

PREPARING FOR THE REVIEW OF THE THEMATIC STRATEGY ON THE PREVENTION AND RECYCLING OF WASTE

Background report for stakeholder event - 22 June 2010

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

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INTRODUCTION TO 22ND JUNE EVENT

1.1 PURPOSE OF THE EVENT AND THIS REPORT

The Thematic Strategy on the Prevention and Recycling of Waste (Waste TS) (COM(2005)666)¹ was one of seven such strategies called for by the Sixth Environmental Action Plan (Decision 1600/2002/EC). The European Commission is now undertaking a review of progress in terms of implementing the Waste TS. Work supporting the review consists of two elements: first, data collation to understand the extent of progress towards its goals; second, an evaluation of whether - and if so, what - further action is needed to better implement the Thematic Strategy.

Analytical work (in the form of a consultant-led study²) being undertaken in support of the review has to date been primarily a data collection and collation exercise. The analytical phase is now beginning, when conclusions and recommendations for the review will be developed.

The 22nd June event represents an important opportunity for stakeholders to input into this process of analysis. Discussions will focus primarily on four key topic areas:

1. Practicalities of implementing the Waste TS and its objectives
2. Prevention of waste
3. International influence and impact of EU waste management policy
4. The EU recycling market

These are explained in further detail within this paper, with explicit questions posed. During the event one working group will focus on each of these four subjects. The working groups will be followed by a plenary session in which conclusions will be discussed and debated. Participants will be asked to volunteer to take part in the working group of their choice; please be prepared to register your working group preference upon arrival at the venue on 22nd June. Results from the meeting will be summarised and any conclusions/key messages will be built into the conclusions of the research currently underway to support the review of the Waste TS.

The goal of the meeting on 22nd June is to have a wide-ranging open discussion, focusing on the strategic future of EU waste policy rather than on specific pieces of legislation or waste streams.

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52005DC0666:EN:NOT>

² This is being completed by a consortium contracted to the Commission consisting of the Institute for European Environmental Policy (IEEP), Ecologic, Arcadis, Umweltbundesamt, BIO Intelligence Services (under a framework contract lead by BIO) and VITO, under contract ENV.G.4/FRA/2008/0112

1.2 AGENDA – 22ND JUNE

Location: European Commission Offices; Avenue de Beaulieu 25 (BU-25), Auderghem, Room 0/S1

Timing: 9:30 -17:00

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

Timing	Activity	
9:30 – 10:00	Registration (including sign-up for working group) and coffee	
10:00 – 10:20	Welcome and Introduction: including a presentation of the envisaged review process	European Commission
10:20 – 11:00	Summary of the study commissioned to support the review of the Waste TS and incorporating conclusions reached Presentation followed by 10min Q&A	Institute for European Environmental Policy (IEEP)
11:00-11:05	Short break to allow participants to reach their allotted working groups	
11:05-12:00	Working Groups – session 1 Session to consist of four working groups: 1. Implementing the Waste TS and its objectives 2. Prevention of waste 3. International influence and impact of EU waste management policy 4. The EU recycling market Each group will commence with a short introduction to the subject matter and the questions by the chair (15 mins)	All stakeholders
12:00-13:30	<i>Lunch – In the European Commission Canteen</i>	
13:30 – 15:10	Working Groups – session 2 Stakeholders to remain in the same groups. This second session will continue discussion, and focus on drawing together conclusions and key issues.	All stakeholders
15:10 – 15:30	<i>Coffee</i>	
15:30 – 16:30	Plenary session - feedback from the four working groups; led by the rapporteurs from each group	IEEP
16:30 – 17:00	Conclusions and next steps	European Commission

INTRODUCTION

1.3 THE THEMATIC STRATEGY ON THE PREVENTION AND RECYCLING OF WASTE

The Thematic Strategy on the Prevention and Recycling of Waste (Waste TS) (COM(2005)666) was published in December 2005 alongside a proposal for the revision of the existing Waste Framework Directive (2006/12/EC), which ultimately became Directive 2008/98/EC on Waste. The Waste TS describes a number of **key objectives** as part of an evolving EU policy on waste. These were to:

- Prevent waste;
- Promote re-use, recycling and recovery; and
- Establish the recycling society.

All the above objectives were intended to contribute to the reduction of the overall negative environmental impacts of resource use, securing a higher level of environmental protection.

In order to achieve these objectives it was proposed to take forward actions intended to modernise the legal framework relating to waste management. These efforts included the introduction of life-cycle analysis into policy-making and clarifying and simplifying EU waste law. Ultimately such efforts were intended to contribute to improving the implementation of waste law and to move the EU 'decisively onto the path of becoming an economically and environmentally efficient recycling society'. Specific actions recommended included:

- A renewed emphasis on full implementation of existing legislation;
- Simplification and modernisation of existing legislation;
- Introduction of life-cycle thinking into waste policy;
- Promotion of more ambitious waste prevention policies;
- Development of better knowledge and information intended to underpin the continued development of waste prevention policy;
- Development of common reference standards for recycling; and
- Further elaboration of the EU's recycling policy, intended to develop new mechanisms by which recycling might be promoted.

