USE OF ECONOMIC INSTRUMENTS AND WASTE MANAGEMENT PERFORMANCES

Background report for stakeholder event - 25 October 2011

Supporting the Implementation of the Thematic Strategy on Waste Prevention and Recycling

CONTENTS

1. INTRODUCTION TO EVENT ON 25 OCTOBER

1.1 PURPOSE OF THE EVENT AND THIS REPORT

The Report on the Thematic Strategy on waste prevention and recycling COM (2011)13 adopted in January 2011[1] demonstrated significant differences between Member States in the implementation of EU legally binding minimum targets (recycling/recovery rates/landfill diversion targets) and clear links between the performance of Member States and the use of economic instruments. The conclusions and recommendations of the report included ***'the introduction of instruments used by well performing Member States should be strongly encouraged particularly in worse performing Member States. Optimal combination of economic and legal instruments should be promoted notably through landfill bans and by applying the producer responsibility concept to additional waste streams on the basis of a common European approach'*** and '***new market mechanisms favouring secondary raw materials should be explored, including economic incentives…'***

These recommendations were recently confirmed with the adoption in September 2011 of the 'Roadmap on Resource Efficiency'[2] which includes several references to the use of economic instruments and notably the extension of the concept of 'producer responsibility'.

In follow-up of the adoption of the report on the Thematic Strategy, the Commission launched a study on the use of economic instruments and their impacts on Member States' (MS) waste management performances. The study will compare various economic instruments in place in the MS, their possible influence on MS performances and the possible impact of an extension of their use in all MS.

The main objectives of the event on 25 October are to present the interim results of the study to ensure a minimum level of validity; to discuss and interpret the results; and to identify the success stories, to analyse to what extent and how they could be reproduced in other MS, and to discuss the possible role of the European Union to ensure the diffusion of the most efficient economic instruments.

Discussions will focus primarily on three key types of economic instruments:

1. Charges for waste disposal and treatment (landfill and incineration);
2. Pay-as-you-throw systems; and
3. Producer responsibility schemes.

These are explained in further detail within this paper, with explicit questions posed. Results from the meeting will be summarised and conclusions/key messages will be built into the conclusions of the study.

[1] http://ec.europa.eu/environment/waste/strategy.htm

[2] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:DKEY=615217:EN:NOT

1.2 AGENDA – 25 OCTOBER 2011

Location: European Commission, DG Environment offices, 25 Avenue de Beaulieu, Brussels, Belgium

Date and time: Tuesday 25 October 2011, 9.30 – 17.40

Please Note – In order to gain entry to the meeting venue, participants will need to present formal documents confirming their identity, e.g. passport or identity card.

TIMING	ACTIVITY	
9.30 – 10.00	**Registration and coffee**	
Introductory session		
10.00 – 10.10	Setting the EU context	Julio Garcia Burgues, European Commission, DG ENV, Head of Unit
10.10 – 10.15	Introduction to the seminar and to the study	Emma Watkins, Institute for European Environmental Policy (IEEP) (consultant)
Session one: Landfill and incineration taxes and fees		
10.15 – 10.30	Landfill and incineration taxes/fees and MS waste management performance: study results	Emma Watkins, IEEP
10.30 – 10.45	EEA survey on landfill taxes	Christian Fischer, European Environment Agency
10.45 – 11.00	Incineration taxes / Green certificates	Dominic Hogg, Eunomia (consultant)
11.00 – 11.15	Landfill and Incineration taxes in Spain	Ignasi Puig Ventosa, ENT Environment and Management
11.15 – 11.45	Discussion: Using economic instruments to support the waste hierarchy	All participants
Session two: Pay-as-you-throw (PAYT) schemes		
11.45 – 12.00	PAYT schemes and MS waste management performance: study results	Emma Watkins, IEEP
12.00 – 12.15	Successful PAYT schemes and their impact on application of the waste hierarchy PAYT in Italy	Umberto Gianolio, E.R.I.C.A. soc. coop.
12.15 – 12.30	Discussion: Using PAYT schemes to implement the waste hierarchy	All participants
12.30 – 13.45	**Lunch break**	
Session three: Producer responsibility – take-back obligations		
13.45 – 14.00	Producer responsibility schemes and Member States waste management performance: study results	Emma Watkins, IEEP
14.00 – 14.15	Comparing the UK, DE and FR systems	Isabelle Martin, FNADE (SUEZ)

TIMING	ACTIVITY	
14.15 – 15.15	**Session on Packaging:** Producer responsibility schemes and MS waste management performance: study results Point of view of EU Producer Responsibility Organisations The Belgian case – results and conditions for success – point of view of Producer Responsibility Organisation The Belgian case – point of view of the public Authorities	Emma Watkins, IEEP M Martins, President Pro Europe William Vermeir, Managing Director, Fost+ Belgium Marc Adam, Director, IVCIE
15.15 – 15.30	Discussion	All participants
15.30 – 15.40	**Coffee break**	
15.40 – 16.40 16.40 – 16.50	**Session on WEEE:** Producer responsibility schemes and MS waste management performance: study results WEEE Producer Responsibility point of view Swedish case - Producer Responsibility point of view Swedish case – Public authorities point of view Discussion	Emma Watkins, IEEP Pascal Leroy, WEEE Forum Jan-Olof Eriksson, CEO, El-Kretsen (Sweden) Lars Eklund, Swedish EPA (WEEE Team) All Participants
16.50 – 17.10	**Session on other waste streams:** Producer responsibility schemes and MS waste management performance: study results Waste streams covered in France	Emma Watkins, IEEP Michel Colin, Ministère du Développement Durable
17.10 – 17.30	Discussion: Similarities/differences between waste streams; lessons from success stories; limits to the use of producer responsibility schemes. Combining different economic instruments to ensure application of the waste hierarchy	All participants
Session four: Conclusions		
17.30 – 17.40	Conclusions and next steps	Michel Sponar, European Commission

2. INTRODUCTION

2.1 THE USE OF ECONOMIC INSTRUMENTS AND WASTE MANAGEMENT PERFORMANCES

The Use of Economic Instruments and Waste Management Performances is a follow-up study to a study that was undertaken to support the review of the Waste Thematic Strategy (which was completed in October 2010 and published on the DG Environment website in January 2011). Within that study, a limited amount of research was undertaken on the use of economic instruments (EIs) to promote improved waste management, and the current study was requested to expand significantly on that limited research.

The objective of the present study is to analyse the relationship between the performances of the waste management systems of the Member States (MS) – with a particular focus on recycling, preparation for reuse and prevention – and the use of EIs. On the basis of this analysis, the opportunity of moving towards a European common approach for the use of EIs in relation to waste management will be analysed. The study aims to provide supporting information and analysis for the European Commission in the preparation of the follow up of the report published in January 2011 on the Thematic Strategy on the Prevention and Recycling of Waste[3].

