics and wood recycling (from 25% to 26% and from 25% to 31% respectively).

The Packaging Directive requires Member States to adopt measures to prevent the formation of packaging waste, and most Member States reported having laid down such provisions. The measures employed included the use of prevention plans and guidance (required by legislation or drawn up by waste prevention organisations or businesses), voluntary or formal commitments of the industry, information and awareness-raising campaigns, taxation measures, encouraging the use of reusable packaging or deposit systems, and the use of eco-labels.

Twenty three countries reported introducing producer responsibility systems where producers must take back packaging waste, organise their own take back systems or participate in return systems for the return, collection, re-use, recovery or recycling of packaging waste. Twenty Member States reported measures to encourage the re-use of packaging. These are based on taxation promoting reusable packaging, deposits, obligation to use reusable packaging, exempting reusable packaging from other obligations, promotion of re-use in the waste management plans, and information and awareness raising campaigns. The most commonly targeted packaging types included carrier bags and beverage packaging. Also, all Member States reported measures to create systems for the return, collection, re-use and/or recovery of packaging waste, mostly based on producer responsibility but also including collective systems to which all economic operators could subscribe. Sixteen Member States took measures to encourage the use of recyclates for the manufacturing of packaging and other products, including public procurement programmes, promotion of the use of recycled materials within waste management plans, research projects, information and awareness-raising activities (e.g. exhibitions, "recycling weeks" and online catalogues of recycled products), and tax incentives.

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<sup>13</sup> More details about the progress achieved by the Member States can be found in the Commission's Flash Report published at: <http://ec.europa.eu/environment/waste/reporting/index.htm>, on the Packaging website at: <http://ec.europa.eu/environment/waste/packaging/data.htm>, and on the Eurostat website at: <http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/data/wastestreams/packaging>.

Only packaging that complies with the essential requirements laid down in the Directive can be placed on the Community market. Member States implemented these provisions by adopting national standards or following the European standards, but generally limited information was provided as regards the practical enforcement of this requirement. At the same time, initial conclusions from an ongoing Commission study on the implementation and enforcement of the essential requirements suggest that stakeholders call for more systematic implementation and enforcement of the essential requirements across the Member States.

## 6. LANDFILL DIRECTIVE<sup>14</sup>

The Landfill Directive is intended to prevent or reduce the adverse effects of waste landfilling on the environment, in particular on surface water, groundwater, soil, air and human health by introducing stringent technical requirements for waste and landfills. It defines the different categories of waste (municipal waste, hazardous waste, non-hazardous waste and inert waste) and applies to all landfills, defined as waste disposal sites for the deposit of waste onto or into land. The Directive introduces criteria for the acceptance of waste in landfills, requires permits for operating landfill sites, and elaborates opening and closure conditions.

According to the Landfill Directive, waste can only be accepted in landfills if it meets the acceptance criteria specified in the Directive and elaborated in the Waste Acceptance Criteria Decision 2003/33/EC<sup>15</sup>. Twenty one respondents have defined waste acceptance criteria and procedures, or use those defined in the Community legislation. Twenty three Member States have set up detailed monitoring regimes for leachates, surface waters, gas emissions and atmospheric pressure. Twenty three respondents confirmed having included in their legislation the obligation to include all the costs of landfill construction, operation, closure and after-care in the price to be charged by the operator for accepting waste in the site. Thirteen Member States reported that they require a financial guarantee from the operator or provide assistance to landfill operators in order to guarantee their financial stability.

All Member States except Cyprus confirmed having established detailed rules for the closure of landfills, including after-closure monitoring requirements and technical specifications. Cyprus is still developing such rules. Twenty two Member States reported having adopted measures related to the opening of landfills such as planning procedures, environmental impact assessments, prohibitions to open landfills in certain areas, inclusion in waste management plans. The Netherlands and Luxembourg indicated that no new landfills were planned in the near future.