1.4 SUMMARY OF WORK – PROJECT TO SUPPORT THE REVIEW OF THE WASTE TS

The Commission contracted a consortium, led by IEEP, to complete work aimed at supporting the review of the Waste TS. This is intended in essence to be a meta-study, focusing on the collation of data sets and information on waste management practice and policy in Europe to provide a resource for the review. The contractor has been requested to undertake six specific tasks, each intended to inform a particular aspect of the Commission's work. The results from these tasks have been used to inform the selection of topics for discussion during the 22nd June event and the content of this paper. A brief summary of the work completed by the contractor and the anticipated outcomes will be presented at the event. The specified tasks are as follows:

- Task 1. Review of trends and developments relevant to waste management – resulting in the production of 12 factsheets on different aspects of waste management and a review accompanied by modelling of anticipated future waste trends to 2030
- Task 2. Diffusion and integration of key concepts – considering how key concepts set out in the Waste TS (e.g. waste prevention, life cycle assessment, recycling society) are used at Member State and EU level

- Task 3. Implementation and impacts of the Waste TS – envisaged as the focus of conclusions from the work
- Task 4. Delivering a recycling society and markets – reviewing what characteristics or indicators could be used to monitor progress towards a recycling society in Europe and the barriers and potential facilitating factors relevant to effective delivery of recycling markets
- Task 5. The EU’s impact internationally in terms of waste management – considering the EU’s impact on third countries and its role in delivering better waste management globally
- Task 6. Stakeholder consultation – expert group and wider stakeholder event 22nd June – This is an important aspect to the work allowing the team to qualify their assertions and findings. We would like to thank all those attending the 22nd June meeting and the core expert group who have already kindly provided detailed opinions on this topic.

The study is due to be completed by September 2010.

DEVELOPING THE WAY FORWARD – THE FOCUS OF THE 22ND JUNE MEETING

1.5 INTRODUCTION TO THE STAKEHOLDER EVENT

During the 22nd June meeting participants will have the possibility to join a working group focusing on one of four topics and associated questions set out in the remainder of this document. All participants will also have the opportunity to participate in wider discussions on all four topics during the final plenary session. Further comments would also be welcomed following the meeting. Please provide these to Emma Watkins (ewatkins@ieep.eu) by Thursday 1 July 2010.

1.6 TOPIC 1 - IMPLEMENTING THE WASTE TS AND ITS OBJECTIVES

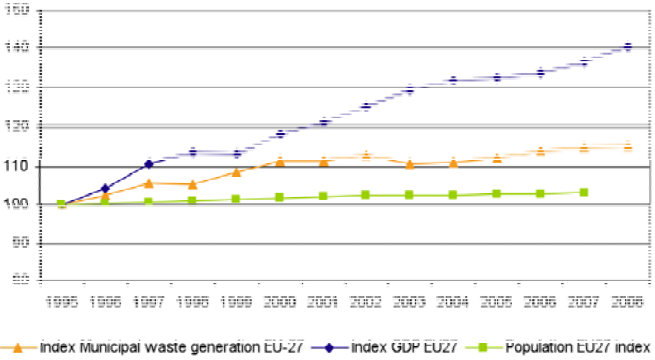
The primary aim of the Waste TS is to contribute to reducing the overall negative environmental impact of resource use, by preventing waste generation and promoting re-use, recycling and recovery of waste. The long-term goal is for the EU to become a recycling society that seeks to avoid waste and uses waste as a resource. Promoting movement towards a recycling and recovery society essentially means moving up the waste hierarchy, away from disposal, through recycling and recovery to prevention; the overriding operational objective of the Waste TS is therefore arguably to promote movement up the waste hierarchy. As a consequence the anticipated impacts of the measures called for in the Waste TS were: less waste being sent to landfill; increased rates of composting and energy recovery from waste; more and better recycling; greater focus on environmental impact to make waste policy more efficient and cost-effective; an improved regulatory environment for waste management activities; and strengthening waste prevention policies at the Member State level.

In order to evaluate progress towards these objectives there is a need to consider the current state of waste management in Europe, the extent to which waste is managed in line with the hierarchy and the adequacy of the policy response. Relevant information to support discussions on these issues is presented in 3.2.1, 3.2.2 and 3.2.3.

3.2.1 Waste management in the EU

There is a large volume of information regarding the performance of the EU in terms of waste management. Table 1 below is intended to summarise briefly key trends and evidence relevant to the different stages of delivering the waste hierarchy.

Table 1 – Summary of key facts and figures related to moving EU waste management up the waste hierarchy

Hierarchy – Directive 2008/98	Issue Description	Trends and Data (detailed factsheets describing the data and sources for all information set out below can be found at http://www.eu-smr.eu/tswpr/)
Waste Generation and Prevention	<p>The prevention of waste is the ultimate goal in terms of delivering better resource use and reducing the environmental impacts of our consumption patterns. Prevention means measures taken before a substance, material or product has become waste, that reduce:</p> <p>(a) the quantity of waste, including through the re-use of products or the extension of the life span of products;</p> <p>(b) the adverse impacts of the generated waste on the environment and human health; or</p> <p>(c) the content of harmful substances in materials and products;</p> <p>The former is notoriously difficult to assess. According to formal EU figures there is an increasing trend in waste generation. The rate of change does, however, depend on the economic and social situation in a given Member State.</p> <p>Certain elements of EU law can be considered to contribute towards delivering the reduction in the harmful substances contained in waste and the adverse impacts it generates. Specifically these include the product focused waste related Directives including, <i>inter alia</i>, ROHS and ELVs.</p>	<p>There is a trend of overall waste generation increasing in the EU. According to data from the EEA and Eurostat waste generation in the EU 15 in 1995 stood at 3.5 tonnes per person and 1.29 billion tonnes in total, in 2004 this had risen to 1.93 billion tonnes and by 2007 2.01 billion tonnes. This represented an increase in 0.72 billion tonnes in 12 years.</p> <p>For the EU 27 total waste generation was estimated at 2.91 billion tonnes in 2004 and by 2006 this was estimated as 2.95 billion tonnes. Based on the data from Eurostat there appears to be high variance in the amount of waste generated between Member States – for example, in 2006 France and Latvia generated 429.2 million tonnes and 1.86 million tonnes of waste, respectively.</p> <p>According to Eurostat figures in 2008 municipal waste generation per capita for the EU27 was 524 kg/capita, for the EU 15 this was 565 kg/capita. This compares to figures reported by the OECD of 750 kg/capita for municipal waste in the USA and 400 kg/capita in Japan as per 2005.</p> <p>In addition to overall waste generation increase the EEA also reports an increase in the production of municipal solid waste, packaging waste, hazardous waste and construction and demolition waste.</p> <p>Figure 1 - Trends in municipal waste generation - EEA, upcoming State and Outlook of the Environment Report 2010, draft version June 2010</p> 
Preparing for reuse	<p>The concept of preparing for reuse was introduced under Directive 2008/98/EC in an attempt to clarify the waste hierarchy. Under the Directive this is defined as ‘checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing’ This is distinct simply from reuse operations which, if the material was not ever classified as waste, contribute to waste prevention.</p>	<p>Given that this is a new concept, data on preparing for reuse does not currently exist.</p>