2.2 SUMMARY OF WORK

A limited set of EIs have been addressed by the study in order to provide greater focus, enabling more substantive research to be undertaken into a defined set of EIs rather than attempting to cover the whole landscape of EIs being used in the waste sector in the EU-27. The EIs being investigated are amongst those where it was anticipated that waste management impacts could be most clearly seen and attributed to the use of EIs.

The following EIs were studied:

1. Fees for waste disposal and treatment:
    a. Landfill taxes, fees and bans;
    b. Incineration taxes, fees, subsidies and bans;
2. Pay-as-you-throw (PAYT) schemes; and
3. Producer responsibility schemes:
    a. Packaging;
    b. WEEE;
    c. ELV;
    d. Batteries; and
    e. 'Other 'producer responsibility schemes (i.e. the recover paper/cardboard, waste oils, medicines, etc).

[3] http://ec.europa.eu/environment/waste/strategy.htm

NB: These schemes were highlighted in the present study as they were conceived to fulfil the requirements of EU legislation (i.e. the Packaging, WEEE, ELV, Batteries and Waste Framework Directives).

3. FOCUS OF THE 25 OCTOBER EVENT

3.1 INTRODUCTION TO THE STAKEHOLDER EVENT

The main objectives of the 25 October event are to present the interim results of the study to ensure a minimum level of validity; to discuss and interpret the results; and to identify success stories and analyse to what extent and how they could be reproduced in other MS.

During the meeting on 25 October, participants will have the opportunity to participate in wider discussions on all three instrument types. Further comments would also be welcomed following the meeting. Please provide these to Emma Watkins (ewatkins@ieep.eu) by Friday 4 November 2011.

Please note that all data presented below are interim data, and aim to provide an overview of the situation across the EU. It is not possible within the scope of this study to provide a comprehensive picture of all EIs in use in the waste management sector across the EU-27.

3.2 TOPIC 1 – CHARGES FOR WASTE DISPOSAL AND TREATMENT

We distinguish in this study between:

- Taxes: a levy charged by public authorities (usually national but occasionally regional) for the disposal of waste in a landfill site, usually with an environmental purpose in mind, and where the revenue is accruing to the body responsible for the levy; and
- Gate fees: charges set by the operators of the landfills for the provision of the service (i.e. waste disposal) and which are designed to cover their costs and profit. NB This type of fee is subject to variation according to the landfill site used, and to other factors such as available landfill capacity and market variations. Gate fees do not always cover an operators' cost due to the market situation at a given time.

3.2.1 LANDFILL TAXES

The study has found that 19 MS currently have landfill taxes in place for the disposal of non-hazardous municipal waste sent to legal landfills (in addition, a tax is planned for Lithuania for 2012). The level of landfill taxation ranges very widely, from €3 per tonne in Bulgaria to up to €107.49 per tonne in the Netherlands. The total cost of disposal to landfill, however, depends also on the gate fee charged by the landfill for accepting waste. When this is factored in, the total median cost to landfill one tonne of municipal waste in the EU appears to range from €17.50 in Lithuania to up to €155.50 in Sweden.

Figure 1 below compares the total median landfill charge for municipal solid waste (MSW) (based on available data; gate fees are missing for some MS) with the percentage of waste sent to landfill in the MS. It shows three reasonably distinct groups of MS:

- MS with high total charges for landfill and low percentages of municipal waste landfilled (bottom right): the majority of MS with total charges of over €100 are landfilling 5% or less of their municipal waste;
- MS with mid-range total charges and mid-range percentages landfilled (centre); and
- MS with low total charges and high percentages landfilled (top left): all MS with total charges of less than €40 are landfilling more than 60% of their municipal waste.

This analysis therefore indicates that higher total landfill charges are generally associated with lower percentages of municipal waste being sent to landfill.

Figure 1 Total median landfill charge and percentage of MSW landfilled, 2009

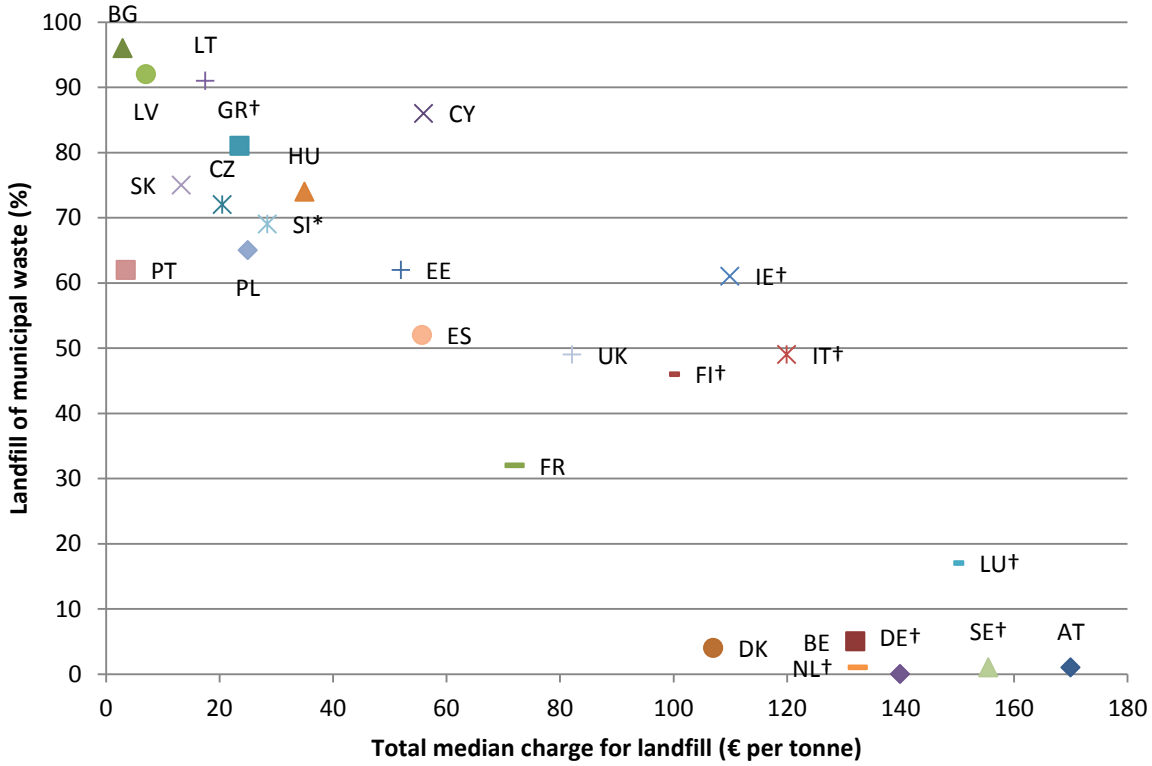


Figure 2 below compares trends in the rate of landfill tax (for non-hazardous municipal waste) with trends in the percentage of municipal waste (MSW) generated that is sent to landfill for MS where adequate time series data have been found.