Landfill gas, primarily methane, is a powerful greenhouse gas 25 times more potent than carbon dioxide and a major contributor to climate change. Its emissions account for over 2% of the EU greenhouse gas emissions. It is produced from biodegradable municipal waste including garden, kitchen and food waste decomposing in landfills. Hence, the capture and management of landfill gas as well as diversion of biodegradable waste from landfills are one of the key requirements of the Landfill Directive. Regrettably, the information provided by most Member States as regards landfill gas management was mostly describing the legal provisions in place, not the actual practice. Four Member States reported not to produce

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<sup>14</sup> Directive 1999/31/EC on the landfill of waste, OJ L 182, 16.7.1999, p. 1–19.

<sup>15</sup> Council Decision of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC (2003/33/EC), OJ L 11, 16.1.2003, p. 27–49.

energy from the landfill gas, the others do it but only where this activity is economically feasible. Otherwise, the gas is flared. It is not clear whether all gas is captured and appropriately treated and further investigation into the effectiveness of its capture would be needed.

The Landfill Directive sets out biodegradable waste diversion targets for 2006<sup>16</sup>, 2009<sup>17</sup> and 2016<sup>18</sup> in order to mitigate the negative environmental impacts related to methane emissions. All but five Member States have developed and reported national strategies for the diversion of biodegradable waste going to landfill and notified them to the Commission. Limited information was provided as to the experiences with the implementation of these strategies. Six Member States provided incomplete data on the generation of biodegradable waste in 1995 and sixteen did not report full data sets on the reduction of this waste stream going to landfills between 2004 and 2006. As a result, from a very fragmentary picture complemented by the Commission's own data including twelve Member States for which data can be compared, one can conclude that in 2006 nine countries<sup>19</sup> met their diversion targets for biodegradable municipal waste (out of these twelve, eight countries have already met their 2009 target and seven the 2016 target).

Only five Member States (Austria, the Flemish region of Belgium, the Netherlands, Ireland and Italy) reported that all their landfills complied with the Directive. Some of this information, however, contradicts the findings of the Commission study<sup>20</sup> which indicated the existence of 1,763 illegal landfills in Italy and over 9 in Ireland in 2005. A large number of non-compliant landfills for both hazardous and non-hazardous waste were reported by twelve other Member States<sup>21</sup>. The reported figures concern only engineered landfills not complying with the Landfill Directive - frequent citizen complaints suggest that beside these a high number of uncontrolled dumpsites presumably exists.

These data suggest that a vast majority of Member States will not meet the deadline of 16 July 2009 by which all Member States that have not been granted derogations must ensure that sub-standard landfills that existed before the introduction of the Landfill Directive now comply with its requirements, even though Member States have had eight years from the transposition date (16 July 2001) to ensure compliance with these requirements or close non-compliant landfills. In July 2009 the Commission has written to all Member States to remind them of their obligation and gather data on compliance.

Bulgaria, Poland and Romania have been given extended deadlines with annually decreasing targets for the amount of waste disposed of in some non-compliant sites. The deadlines are:

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<sup>16</sup> By 17 July 2006, reduction of biodegradable municipal waste going to landfills to 75% of the total amount (by weight) of biodegradable municipal waste produced in 1995.

<sup>17</sup> By 17 July 2009, reduction of biodegradable municipal waste going to landfills to 50% of the total amount (by weight) of biodegradable municipal waste produced in 1995.

<sup>18</sup> By 17 July 2016, reduction of biodegradable municipal waste going to landfills to 35% of the total amount (by weight) of biodegradable municipal waste produced in 1995.

<sup>19</sup> Austria, Belgium (Flanders), Estonia, Finland, France, Germany, the Netherlands, Slovakia, and Sweden.

<sup>20</sup> Report on the Implementation of the Landfill Directive in the 15 Member States of the EU, Golder Associates 2005, [http://ec.europa.eu/environment/waste/pdf/report\\_a2.pdf](http://ec.europa.eu/environment/waste/pdf/report_a2.pdf).

<sup>21</sup> 2008 estimates for the EU-12 indicate the following numbers of non-compliant landfills: Romania: 181, Poland: 317, Latvia: 150, Hungary: 71, Malta: 0, Lithuania: 383, Slovakia: 52, Czech Republic: 28, Estonia: 12, Cyprus: 115, Slovenia: 61, Bulgaria: 252.

Bulgaria (for 14 landfill sites) 31 December 2014; Poland (for 305 landfill sites) 31 December 2011; Romania (for 101 landfill sites) 16 July 2017.