Material recycling

Recycling is a 'recovery operation by which waste materials are reprocessed into products, materials or substances' (Directive 2008/98/EC). Recycling trends in the EU have been increasing, although there remains a disparity between overall Member State performance. The EU has specific product based Directives that promote recycling of for example ELVs, packaging, WEEE, batteries. It also has generic goals to promote recycling as part of the move up the waste hierarchy. In 2008, under the Directive on waste new targets for the preparing for reuse and recycling of materials were established for municipal solid waste and construction and demolition waste.

According to EEA figures for 2006 in the EU 27 approximately 55% of waste targeted by EU Directives was recycled ie 70% of ELVs, 57% of packaging, 65% of construction and demolition waste, 34% of municipal solid waste and 19% of WEEE. The rate of recycling achieved varies by Member State, as demonstrated in Figure 2 below

Figure 2 – Recycling of End of Life Vehicles – Source Eurostat

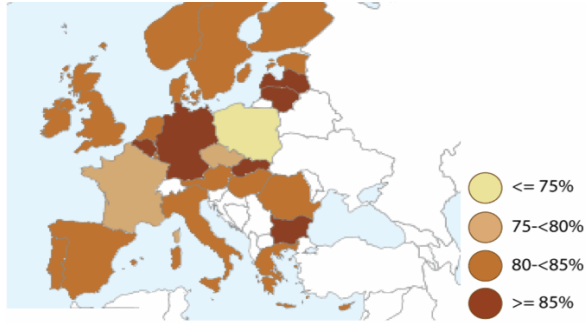
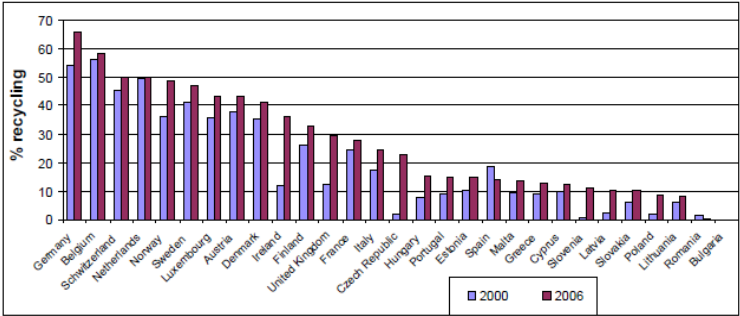


Figure 3 – Recycling rates for municipal waste in the EU 27, including Norway and Swizerland - EEA, upcoming State and Outlook of the Environment Report 2010, draft version June 2010



European Recovered Paper Council claims that paper recycling was up to 66% in 2008 from 61.6% in 2005, for EU27 including Switzerland and Norway. Data from the EEA suggests that management of waste has improved in the last 15 years with recycling/composting of MSW increasing from 19% to 38% between 1998 and 2007.

Work supporting the SCP working paper 2/2009 concluded that the EU 15 recycled between 60kg and 370kg of waste per capita, while the EU 12 recycling between 20kg and 100kg per capita in 2005/2006 – when interpreting this one must, however, take account for variations in MS levels of waste generation.

Energy recovery

Under Directive 2008/98/EC incinerators must achieve a specified level of efficiency in terms of conversion of waste to energy in order to qualify as an energy recovery activity.

Eurostat's Energy, Transport and Environment Indicators (2008) indicate that incineration of municipal solid waste (MSW) with energy recovery has increased significantly, with primary energy production from municipal waste incineration almost doubling from 1995 to 2006. The energy content was equivalent to 10 million tonnes of oil in 2006. In 2006 Germany and Sweden recovered energy from by far the highest quantities of waste EU wide, subsuming just