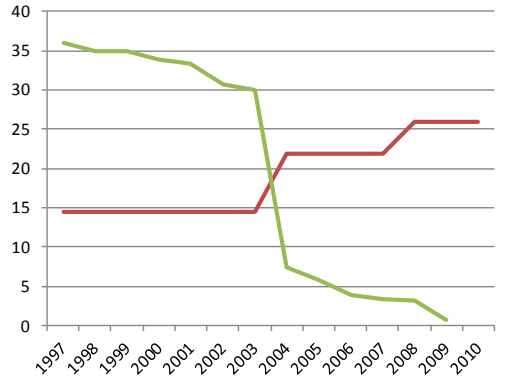
Strong *apparent* correlations between increasing landfill tax rates and decreasing rates of landfill for MSW has been observed for AT, SE and UK. A slight *apparent* correlation is observed for EE, FI, NL and SK. However, DK, FR, IE, LB and PL demonstrate no distinguishable correlation between changes in the rate of landfill tax and the amount of MSW sent to landfill. It must be stressed that there will have been other factors at play, including broader waste policy in the MS, the use of other EIs in the waste sector, the economic situation over time, changes in gate fees charged by landfill sites, the available capacity of landfills and so on. Therefore we must be very wary of inferring *direct* correlations taxes and rates of landfilling.

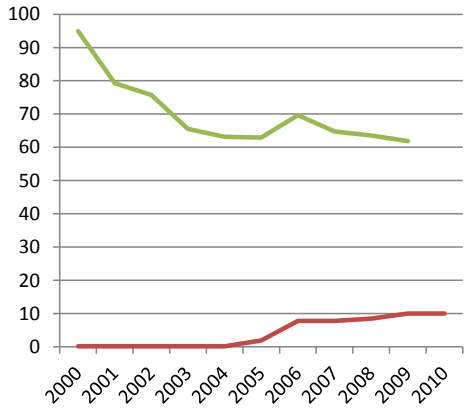
Figure 2 Landfill tax rates compared with percentage of municipal waste sent to landfill

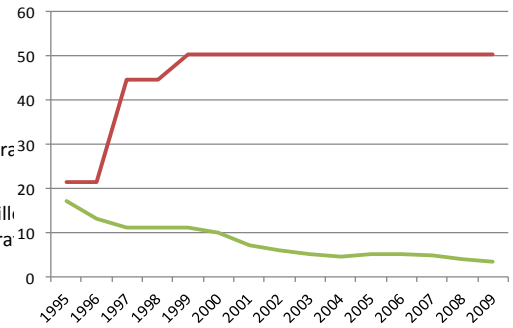
Austria and Sweden demonstrate strong *apparent* correlation between the rate of MSW landfilled and increasing landfill tax rates.

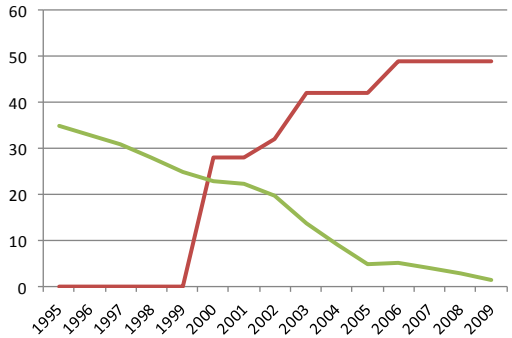
Estonia and Finland demonstrate some *apparent* correlation between the rate of MSW landfilled and increasing landfill tax rates.

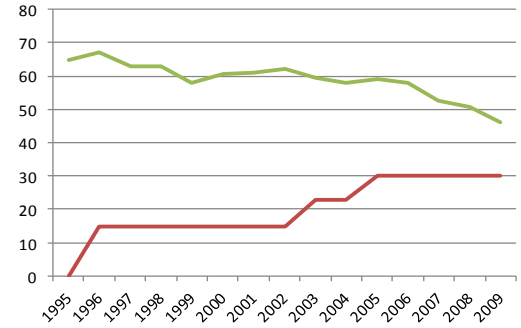
Denmark and France demonstrate no *apparent* correlation between the rate of MSW landfilled and increasing landfill tax rates.

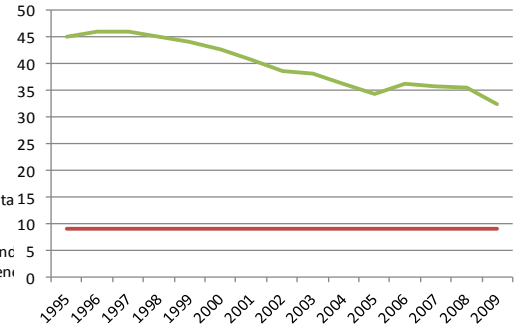












3.2.2 *INCINERATION TAXES*

The study has found that only 5 MS currently have incineration taxes in place for the disposal of municipal waste (the Czech Republic is considering introduction of an incineration tax, and Sweden introduced a tax in 2006 that was subsequently abolished in 2010). The level of taxation for incineration ranges very widely, from as little as €2.40 per tonne in France to €44 per tonne in Denmark (there is technically an incineration tax in the Netherlands, but it is currently set at €0). The total cost of incineration, however, depends also on the gate fee charged by the incinerator for accepting waste. When this is factored in, the total median cost to incinerate one tonne of municipal waste in the EU appears to range from €55.47 in the UK (for existing facilities) to €190 in Italy.

Research undertaken within the study also suggests that only 1 MS (Latvia) has a restriction in place for the incineration of certain materials.

Figure 3 Overview of total median cost of incineration (municipal waste)