In addition to the national reporting for the reference time period, a recent Commission study on the implementation of the Landfill Directive<sup>22</sup> identified a number of persisting serious problems related to the implementation of this legislation, in particular in the EU-10 but a similar situation can be observed in Bulgaria and Romania (not yet members of the EU in this reporting period) or some EU-15 Member States landfilling over 50% of their waste<sup>23</sup>. The situation concerning waste management within these countries has certain common features. In all EU-10 countries, environmental concerns (especially waste management) still constitute a relatively low priority which results in a lack of administrative capacity devoted to these issues. High share of landfilling in waste management (80-90% and beyond) and a lack of attention to the waste hierarchy can be observed. Actions to reduce the amount of waste landfilled are taken slowly by investing in separate collection systems and treatment facilities. Landfilling in many cases is still by far the cheapest and easiest way to manage waste. Consequently, landfill fees are not covering the costs for operating, maintaining and closing of a modern landfill.

Landfill capacity aspects (limitations in landfill use, saving of scarce landscape resources) do not seem to be acknowledged as important limiting factor in the majority of the EU-10 so far. On the other hand, there is often a strong public scepticism and opposition to the installation of thermal waste treatment installations. Mixed municipal solid waste (MSW) with a high content of biodegradable and combustible fractions is landfilled in most cases. The fraction of biodegradable waste in landfilled mixed MSW is ranging between 30-50% and may reach 75%. Strategies for the reduction of organic waste going to landfills, implementation of systems for source separation, and construction of facilities for composting or energy recovery from combustibles have only started.

Typically, a huge number of small and technically poorly equipped landfills (municipal dumps) were in use in the EU-10 prior to accession. The process of closing down landfills has started during the last years and some countries have made remarkable progress with that, but it is still questionable whether the deadline for 2009 for closing the old landfills will be met.

## **7. WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) DIRECTIVE<sup>24</sup>**

The WEEE Directive aims to improve the management of waste electrical and electronic equipment. To this end, the Directive encourages the prevention of WEEE, and in addition, the reuse, recycling and other forms of recovery of such wastes so as to reduce its disposal. It also seeks to improve the environmental performance of all operators involved in the life cycle of electrical and electronic equipment, e.g. producers, distributors and consumers and in particular those operators directly involved in the treatment of waste electrical and electronic equipment. The legislation introduces requirements for a creation of collection schemes where consumers can return their used e-waste free of charge in order to increase the recycling and/or reuse of such products, sets collection and recovery targets for WEEE and relies on the principle of producer responsibility.

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<sup>22</sup> Final Report from the Organisation of awareness raising events concerning the implementation of Directive 1999/31/EC on the landfill of waste, BiPRO, 30 May 2007.

<sup>23</sup> Landfilling remains a predominant option in Finland, Sweden, United Kingdom, Spain, and Greece.

<sup>24</sup> Directive 2002/96/EC on waste electrical and electronic equipment, OJ L 37, 13.2.2003, p. 24.

All reporting Member States have transposed the WEEE Directive into their national legislation. However, the Commission had to open twenty cases against Member States based on incorrect transposition, with fifteen of those cases still open as of July 2009.

Even though the majority of the Member States reported adopting measures to encourage the design and production of EEE which would facilitate its dismantling, reuse and recovery, the reported measures were mostly limited to copying the provisions of the Directive into national legislation or declarations of intent, without clear enforcement mechanisms. Some Member States pointed out that the Eco-Design Directive<sup>25</sup> would be more suitable to encourage eco-design than the WEEE Directive. In most cases, no reasons were given as to why such measures have not been adopted, and very limited experience with eco-design policies was reported.

All Member States reported that systems for the return of WEEE free of charge were set up, but not all provided their description. The systems differ between the Member States. In almost all countries collective systems for the management of household appliances were implemented, but not all Member States compel producers / distributors to take back old appliances from households when a new product is supplied to customers. Instead, some rely on municipal collection schemes and make individual take-back voluntary. While the Directive provides that Member States may depart from one-to-one take back, Member States making use of that provision should inform the Commission but have not done so via this report in three cases. Individual take back solutions are very common for non-household WEEE. National replies do not demonstrate whether the collection systems work well in practice. The most common problems reported are related to charging distance sellers for WEEE collection, establishing responsibility for historical waste, missing WEEE, and some interpretation or implementation issues.