		<p>over 17,000 and 18,000 tonnes respectively (Eurostat figures on the treatment of waste).</p> <p>It should be noted that these statistics originate from before the adoption of the new Directive on waste. Data will become available in subsequent years to determine the impact of the Directive on the level of energy recovery from waste.</p> <p>According to a report³ for the period from 2004 to 2007, it can be assumed that out of the total of 370 municipal waste incinerators in the EU about 50 to 70% might be able to achieve the energy efficiency criteria for municipal waste incinerators set by the new Waste Framework Directive 2008/98/EC.</p>																																																																																																																																																	
<p>Waste disposal</p>	<p>Waste disposal techniques in Europe primarily consist of landfilling and incineration of waste in varying proportions dependent upon the Member State.</p>	<p>According to Eurostat figures in 1995, the baseline year for the targets in the landfill Directive, an average 62 per cent of MSW in the EU-15 was sent to landfill. By 2007, this figure had fallen to 42 per cent. For the EU 27 Eurostat calculated a fall in per capita landfilling of MSW from 293 kg to 207 kg between 1997 and 2007. However, at the same time they estimate that MSW incineration has increased from 70kg per capita to 102 kg per capita.</p> <p>There is a wide variation between Member States in terms of the balance between disposal and recovery activities, and the most favoured forms of disposal. This variation is demonstrated in the figure below.</p> <p>Figure 4 – Treatment of Waste as per 2006 – Eurostat, Energy Transport and Environment Indicators 2008</p> <table border="1"> <caption>Estimated data for Figure 4: Treatment of Waste as per 2006</caption> <thead> <tr> <th>Member State</th> <th>Landfill (%)</th> <th>Incineration (%)</th> <th>Energy recovery (%)</th> <th>Recovery (%)</th> </tr> </thead> <tbody> <tr><td>Denmark</td><td>10</td><td>10</td><td>0</td><td>80</td></tr> <tr><td>Netherlands</td><td>10</td><td>10</td><td>0</td><td>80</td></tr> <tr><td>Belgium</td><td>15</td><td>10</td><td>10</td><td>55</td></tr> <tr><td>Poland</td><td>18</td><td>0</td><td>0</td><td>82</td></tr> <tr><td>Germany</td><td>20</td><td>5</td><td>10</td><td>65</td></tr> <tr><td>Austria</td><td>25</td><td>5</td><td>10</td><td>55</td></tr> <tr><td>Italy</td><td>28</td><td>5</td><td>0</td><td>67</td></tr> <tr><td>Czech Republic</td><td>30</td><td>0</td><td>0</td><td>70</td></tr> <tr><td>Ireland</td><td>35</td><td>0</td><td>0</td><td>65</td></tr> <tr><td>France</td><td>35</td><td>5</td><td>0</td><td>60</td></tr> <tr><td>Slovenia</td><td>40</td><td>0</td><td>10</td><td>50</td></tr> <tr><td>Portugal</td><td>45</td><td>0</td><td>5</td><td>45</td></tr> <tr><td>EU-27</td><td>45</td><td>5</td><td>5</td><td>45</td></tr> <tr><td>Slovakia</td><td>50</td><td>0</td><td>5</td><td>45</td></tr> <tr><td>Finland</td><td>55</td><td>0</td><td>10</td><td>35</td></tr> <tr><td>Sweden</td><td>60</td><td>0</td><td>15</td><td>25</td></tr> <tr><td>United Kingdom</td><td>60</td><td>0</td><td>0</td><td>40</td></tr> <tr><td>Latvia</td><td>60</td><td>0</td><td>0</td><td>40</td></tr> <tr><td>Lithuania</td><td>60</td><td>0</td><td>0</td><td>40</td></tr> <tr><td>Cyprus</td><td>60</td><td>0</td><td>0</td><td>40</td></tr> <tr><td>Estonia</td><td>60</td><td>0</td><td>0</td><td>40</td></tr> <tr><td>Spain</td><td>65</td><td>0</td><td>5</td><td>30</td></tr> <tr><td>Hungary</td><td>70</td><td>0</td><td>5</td><td>20</td></tr> <tr><td>Greece</td><td>75</td><td>0</td><td>0</td><td>25</td></tr> <tr><td>Malta</td><td>80</td><td>0</td><td>0</td><td>20</td></tr> <tr><td>Romania</td><td>85</td><td>0</td><td>0</td><td>15</td></tr> <tr><td>Bulgaria</td><td>90</td><td>0</td><td>0</td><td>10</td></tr> <tr><td>Luxembourg</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td></tr> </tbody> </table>	Member State	Landfill (%)	Incineration (%)	Energy recovery (%)	Recovery (%)	Denmark	10	10	0	80	Netherlands	10	10	0	80	Belgium	15	10	10	55	Poland	18	0	0	82	Germany	20	5	10	65	Austria	25	5	10	55	Italy	28	5	0	67	Czech Republic	30	0	0	70	Ireland	35	0	0	65	France	35	5	0	60	Slovenia	40	0	10	50	Portugal	45	0	5	45	EU-27	45	5	5	45	Slovakia	50	0	5	45	Finland	55	0	10	35	Sweden	60	0	15	25	United Kingdom	60	0	0	40	Latvia	60	0	0	40	Lithuania	60	0	0	40	Cyprus	60	0	0	40	Estonia	60	0	0	40	Spain	65	0	5	30	Hungary	70	0	5	20	Greece	75	0	0	25	Malta	80	0	0	20	Romania	85	0	0	15	Bulgaria	90	0	0	10	Luxembourg	N/A	N/A	N/A	N/A
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³ CEWEP, Energy Report II (Status 2004-2007), Bamberg, March 2009

3.2.2 Analysis of diffusion of key terms

The Waste TS was intended not only to impact on practices in Europe, but also to help guide better policy making in Europe. The study in support of the review of the Waste TS is undertaking an analysis of the diffusion (take-up) of eight key terms from the Waste TS in relevant EU and Member State documents and legislation. To date the analysis has focused on a numerical count of the occurrence of the terms (and synonyms) in 15 EU documents (on waste, natural resource management, procurement/green public procurement, greening product design and industry regulation and pollution control) and 65 documents (legislation, guidance, national/regional waste plans/strategies, progress reports and consultations) across six Member States. This analysis is now being coupled with an assessment of the context in which these terms are used and their relevance to waste management practices undertaken within the Member States.