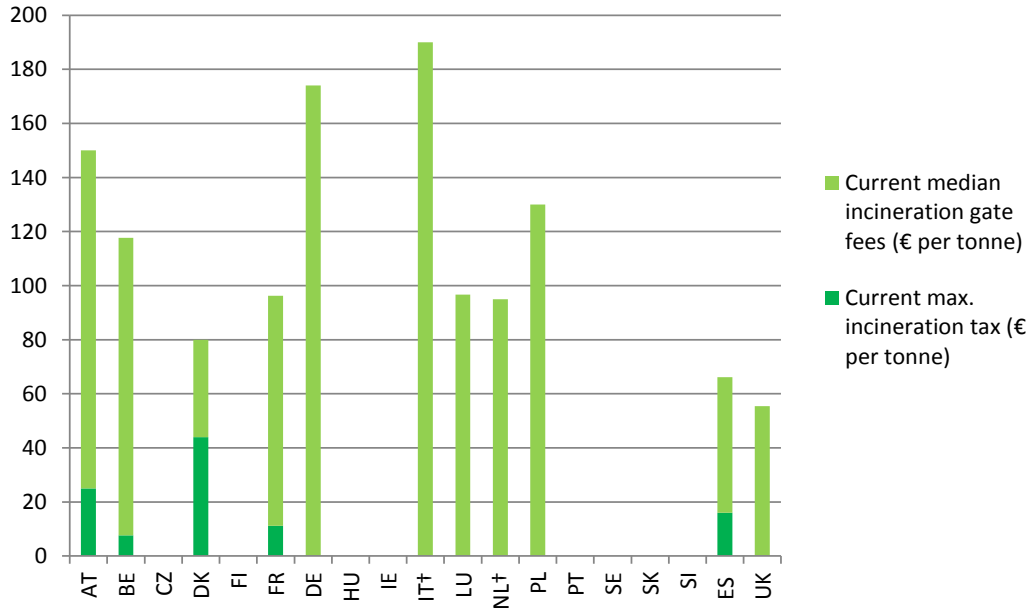
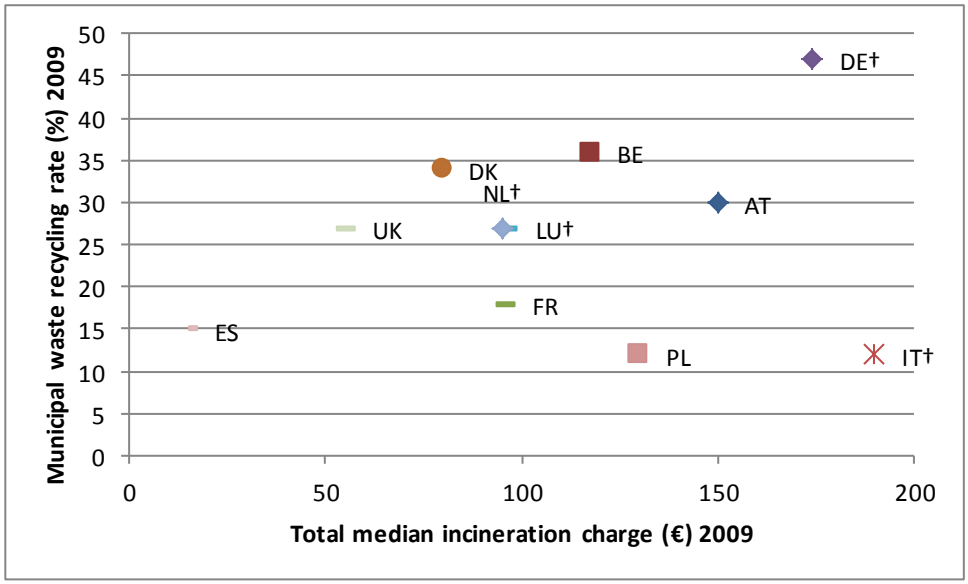


Figure 4 below compares the total median incineration charge (based on available data; gate fees are missing for some MS) with the percentage of waste recycled in the MS. It shows a broad overall trend that higher incineration charges are generally associated with higher percentages of municipal waste being recycled, indicating that higher incineration charges may help to push waste treatment up the waste hierarchy. The most notable exception to the trend is Italy, which has the highest charges for incineration and the lowest recycling rate.

Figure 4 Total median incineration charge and percentage of MSW recycled, 2009



3.3 TOPIC 2 – PAY-AS-YOU-THROW SYSTEMS

According to the data found within this study, 14 MS have established **pay-as-you-throw (PAYT) systems** in place for municipal waste, with two MS currently trialling PAYT schemes. Many other MS do charge households for the collection/disposal of their waste, but through flat charges or municipal taxes rather than variable charging schemes.

It appears that only 3 MS (Austria, Finland and Ireland) have PAYT schemes in place in all municipalities. In terms of the type of schemes in place, research to date suggests that 10 MS use volume-based schemes, 8 MS use weight-based schemes, and 7 MS use frequency-based schemes. (NB Several MS use a mixture of different types of schemes.)

Decisions on the use of PAYT schemes are taken at the local level, in particular with regards to the design of the schemes; no MS has national legislation laying down the type of PAYT to be put in place.

A review of existing schemes indicates a broad range of both the basis for charging and the amounts charged in the various PAYT schemes. Although the schemes are not necessarily directly comparable, an initial summary of findings is presented below:

- **Fixed annual fees per household** range from €40 (Miravet and Rasquera Municipalities, Tarragona region, Spain) to up to €350 (for a 120l bin, Luxembourg);
- **Fees for the purchase of mandatory refuse bags** range from €0.65 (Argentona Municipality, Barcelona region, Spain) to €5.50 (for bags over and above standard volume collected, Stuttgart, Germany);
- **Fees per emptying of a bin** (120l or 140l only, for comparison purposes) are more similar, ranging from €3.17 (Kuopio, East Finland) to €4.20 (north Helsinki, Finland); and
- **Fees per kg** range from €0.17 (Slovakia) to €0.36 (Sweden).

Box 1 – Overview of PAYT systems in Austria, Finland, Germany and Ireland

In **Austria**, household waste fees are primarily determined by the size of residual waste bins and the frequency of emptying, though a tag-based system also exists. The collection and treatment of waste rests in the hands of local authorities, who often delegate waste management activities to waste associations. High rates of household waste generation coupled with the transition from waste management policies based on landfilling to a recycling / incineration / biological based system saw waste collection and treatment fees rise by 75% upon 1995 levels from €72/household to €155/household. From 2005-2009 MSW generation trended downwards, indicating that higher fees, though generally regarded as insignificant, may have dampened household waste generation. However other factors, such as the economic downturn, are likely to have had an effect as well. In Austria true PAYT schemes are only provided for single-family houses, with waste collection and treatment fees for apartment buildings being determined by apartment size (m^2). This is seen to limit the effect of the PAYT schemes on individual apartments.

In **Finland**, charges for municipal household waste are primarily determined by the quantity and quality of waste being disposed of, as well as the frequency of collection. On average, the annual fixed fee for a single family house is €159, with the collection and treatment of a 240l bin averaging €6 per emptying, and a 600l bin averaging €9.50. The charges also vary depending on the type of waste disposed of. For example, residents who compost waste at home realise large savings over those who separate their compost from household waste for separate collection, and those who do not separate compost from household waste. Regional cooperation in waste management activities as well as relying on the private sector for elements of waste management where they have achieved efficiency have been emphasised as ways of improving the collection and processing of municipal solid waste.

PAYT schemes in **Germany** encompass bin volume-based, sack volume-based, frequency-based and weight-based systems. The majority of local waste collection systems are bin volume-based, with a fixed annual fee imposed for waste collection depending on bin volume and frequency of collection, with fee levels differing by region. In addition to residual waste, biowaste and waste paper is collected by the local authority. Generally, the PAYT schemes establish incentives for households to reduce the amount of waste they generate and thus lower collection costs. In many cases, there is a basic fee and a variable fee, the latter applying to residual waste and biowaste, in particular. The rate of the variable fee can be manipulated through household waste prevention and recovery activities. However, in order to effectively stimulate waste prevention and recycling – and thus cost savings for households and local authorities - appropriate services must be established. In general, PAYT schemes in Germany are considered environmentally beneficial, economically efficient as well as highly socially acceptable because they incentivise waste prevention and recycling, and make the options for cost savings transparent to citizens.