Member States have set up systems for the treatment of WEEE, or have adapted their existing systems. However, few countries have reported to have gone beyond the basic treatment requirements described in Annex II to the Directive. Additional requirements tend to focus on treating specific types of equipment (e.g. appliances containing ozone depleting substances). No specific requirements or control mechanisms were reported for the exports of WEEE to be counted for the fulfilment of the targets or for the sites for the storage and treatment of this equipment going beyond the main requirements of the Directive.

All respondents confirmed having adopted measures to ensure the environmentally sound reuse, recovery and recycling of WEEE, but none went beyond the targets specified in the Directive.

Compliance with the reuse, recycling and recovery targets is usually ensured by imposing reporting requirements or recording mechanisms. No sanctions for not meeting the targets were reported. Overall, the answers provided were not sufficient to properly analyse the effectiveness of the measures taken to promote WEEE recovery. Several Member States reported that the rates of WEEE collection and recovery increased as a result of the implementation of the Directive. The Commission does not yet possess the necessary data to confirm this tendency<sup>26</sup>.

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<sup>25</sup> Directive 2005/32/EC establishing a framework for the setting of ecodesign requirements for energy-using products.

<sup>26</sup> The first national reports on the amounts of WEEE collected and treated cover 2006 as the latest year, and were sent to the Commission in mid-2008.

The legally binding obligation to meet the 2006 collection, recycling and recovery targets applied to EU-15. Thirteen Member States reported collection, recycling and recovery data, eight met the collection target of 4 kg per capita, five reported meeting all the 10 applicable recycling targets and four reported to have met all the 9 applicable recovery targets. Many Member States reported to have met some, but not all the targets. In some cases, the lack of reporting and/or meeting the targets was linked to late transposition. With transposition now in place, a much more complete reporting result is expected for the next two reporting periods covering years 2007 and 2008.

A large proportion of Member States encourage the development of new recovery, recycling and treatment techniques by prescribing the use of best available techniques when permitting installations or implementing national R&D programmes.

According to the Directive, by 13 August 2005 Member States were required to ensure that producers provide at least for the financing of the collection, treatment, recovery and environmentally sound disposal of WEEE from private households deposited at collection facilities. Unfortunately, little information was given regarding the practical enforcement of this provision, with most respondents merely reporting inclusion of this requirement in their national legislation. As regards the fees for the collection and treatment of WEEE from private households, some Member States show these costs to buyers at the time of purchase of new products. Most Member States do not have any special arrangements for distance sellers, but some oblige them to comply with the requirements of the market on which they place their products. Many respondents signalled that enforcement of the legislation upon distance sellers posed implementation problems.

All Member States took action to ensure that the users of EEE receive the necessary information on how to handle the resulting waste. Two main approaches were observed: information campaigns targeted at the large public, and information provided directly to the buyers during purchase of the equipment. Some Member States combine these two approaches. All Member States except Cyprus reported that they required their producers to provide reuse and treatment information to reuse, treatment and recycling facilities within one year from the placement of equipment on the market, typically via manuals or electronic means of communication. No specific problems with the provision of information to treatment facilities were reported.

#### **Acronyms:**

EEE Electrical and electronic equipment

EFTA European Free Trade Association

ELV End-of-life vehicles

EU European Union

EU-10 10 new Member States that joined the Community in 2004

EU-12 12 new Member States that joined the Community in 2004 and 2007

EU-15 15 Member States which were members of the EU before the 2004 enlargement

EU-25 25 Member States which were members of the EU during the reporting period 2004 - 2006

IMPEL European Union Network for the Implementation and Enforcement of Environmental Law

MSW Municipal Solid Waste  
OECD Organisation for Economic Cooperation and Development  
PCB Polychlorinated biphenyls  
PCT Polychlorinated terphenyls  
R&D Research & Development  
RoHS Restrictions on the use of hazardous substances in electrical and electronic equipment  
WEEE Waste electrical and electronic equipment  
WFD Waste Framework Directive  
WMP Waste Management Plan  
WSR Waste Shipment Regulation