The initial results of the quantitative analysis are as follows:

- **Extensive diffusion⁴**: The terms **waste prevention** and **producer responsibility** enjoy extensive diffusion at both EU and MS level, and **life cycle thinking** enjoys extensive EU diffusion and fair MS level diffusion.
- **Fair diffusion⁵**: The terms **waste hierarchy** and **reducing negative environmental impacts by better waste management** enjoy fair diffusion at EU and MS level, and **using waste as a resource** enjoys extensive MS level diffusion but limited diffusion at EU level.
- **Limited diffusion⁶**: The terms **proximity principle** and **recycling society** suffer from limited diffusion at both the EU and MS level.

This analysis is by no means claimed to be a comprehensive assessment of the state of EU compliance in Member States, but is intended to provide an understanding as to whether concepts are penetrating beyond EU-level policy-making.

3.2.3 Implementing the waste *acquis*

The overall state of implementation of EU waste legislation is outlined in the latest Commission implementation reports, published in November 2009 and referring to the period 2004-2006 (the latest period for which Member State implementation reports are available). The general implementation report, which covers the Waste Framework, Hazardous Waste, Waste Oils, Sewage Sludge, Packaging and Packaging Waste, Landfill and WEEE Directives, concluded that EU waste law is being poorly implemented and enforced in many Member States, in particular with regards to the Waste Framework and Landfill Directives. Problems include: lack of waste treatment infrastructure and lack of separate waste collection; heavy reliance on landfilling (especially in the newer Member States); targets for WEEE, ELVs and packaging not being met; and insufficient diversion of biodegradable waste from landfill. A separate report highlighted problems in implementation of the Waste Shipment Regulation, evidenced by a high number of illegal shipments. Over 20% of all environmental infringement cases are related to waste management.

The picture is not entirely negative, however. Recycling and recovery rates for packaging waste have been continuously increasing for the past 10 years; a ban on landfilling has increased recovery of waste tyres to 95% and developed a strong market for tyre-derived materials; and restrictions on hazardous substances in EEE and vehicles have reduced health risks. The potential benefits of proper implementation and enforcement of all EU waste legislation include: reducing greenhouse gas emissions by up to 30%; significant innovation opportunities for EU businesses; improved access to valuable secondary raw materials; and reduced environmental and financial costs. The Commission

⁴ Extensive = high number of occurrences and presence in many documents

⁵ Fair = reasonable number of occurrences and/or presence in fewer documents

⁶ Limited = low number of occurrences and/or presence in limited number of documents

has already taken steps to support Member States in better implementation, including awareness-raising and information exchange events, guidance documents for Member States and inspection activities in Member States in close cooperation with the EU network for the implementation and enforcement of environmental law (IMPEL).

QUESTIONS FOR DISCUSSION - TOPIC 1 - IMPLEMENTATION OF THE WASTE THEMATIC STRATEGY

Considering the Waste TS and the adequacy of existing policy

1. What would you consider to be the key impacts of implementing the Waste TS since its adoption in 2005?
2. Have there been any limitations in terms of the actions delivered and their contribution to meeting the aims of the Waste TS?
3. Where do you consider the existing set of EU policy will lead us in the next 20 years? Is this sufficient to address the anticipated challenges in terms of waste prevention and management?

Moving EU waste management further up the waste hierarchy

4. What action do you consider necessary to encourage further movement up the waste hierarchy?
5. What do you consider to be the main reasons for different levels of implementation across Member States both in terms of (a) EU waste legislation and (b) the 'waste hierarchy' principles?
6. How might these differences be addressed and more effective waste management across the EU be promoted? Would there be a role for further EU initiatives, and if so what would be the added value of such an approach?

1.7 TOPIC 2 - WASTE PREVENTION

The management of waste can be simplified by waste prevention. Waste prevention involves taking measures before a substance, material or product has become waste, that:

- reduces the quantity of waste, including through the re-use of products or the extension of the life span of products;
- reduce the adverse impacts of the generated waste on the environment and human health; or
- reduce the content of harmful substances in materials and products.

Waste prevention can be attempted through waste prevention strategies and targets, improvements to manufacturing processes, and encouraging consumers to demand greener products and less packaging.

However, waste prevention, by its nature, can be difficult to measure accurately; it is not easy to measure something that has not happened. It is also difficult to say with certainty whether any observed reductions in waste generation are due to waste prevention measures, or to external factors such as economic or demographic changes, or other behavioural changes independent of waste prevention strategies.

3.3.1 Prevention in the Waste TS

The Waste TS addresses waste prevention as a priority issue, to contribute to the overall aim of the EU becoming 'a recycling society that seeks to avoid waste and uses waste as a resource'. It pointed out that although waste prevention has been the primary aim of both national and EU waste management policies for many years, limited progress had been made in terms of action, and EU and

national targets had not been satisfactorily met. The Waste TS concluded that prevention can only be achieved by influencing practical decisions taken throughout a product's life cycle (design, manufacture, provision to the consumer, and use), and that more ambitious waste prevention policies are needed, together with improved knowledge and information to underpin them.

The Waste TS recognised that economic growth, the adoption of best practice by operators, consumer behaviour and social structures also affect levels of waste production.

The Waste TS, however, did not promote the setting of EU waste prevention targets; it suggested that such targets fail to address the complexity of environmental impact (e.g. the weight of waste could be reduced yet the environmental impact could increase). Subsidiarity must also be taken into account; prevention policies need to consider national production and consumption patterns. The Waste TS aimed to create a framework for the development of national policies, and the revised Directive on Waste (2008/98/EC) obliges Member States to develop publicly available waste prevention programmes. Other major policy contributions on this issue include the IPPC Directive and its best available technique reference documents (BREFs), Integrated Product Policy and eco-design initiatives.

The Waste TS stated that the review in 2010 would assess progress on waste prevention policies, and if necessary identify additional measures needed to promote waste prevention and apply life-cycle thinking to waste management and to progress towards a European recycling society.