A 2003 mandate obligated all local authorities (LAs) in **Ireland** to transition from fixed-rate household waste disposal charges to PAYT schemes, though a number continue to operate a fixed-rate system. Volume-based, tag-based and weight-based PAYT systems account for wide variability in waste disposal practices between LAs, with collection and disposal charges nationwide ranging between €195 and €440 per annum. An apparent correlation has been observed between LAs that operate weight-based PAYT schemes and reductions in household waste generation, as exemplified by the case of County Monaghan, which in the first year of its weight-based charge scheme (2003) witnessed a 25% decrease in landfilled waste. However, PAYT is also believed to have significantly influenced the number of households engaging in waste burning, as well as increased illegal waste diversion. Also impeding the success of PAYT in Ireland is the autonomy of households to *not* subscribe to any waste collection service, as well as the inability of LAs to enforce the adoption PAYT by private waste collectors.

3.4 TOPIC 3 – PRODUCER RESPONSIBILITY SCHEMES

The concept of producer responsibility includes a wide range of instruments, from ecodesign measures to financial contributions towards separate collection and recycling and so on. This study, however, only analyses schemes that place financial responsibility on producers/importers of goods for the waste management of the products they place on the market.

This section summarises the information gathered on producer responsibility schemes, focusing on those that have been developed to implement the requirements of EU legislation (notably the Packaging, WEEE, ELV, Batteries and Waste Framework Directives).

Table 1 Summary of presence of producer responsibility schemes in the 27 MS

Member State	Packaging	WEEE	ELV	Batteries	Other
AT	•	•	•	•	Tyres; waste mineral and edible oils; paper; bulky metals, glass, plastics and wood; plastic foils; medical waste; compound packaging (Tetra-Pak); expanded polystyrene
BE	•	•	•	•	Paper/card; plastic bags; disposable plastic kitchenware; car batteries; unused/old medicines; oils; tyres; photo-chemicals
BG	•	•	•	?	Tyres; plastic bags; tax on products generating widespread waste
CY	•	•	•	•	Paper/card; motor oils; tyres
CZ	•	•	•	?	?
DK	•	•	•	•	Paper/card; tyres
EE	•	?	•	•	Tyres; old medicines; paper
FI	•	•	•	•	Paper; tyres
FR	•	•	?	•	Paper/card; tyres; unused medicines; textiles; Paper/card; tyres; unused medicines; textiles, linens, shoes; mineral or synthetic oils; fluorinated refrigerants; waste from healthcare activities with a risk of infection; gas cylinders; chemical products; furniture; office and IT supplies; pesticide packaging; non-used pesticides; fertilizer

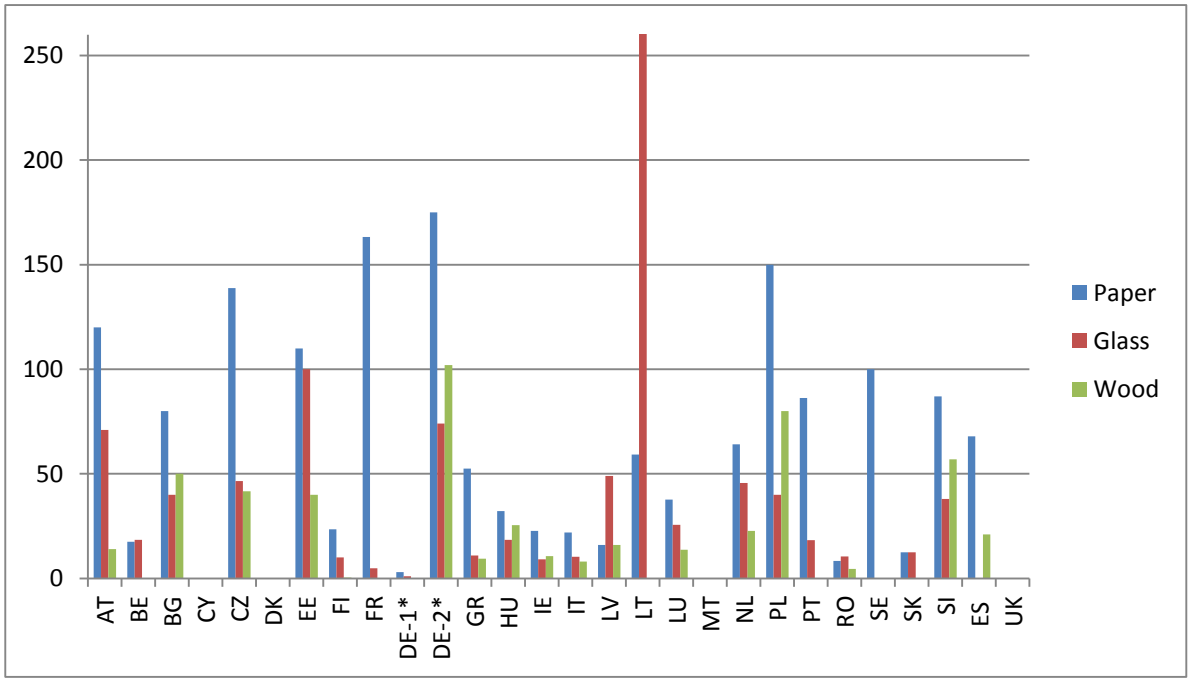
Member State	Packaging	WEEE	ELV	Batteries	Other
					packaging; agricultural Films; seed and plant packaging
DE	•	•	•	•	Commercial waste; construction waste; waste oil
GR	•	•	•	•	?
HU	•	•	?	?	Tyres
IE	•	•	•	•	Tyres; farm plastics; plastic bags
IT	•	•	•	•	Tyres
LV	•	•	•	•	Paper/card; tyres; tax on tyres, lubricating oils and oil filters
LT	•	•	•	•	Paper/card; tyres
LU	•	•	Participates in BE scheme	•	N
MT	•	?	?	•	Eco-contribution Act
NL	•	•	•	•	Paper/card; tyres
PL	•	•	?	?	?
PT	•	•	•	•	?
RO	•	•	?	?	?
SE	?	?	?	?	?
SK	•	•	•	•	Paper/card; tyres
SI	•	•	?	•	Waste from hazardous pesticides; graveside candles; medical waste; tyres; lubricating oils
ES	•	•	•	•	Tyres; mineral oils
UK	•	•	•	•	?