3.3.2 Prevention in EU legislation

Historically, EU waste legislation was aimed at providing end-of-pipe solutions (recycling, energy recovery and disposal) and included only limited specific references to waste prevention. However, there is now a growing focus on waste prevention. Table 2 sets out explicit references to prevention in existing EU Directives.

In addition the European Commission has launched the European Week for Waste Reduction: running annually until 2011, this LIFE project aims to raise awareness, encourage behaviour change and share good practice. A study is currently underway analysing the need for further support for Member States with regards to waste prevention and their waste prevention programmes.

QUESTIONS FOR DISCUSSION – TOPIC 2 – WASTE PREVENTION

Delivering waste prevention in the EU

1. Do you consider that there have been successes in terms of delivering waste prevention since the adoption of the Waste TS? If so what would you consider to be the key achievements?
2. Do you consider that the Waste TS has helped in promoting concepts of waste prevention?
3. What are the major barriers to promoting and measuring waste prevention and how might these be overcome? Can waste prevention be reconciled with economic growth, and how?

Policy approaches for promoting waste prevention

4. What would be the most effective actions, at EU level, to promote quantitative and qualitative waste prevention?
5. Is it feasible – or even desirable – to set quantitative and/or qualitative waste prevention targets? If yes, for any particular waste streams? If no, what alternative policy approaches might be adopted?
6. What are the best methods and instruments for integrating life-cycle analysis into waste prevention policies?

Table 2 – References to waste prevention in EU law

Legislation	Relevant References
Waste Framework Directive (2008/98/EC)	<ul style="list-style-type: none"> Prevention = reducing the quantity of waste, its adverse environmental and health impacts and the content of harmful substances; Prevention at the top of the waste hierarchy; Commission to publish interim report on the evolution of waste generation and the scope of waste prevention (including product eco-design) and an action plan on EU support to change consumption patterns, by the end of 2011; Waste prevention and decoupling objectives to be set for 2020 by the end of 2014; Member States to establish (by 12 December 2013), national waste prevention programmes (waste prevention objectives, existing prevention measures, qualitative or quantitative benchmarks for waste prevention measures); Commission to publish implementation report, including assessment of existing Member State waste prevention programmes, by 12 December 2014
Batteries Directive (2006/66/EC)	Member States' implementation reports should include developments on measures to promote waste prevention
End-of-Life Vehicles Directive (2000/53/EC)	<ul style="list-style-type: none"> Prevention of waste from vehicles is first priority; in addition reuse, recycling and recovery of ELVs and components should be encouraged to reduce the disposal of waste; Prevention = measures to reduce the quantity and harmfulness of ELVs, their materials and substances; Requires Member States to: encourage vehicle/material manufacturers to limit/reduce hazardous substances in vehicles; encourage design and production processes to facilitate dismantling, reuse, recovery and recycling; encourage manufacturers to integrate an increasing quantity of recycled material in vehicles and other products; Sets strict prohibitions/limits on the use of heavy metals. <p>A forthcoming study for ACEA will indicate that the hazardous substances measures in the ELV Directive have led to manufacturers both inside and outside the EU dramatically reducing their use of hazardous substances (by over 90%) in vehicles, providing an example of how EU targets can drive qualitative prevention even outside the EU.</p>
Mining Waste Directive (2006/21/EC)	Requires Member States to ensure that operators draw up a waste management plan, including the objective of preventing or reducing the production and harmfulness of waste.
Packaging Directive (1994/62/EC)	<ul style="list-style-type: none"> Prevention of production of packaging waste is first priority; Prevention = reduction of the quantity and harmfulness of materials and substances in packaging and packaging waste; Requires Member States to ensure that preventive measures are implemented, e.g. national programmes, producer responsibility projects; Requires the Commission to encourage the development of suitable European standards to minimise the environmental impact of packaging; Requires the Commission (as appropriate) to present proposals for measures to ensure that new packaging is put on the market only if all steps have been taken to minimise its environmental impact; it is for the Member States to enforce this requirement, the Commission provided harmonized standards Commission implementation reports to cover additional prevention measures, possible development of a packaging environment indicator to assist with prevention, packaging waste prevention plans, and efforts to reduce/phase out use of heavy metals and other hazardous substances by 2010.
WEEE Directive (2002/96/EC)	<ul style="list-style-type: none"> Prevention of WEEE is first priority; in addition reuse, recycling and recovery of such wastes to reduce the disposal of waste; Prevention = measures to reduce the quantity and harmfulness of WEEE and materials and substances contained therein.
RoHS Directive (2002/95/EC)	<ul style="list-style-type: none"> Requires Member States to ensure that from 1 July 2006 new EEE does not contain certain heavy metals, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) (with some derogations); Allows for the prohibition of other hazardous substances and their substitution, based on scientific evidence.

1.8 TOPIC 3 - INTERNATIONAL INFLUENCE OF THE EU

3.4.1 Introducing international aspects of waste policy

The Waste TS dedicated a whole section to discussing the international situation in terms of the development of waste management policies both in third countries and at the multilateral level.

Despite this, however, it does not include specific actions in relation to the EU's international activities on waste or its international impacts. This section examines the nature of EU influence over waste management internationally.

3.4.2 Categorising EU policy influence

On the basis of expert input and a review of key dossiers the following three policy areas are considered those where the EU has the greatest potential to influence and improve approaches to waste management globally:

- Shipment of waste – i.e. promoting better practices both in terms of reducing illegal shipments and improving management of materials shipped for recycling or reuse;
- Product standards that might influence the hazardous content of waste; and
- Policies that influence the quantity, quality or use of secondary raw materials.

In these three areas the EU, in particular due to its common market status, has the potential to exert significant influence in terms of improving policy approaches in third countries and reducing the overall footprint associated with the EU's own use of resources.

The analysis to date has identified three different ways in which EU policies act upon international waste management practices. Two of these influences were perceived by consulted experts as positive, while the third was negative (although perhaps offering the opportunity for improved approaches into the future). Table 3 presents the three types of policy influence identified.

Table 3 – Mechanisms by which EU policy can influence waste management activities in third countries

Type of Policy Influence	Description	Evidence	Nature of Impact
Fulfilling leadership role	Adopting ambitious policies to deliver better practice in promoting policy concepts resulting in improved consideration of waste management in some third countries	Stakeholders reported that the EU has had an impact on the broader question of how waste management can be improved. It was considered that the profile of issues such as use of the waste hierarchy and the benefits of improved waste management have been raised as a consequence of EU policy making in this field. Stakeholders commented that the Waste Framework Directive influenced thinking in terms of improving management in the US/Canada/Japan.	Positive
Supporting policy-making in third countries	The adoption of ambitious and effective mechanisms for dealing with problem areas of waste management in Europe leads to the adoption of similar waste laws in third countries	There is extensive evidence of the adoption, in particular, of the product-based recycling legislation by third countries. For example measures similar to or inspired by RoHS/WEEE are reported to have been adopted in Japan, Korea, California, China, Thailand and India. Similar examples of broader adoption of EU policy ideas can be applied to the ELV Directive and the Packaging Directive. Product based Directives apply standards to all imports of a specified good to the EU as well as to EU manufactured products, therefore there is an additional incentive to apply similar rules and requirements in countries for whom the EU represents an important export market.	Positive
Consequences of EU policy-making	Adoption of policies and measures in the EU to reduce disposal of waste leads to increased export of materials for recycling and recovery with the risk that waste is not treated in an environmentally responsible manner	This is a significant concern in terms of the EU's footprint on the global environment, i.e. there is a risk that we are exporting polluting activities. Moreover, there are questions raised, as we push to expand our efforts towards recycling and recovery, as to how we can ensure that this is not at the expense of the environment in third countries. Finally there are concerns that the EU is exporting its material for recycling, resulting in the loss of materials from the EU streams, and that products imported do not sufficiently deliver in terms of recycled content, i.e. completing the recycling loop.	Negative, but potential to alter

From the analysis to date we would anticipate that EU law could influence policy-making in third countries in the following ways:

- EU law is directly copied out into a third country's national law, with the same standards and delivered by the State;
- The EU law inspires similar measures, for example delivered by industry;
- The EU's efforts to address a policy area of concern inspire a third country to tackle an issue as a priority;
- The EU's efforts to prioritise waste management and resource use add to the weight of pressure upon other countries to address their own waste challenges in this field; and/or
- Laws adopted in the EU lead to changes in the consideration of environmental conditions or the use of secondary raw materials in products.

It is anticipated that the rate of adoption of laws similar to or influenced by the EU will depend on the type of relationship between the EU and the third country, for example:

- Whether the third country can be considered an EU neighbour;
- Whether the country is a primary recipient of materials from the EU, for example for processing into secondary raw materials; and/or
- Whether the country is a primary producer of goods for which the EU represents a significant market place.

QUESTIONS FOR DISCUSSION – TOPIC 3 – INTERNATIONAL INFLUENCE OF THE EU

Exporting of waste and associated impacts

1. What factors are contributing to the high levels of waste exports from EU Member States?
2. How do you foresee the generation of waste evolving internationally? What might be the opportunities and challenges associated with this for the EU and its Member States?
3. What are the key tools, at EU and Member State level, for addressing concerns about the EU's footprint in terms of the export of waste for processing and the illegal export of waste?
4. Are EU policies sufficient to influence the closing of the resource loop both in Europe and internationally i.e. while we are generating materials for recycling are we also positively contributing to the development of markets for secondary raw materials?

Influencing waste policy-making internationally

5. In your opinion, are there any interesting developments in waste and recycling policy occurring outside the EU that the EU could learn from?
6. What do you consider to be the key sources of the EU or Member States' international influence on waste management, in particular in relation to spreading environmental standards? And what effect does this have on trade and the international playing field?
7. What mechanisms or methods could the EU adopt to improve approaches to waste management in third countries?

1.9 TOPIC 4 - RECYCLING MARKETS AND THE CREATION OF A RECYCLING SOCIETY

3.5.1 Recycling markets and trade materials for recycling

The Waste TS set as a clear goal the creation of a recycling society in Europe. Key to the delivery of this concept is the need to develop collection schemes that provide quality waste products, and generate markets for the reprocessing of waste and outlets for the secondary raw materials produced.

As levels of recycling in Member States have increased, so too has the export of waste materials to other countries (other Member States or third countries) for reprocessing. Based on figures published by the EEA, total trade in notified waste exports from Member States increased four-fold between 1997 and 2005. This included a significant growth in the volume of non-hazardous waste shipped from the EU to third countries.

The EU's key market for export has been Asia. This export route accounts for the majority of non-EU trade in waste paper and plastics; a trade which expanded five-fold for metals, 10-fold for paper and 11-fold for plastics between 1995 and 2007. In 2007 more plastic waste was shipped to the Asian market by the EU than was shipped within the EU. In addition half of all waste plastics were exported to China and Hong Kong. It should be noted that it is not only the EU that is expanding exports of waste materials; Japan, for example, has shown a general upward trend in exports of iron, steel, copper and plastic waste since 1995.