• = Scheme in place *? = Information missing*

3.4.1 PACKAGING

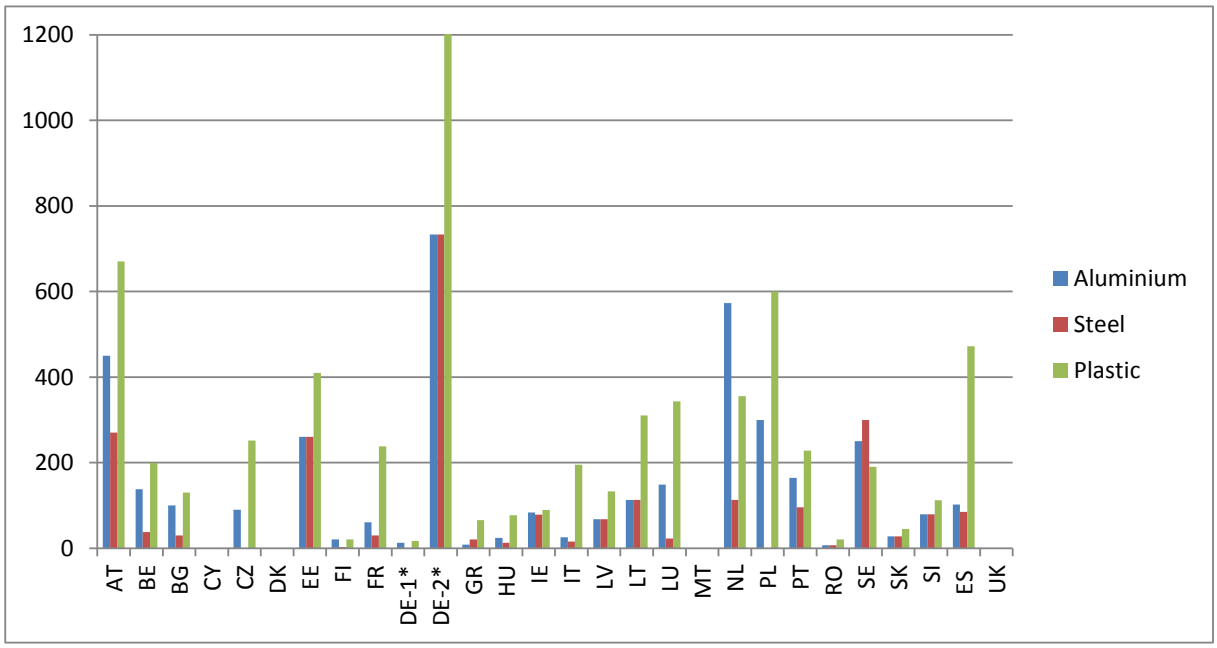
Producer responsibility schemes for **packaging** have been identified in all 27 MS; they vary from taxation to deposit-refund schemes to 'Green Dot' schemes. In the majority of MS, the 'Green Dot' approach, a scheme funded by subscribing producers, generally involves a logo being included on packaging to make consumers aware that the producer contributes to the cost of recovery and recycling of the packaging. Producers generally pay a fee to join the scheme, together with ongoing fixed and variable fees. Significantly, 'licence fees' are paid by producers, based on the tonnages of packaging material they place on the market. The broad aim of such schemes is to encourage producers to cut down on packaging in order to reduce the fees they pay to the scheme, or at least to cover the costs of collection, sorting and recycling of the packaging once it becomes waste.

Figure 5 Maximum average fee charged under Green Dot schemes (€ per tonne) for paper, glass and wood packaging (latest available data)



*DE-1 and DE-2 refer to two separate data sources; DE-2 showed much higher fees but is not confirmed

Figure 6 Maximum average fee charged under Green Dot schemes (€ per tonne) for aluminium, steel and plastic packaging (latest available data)



*DE-1 and DE-2 refer to two separate data sources; DE-2 showed much higher fees but is not confirmed

The efficiency and effectiveness of the schemes also depends on the proportion of costs of collection, sorting and recycling of waste packaging that are actually covered by producers' contributions. Initial research suggests that the schemes in 7 MS (Austria, Belgium, Cyprus, Germany, Latvia, Slovenia and Spain) currently appear to aim to cover the full costs to local authorities/waste collection authorities of these activities. In Finland, after implementation of the new waste law (likely

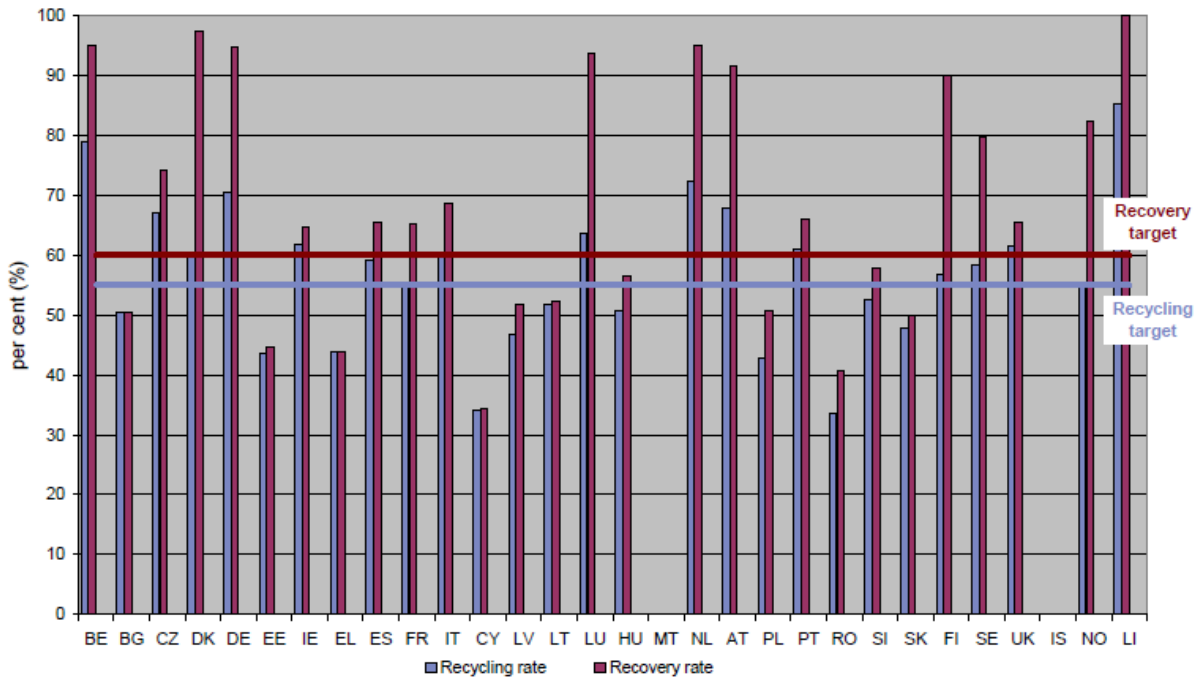
to be in 2013), producers will cover 100% of the costs of packaging waste management. In other countries it is unclear whether there is full cost coverage by producers.

The Packaging and Packaging Waste Directive set the following targets for 2008:

- 60% recovery; and
- 55% recycling (50% for metal, 60% for glass, paper/cardboard, 22.5% for plastics and 15% for wood).

Figure 7 below shows the recycling and recovery rates for packaging waste in the 27 MS for 2008. It shows that, by 2008, 15 MS had met or exceeded the 55% overall recycling target and the 60% recovery target (Bulgaria, Cyprus, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia had not).

Figure 7 Recycling and recovery rates for packaging waste, 2008[4]



3.4.2 WEEE

Information on producer responsibility schemes for **WEEE** has been found in all but three MS. However, comparable data on costs paid into the schemes proved rather more difficult to find; in several cases this information is only readily available to members of the schemes. Figures 8 and Figure 9 below therefore present the limited amount of data of this type that was found during the study.