The shipment of waste raises many questions. It is known that there is a trend towards export; however, there are concerns regarding the reliability of the data on trade. For example Eurostat's information on trade in WEEE and ELVs has been questioned; according to findings by the European Topic Centre on resource and waste management (ETC/RWM), exports of WEEE (estimated at 250,000 tonnes) are considered low compared to total generated levels of WEEE (estimated at 7 million tonnes). There are also known gaps (highlighted by the ETC/RWM) in the figures on the shipment of green list wastes, with data not available for all of the waste product codes in every year, in particular for plastics. Moreover the rate of reported illegal shipments of waste has increased between 2001 and 2005; for this period on average the EEA report that annual illegal shipments are equivalent to 0.2% of notified waste. In terms of environmental protection there is little understanding or information on the consequences associated with the export of waste.

More generally challenges are emerging regarding the promotion of the use of secondary raw materials and closing the loop in terms of the EU's resource use. At present there is little reward for those producers who choose to use secondary rather than primary raw materials. In addition the recent economic crisis led to problems in terms of the market for waste for recycling. Given the international nature of trade some Member States have had problems selling their wastes collected for recycling. This has led to questions over the quality of materials collected for recycling in the EU, and over the long-term reliability of the market place in terms of absorbing ever-expanding levels of materials as the EU pushes towards more ambitious waste goals. A more general question is also being posed by some as to whether the EU should be looking to increase exports of materials for recycling or treating these more as a resource to be utilised locally, in order to limit the EU's broader resource demands.

3.5.2 Delivering an improved basis for recycling

To deliver more effective recycling in the EU and improve the market for secondary raw materials it is necessary to understand what the key barriers might be to the development and success of a recycling society. During the study to support the review of the Waste TS, a literature review has been conducted and experts have been consulted on their views on the barriers to recycling success. This analysis has identified the issues presented in Table 4.

Table 4 – Potential barriers and needs in terms of promoting recycling and the improved use of resources (a basis for further discussion)

Type of barrier	Issues Raised	Needs Identified
Policy	<ul style="list-style-type: none"> Failure to implement existing policies effectively Excessive focus on e.g. national carbon budgets without effective consideration of the effects of the manufacture of primary and secondary materials in third countries 	<ul style="list-style-type: none"> Clear emphasis on targets for waste prevention and reuse Incentives to promote the use of secondary raw materials Greater focus on ecodesign for products, including use of secondary raw materials

	<ul style="list-style-type: none"> • Lack of support from Member States to encourage reuse and waste prevention activities • Lack of systematic reporting on reuse activities • Lack of consideration of the broader sustainability of goods and services, i.e. gaining benefits from using secondary raw materials • Insufficient activity to tackle waste prevention • Lack of incentives to mitigate against the use of cheap raw materials, i.e. supporting the closing of the recycling/reuse loop 	<ul style="list-style-type: none"> • Development of common methods, measurement and indicator systems for waste prevention • Creation of common EU guidance on the quality of recyclates
Technology	<ul style="list-style-type: none"> • Co-mingled waste collection systems producing low quality secondary materials 	<ul style="list-style-type: none"> • More reliable collection systems and more specialised recycling processes
Market	<ul style="list-style-type: none"> • Lack of support for stabilised markets for secondary raw materials • Fear that promoting sales of secondary materials might damage sales of new materials due to competition • Ignorance in terms of the proximity of local markets for resource management acting as a barrier to prevention/reuse activities 	<ul style="list-style-type: none"> • Boosting support for markets for secondary raw materials • Fair access for private sector to waste management contracts
Social	<ul style="list-style-type: none"> • Negative perceptions of the concept of waste management associated with a lack of knowledge regarding how to promote such a society 	<ul style="list-style-type: none"> • Promote behavioural change to encourage reuse and recycling among industry and consumers • Enabling waste prevention actors to reach out to the public • Finance targeted information campaigns and provide financial support to dedicated waste prevention and reuse projects • Promote the exchange of waste management information between countries

QUESTIONS FOR DISCUSSION – TOPIC 4 - RECYCLING MARKETS AND THE CREATION OF A RECYCLING SOCIETY

Delivering a recycling society

1. What would you consider to be the key characteristics of a recycling society? What indicators could be used to assess whether we are moving towards a recycling society?
2. What do you consider to be the key barriers to the further development of recycling markets and a recycling society in the EU?
3. What are the needs in terms of overcoming barriers to recycling markets and a recycling society? Specifically, do you foresee a potential role for the following and if so what might this be: economic instruments (taxes, allowances, credits); product policies (ecolabels, ecodesign, green public procurement); climate policies (comparative advantage for the use of recycled materials); waste policies (end-of-waste criteria for certain waste streams in the Waste Framework Directive); and other policies? Which of these instruments could be addressed by EU policy?

Exporting waste and the implications for resource use

4. How could we link waste and resource policies in order to ensure a secure supply of raw materials whilst limiting negative environmental impacts?

5. What policy mechanisms are available to help reduce the uncertainties associated with the international trade in recyclables and secondary raw materials?
6. What can the EU do to improve understanding of EU exports of waste and their impacts?

FURTHER THOUGHTS AND QUESTIONS

Following the meeting on 22nd June, if you have any further thoughts and issues you wish to raise we would be very interested in hearing your thoughts. In order for these to be taken into account, all comments should be sent to ewatkins@ieep.eu by close of business on Thursday 1 July 2010. We would particularly appreciate your thoughts in response to the following questions:

1. What do you consider to be the key impacts of the Waste TS?
2. If you had a blank page, what would you consider to be the priority next steps to deliver more effective waste management and waste prevention in Europe?
3. What, if any, do you consider to be the key gaps in terms of EU policy on waste management and waste prevention?

We would also welcome any further thoughts or comments on the four issues discussed by the working groups on 22nd June, namely implementation of the Waste TS, waste prevention, the EU's international influence, and the creation of recycling markets.