[4] Eurostat, Environmental Data Centre on Waste, http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/documents/packaging%20waste%202008.pdf

Figure 8 Maximum payment to WEEE scheme, € per item sold

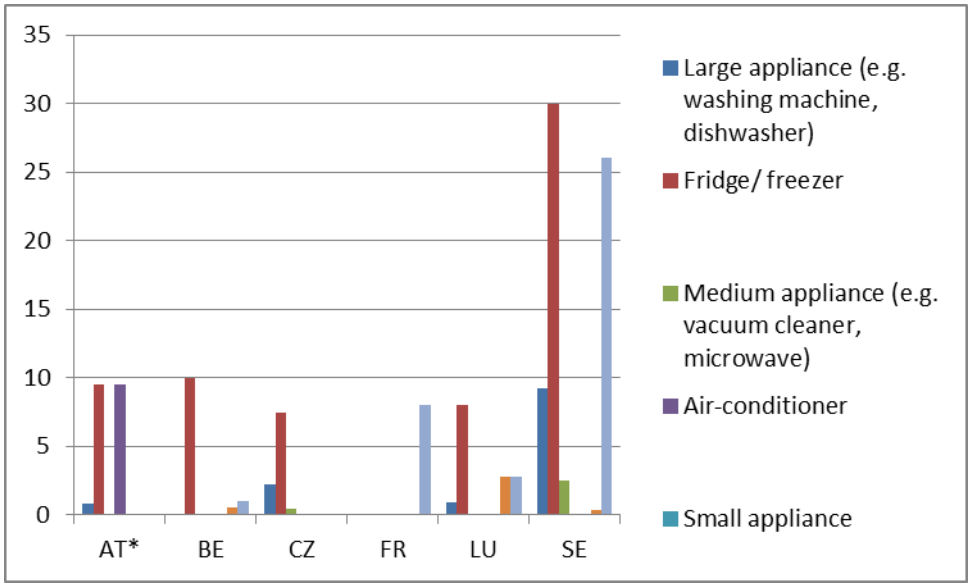
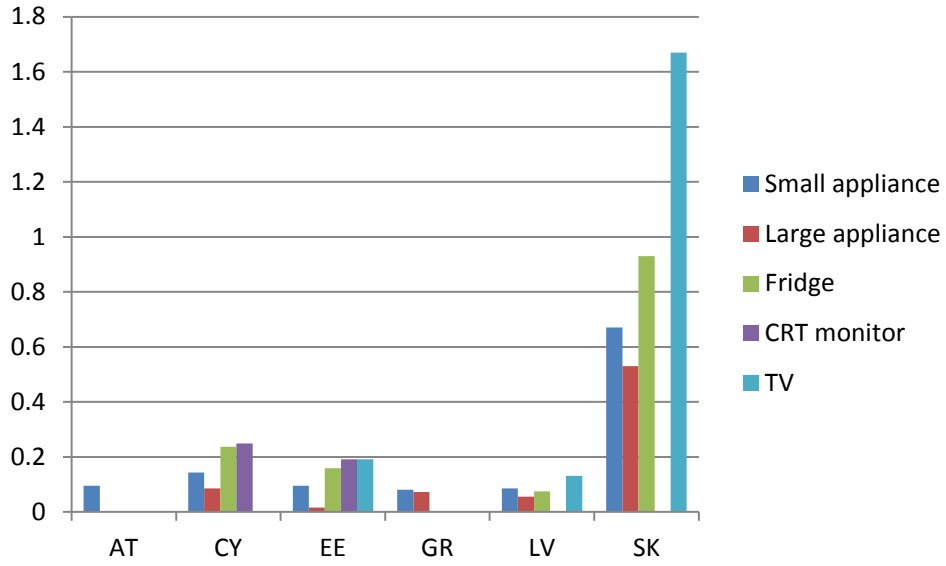


Figure 9 Maximum payment to WEEE scheme, € per kg of type of appliance sold



Despite the lack of data on the actual amounts charged to producers, information found on the vast majority of WEEE schemes suggests that the fees charged are based on the amount placed on the market by producers (either per unit, or per kg/per tonne). This helps to ensure that the cost to producers is in proportion to their market share of EEE sold in the country in question. In Ireland, fees are based more specifically on the turnover of EEE by the company (used as an equivalent to market share) and the length of time for which the company has been placing EEE on the Irish market. Fees paid in Germany vary according to the contracts negotiated with waste management firms. Research indicates that the fees are translated to 'visible fees' for consumers (i.e. the fee paid to the scheme is displayed to the consumer at the point of sale) in Belgium, Romania and Slovakia (although the fee will no longer be displayed to the consumer in Romania after February 2013).

Again, the efficiency and effectiveness of the schemes depends on the proportion of costs of collection, recycling and recovery of WEEE that are actually covered by producers' contributions. The

research to date suggests that the identified schemes in 8 MS (Austria, Belgium, Cyprus, the Czech Republic, Denmark, Ireland, Latvia and Poland) appear to aim to cover the full costs of these activities through the producers' contributions. In Finland, producers pay for 100% of the costs for management of business-to-consumer WEEE; for business-to-business WEEE, producers and end users may agree to share costs. In other countries it is unclear whether there is full cost coverage by producers.

The WEEE Directive set the following targets for 2006:

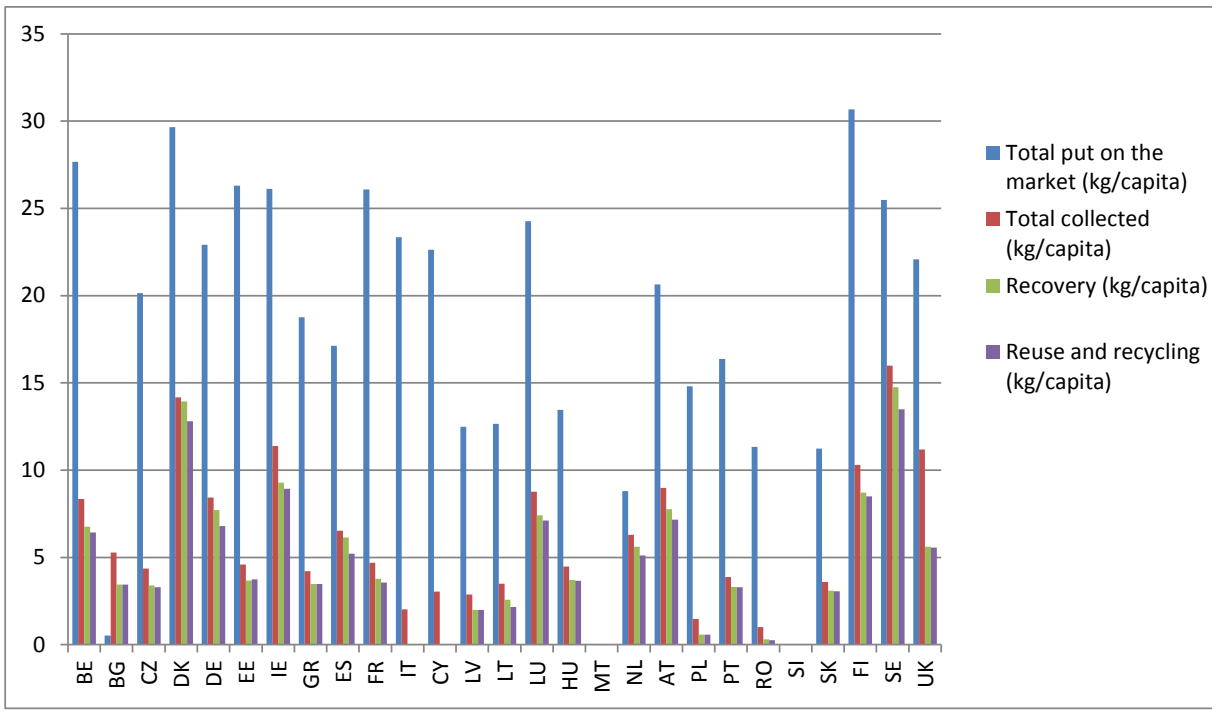
- Minimum collection rate of 4kg per inhabitant per year;
- 70-80% recovery (depending on category of WEEE); and
- 50-80% recycling including reuse (depending on category of WEEE).

The proposal for the revised WEEE Directive proposes, for 2016:

- Collection target of 65% of WEEE placed on the market or 85% of WEEE arisings.

Figure 10 below shows that by 2008, 18 MS had reported meeting the 4kg per capita collection target (Cyprus, Italy, Latvia, Lithuania, Poland, Romania and Slovakia had not; data is not available for Malta and Slovenia). The average collection rate (for the 25 countries for which data were available, minus Bulgaria which appears to import large quantities of WEEE and would therefore skew the figures) was 31.5% by weight of amounts put on the market; an increase from 23% in 2006. It is likely that considerably more than this is collected but not reported, and that a substantial part of this undergoes sub-standard treatment in the EU or is illegally exported. Where WEEE is collected separately, however, it is widely recycled: for 23 countries where recycling rates can be calculated, the average recycling rate was 75.8%.

Figure 10 WEEE put on the market, collected and recycled/recovered/reused (kg/capita), 2008[5]



[5] Eurostat, Environmental Data Centre on Waste, http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/documents/WEEE%20year%202008%20worksheet%202011%2002%2001_kg_per_capita_0.xls

3.4.3 ELVs

Evidence of producer responsibility schemes for **ELV** has been found in 19 MS. Where producer responsibility schemes exist, they all specify that ELV must be taken back at no cost to the final owner of the vehicle (in several cases unless the vehicle has been modified or is no longer intact). Several MS (Belgium, Bulgaria, Denmark, Greece, Latvia, Lithuania, Netherlands, Portugal and the UK) have organisations or 'eco-organisms' that coordinate the take back and recovery of ELV on behalf of producers. Only limited information has been found on financial contributions to producer responsibility schemes for ELV. These are not directly comparable, therefore they are presented in Table 2 below, rather than in graphical form.

Table 2 Identified financial contributions to ELV producer responsibility schemes

Member State	Detail of financial contribution	Paid by
CZ	EURO III or higher standard: no fee EURO II standard: €122/vehicle EURO I standard: €205/vehicle	The person who registers the used M1 or N1 vehicle
DK	From January 2012: €21.54 per tonne for landfilled shredder residue; from January 2015: €63.70 per tonne €12.10 annual environmental fee	Landfiller of residue Car owner
FI	One-off joining fee per producer (typically less than €1,000) and less than €5 per car sold	Producer/importer
NL	€15 per new car registration	Producer/importer, but ultimately passed on to the consumer
PT	<500 vehicles: €250 500 to 9,999: €500 From 10,000 to 20,000: €1,000 > 20,000: €1,500	Producer/importer
SK	€66.67/kg contribution to recycling fund	Producer/importer
SI	€40 per tonne of new vehicle	

3.4.4 BATTERIES

Evidence of producer responsibility schemes for waste **batteries** has been found in 20 MS. Comparable data on the amount charged to producers, however, has been even more difficult to find than for schemes relating to WEEE. Essentially, the schemes charge fees to producers based on the amount of batteries placed on the market, either per kg, per battery or according to market share (in Lithuania the Law on environmental pollution taxes batteries at a rate of €0.70 per kg). However, the MS determine the cost based on the type of battery and the classification varies from country to country, e.g. consumer/vehicle/industrial battery in Austria and Lithuania; the chemical content of the battery (e.g. lead-acid/nickel-cadmium/alkaline/zinc carbon/lithium/button/lithium ion) in Latvia and Portugal; and size or weight of battery in Cyprus and Slovakia. It is therefore almost impossible to draw meaningful comparisons between the fees paid to the schemes in the different MS based on the data collected.

3.4.5 EIs dealing with Other Waste Streams

'Other' producer responsibility schemes identified in this study range from the collection of tyres and paper/card (frequent) to photochemicals (rare). Of these 'other' schemes, the most commonly occurring throughout the MS surveyed were the recovery of tyres, paper/card, oils (including mineral, motor, edible and lubricating oils), and the collection and disposal of old and unused medicines.

Sixteen of the 27 MS currently have in place producer responsibility schemes covering one or more categories of items identified. Fifteen MS have recovery programmes in place for tyres, nine for paper/card, seven for oils, and three for medicines.

4. FURTHER THOUGHTS AND QUESTIONS

Following the meeting on 25 October, we would be very interested in hearing any further thoughts you have. Please send all comments to ewatkins@ieep.eu by Friday 4 November 2011.

We would particularly appreciate your thoughts in response to the following questions:

1. In your view, what is the role of EIs to ensure application of the waste hierarchy? Are they useful to ensure the implementation of legally binding EU targets (e.g. recycling and landfill diversion targets)?

2. Are there other EIs (besides those analysed in this study) which you consider to be relevant in ensuring the application of the waste hierarchy? Please describe/explain.

3. What combinations of different economic instruments might be most effective to ensure application of the waste hierarchy?

4. For those MS with limited use of EIs at present, what are the main barriers to their application? Should the initial focus be on addressing the bottom of the waste hierarchy (i.e. landfill and incineration)?

5. In your view, are there any limits/constraints (legal, practical, financial, etc.) to the use of producer responsibility schemes? What are the main conditions to ensure the success of such schemes?

6. Are there additional waste streams to which producer responsibility schemes could be applied?

7. For those MS where there are no apparent correlations between the use of a particular EI (e.g. landfill taxes) and the national recycling rate, what in your view are the main (structural or conjunctural) causes for this situation?

8. In your experience, are there any particular lessons that can be learned from the successful (or less successful) use of EIs in the waste sector?

9. Is there a need for further initiative at EU level to promote the use of successful (cost effective) EIs? And if so, how the Union could further promote their use?

10. Should the Union promote/recommend the use of a specific 'model' of EIs, or is a case-by-case approach preferable? If the latter, please suggest the criteria around which a tailor-made model could be designed.