Overall trends in waste generation and management in Europe

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European Environment Agency
The European Environment Agency

- An EU institution located in Copenhagen since 1994
- Provides information on the state of environment, trends and outlook, to support policy making
- 32 member countries: EU-27, Turkey, Iceland, Norway, Liechtenstein and Switzerland
- 7 cooperating countries in the Western Balkan
Main EEA Activities on Waste

- **Analysis and assessments on waste**
  - State and outlook of the environment report
  - EEA publications on waste
  - Indicators on waste
  - Other analysis on waste (critical metals in WEEE, landfill taxes, transboundary shipments...etc.)

- **Waste policy support**
  - Country fact sheets on waste policies
  - Policy analysis reports
  - Eionet workshops
  - Support European Neighbourhood Countries
  - Support DG Environment and countries on implementation of waste management plans and waste prevention programmes
What is SOER 2010?

Thematic assessments
- Understanding climate change
- Mitigating climate change
- Adapting to climate change
- Biodiversity
- Land use
- Soil
- Marine and coastal environment
- Consumption and environment
- Material resources and waste
- Water resources: quantity & flows
- Freshwater quality
- Air pollution
- Urban environment

Assessment of global megatrends
- Social megatrends
- Technological megatrends
- Economic megatrends
- Environmental megatrends
- Political megatrends

Country assessments
- Country profiles
- National and regional stories

Common environmental themes
- Climate change mitigation
- Land use
- Nature protection & biodiversity
- Waste
- Freshwater
- Air pollution

Each EEA member country (32) and EEA cooperating country (6) assessed all six environmental themes above.
Policy question: Are we reducing the generation of waste?

- Total waste generation in the EU-27, Turkey, Norway, Iceland, Croatia: 2.7 billion tonnes (2008)
- Total municipal waste generation in the EU 27: 252 million tonnes (2010)
- 502 kg/cap municipal waste generation (2010), large differences between countries
- Total hazardous waste generation: 83 million tonnes (2008)
Total Waste Generation in Europe

Source: Eurostat
Generation of Municipal Waste in Europe kg/capita

The chart shows the generation of municipal waste in Europe per capita for the years 2003, 2010, and 2009. Countries on the x-axis are listed in descending order of waste generation. The bars indicate the amount of waste produced per capita, with darker bars representing 2010 and lighter bars representing 2009.
Hazardous Waste Generation in the EU

Million tonnes

EU-15 | EU-12 | EU27 + CH, HR, NO*

*Data for 2007, 2008, 2009 do not include CH, HR, NO

European Environment Agency
Packaging waste generation per capita by country (CSI 017)
Trend in Generation of Packaging Waste in Europe (CSI 017)
The long-term goal is for the EU to become a recycling society, that seeks to avoid waste and uses waste as a resource.

(Thematic Strategy on prevention and recycling of waste, 2005)
<table>
<thead>
<tr>
<th>Category</th>
<th>Year</th>
<th>Recovery targets</th>
<th>Recycling targets</th>
<th>Collection targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging waste</td>
<td>2008</td>
<td>60%</td>
<td>55%</td>
<td></td>
</tr>
<tr>
<td>End-of-Life Vehicles</td>
<td>2006</td>
<td>85% incl. Reuse</td>
<td>80% incl. reuse</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>95% incl. Reuse</td>
<td>85% incl. reuse</td>
<td>100%</td>
</tr>
<tr>
<td>Waste Electrical and Electronic Equipment</td>
<td>2006</td>
<td>70 – 80% (differs acc. to WEEE categories)</td>
<td>50 – 80% incl. reuse (differs acc. to WEEE categories)</td>
<td>Min. 4 kg per inhabitant per year</td>
</tr>
<tr>
<td>Batteries</td>
<td>2012</td>
<td></td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td></td>
<td></td>
<td>45%</td>
</tr>
<tr>
<td>Batteries, lead acid and accumulators</td>
<td>2011</td>
<td></td>
<td>50 – 75% efficiency (different targets for different battery types)</td>
<td></td>
</tr>
<tr>
<td>Tyres</td>
<td>2006</td>
<td></td>
<td></td>
<td>Zero landfill of tyres</td>
</tr>
<tr>
<td>Landfill of biodegradable municipal waste</td>
<td>2006</td>
<td></td>
<td></td>
<td>Reduction to 75% of the amount generated in 1995</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td></td>
<td></td>
<td>Reduction to 50% of the amount generated in 1995</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td></td>
<td></td>
<td>Reduction to 35% of the amount generated in 1995</td>
</tr>
</tbody>
</table>
Recycling Targets, WFD

<table>
<thead>
<tr>
<th>New Targets</th>
<th>2015</th>
<th>2020</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Separate collection: At least for paper, plastic, metal and glass</td>
<td>recycling rates of 50% for household and similar wastes (at least paper, plastic, metal and glass)</td>
<td>70% for construction and demolition waste</td>
</tr>
</tbody>
</table>
Policy question: How far the EU reached to be a recycling society?

- The management of waste has improved, with many countries recycling and recovering more, but more efforts are needed if the EU is to become a 'recycling society'.
- The majority of this waste (45 %) is still sent to landfill, but an increasing amount is recycled (42 %) or incinerated (5 %).
Trend and Outlook of Municipal Waste Management in Europe

The graph shows the trend and outlook of municipal waste management in Europe from 1990 to 2020. The waste is categorized into three main types: recycled or composted, incinerated, and landfilled. The graph indicates a consistent increase in the total waste over the years, with a projection for the future. The data is presented in million tonnes. The European Environment Agency is credited for the imagery.
Average recycling rate of packaging waste in the EU is 61% (CSI 017)
Packaging waste management, EU-15
(CSI 017)
private households collection target: 4 kg per capita per year
Landfill of BMW, 2006 (New indicator)

- **Landfilling of biodegradable municipal waste, 2006**
- **Target 2006**
- **Target 2009**
- **Target 2016**

* country with derogation periods of up to 4 years to achieve the target
Transboundary shipments of waste kg/capita, 2009 (New indicator)

Export

Import
GHG emissions from MSW management decreasing

Million tonnes CO₂-equivalent emissions (+)/savings (−)

Direct emissions
- Recycling
- Incineration
- Landfilling
- Transport

Avoided emissions
- Recycling
- Incineration
- Landfilling

Net GHG emissions
The turnover of seven recyclables has almost doubled from EUR 32.5 billion in 2004 to EUR 60.3 billion in 2008.

Due to the economic downturn, the turnover of recycling declined sharply at the end of 2008 and in the first half of 2009 but seems to have recovered markedly since then.
Persons employed in recycling activities in the EU, Norway and Switzerland per million inhabitants

- Overall employment related to materials recovery in Europe has increased steadily, from 422 inhabitants per million in 2000 to 611 in 2007, which is an increase of 45%.
• Europe lacks geological stocks of these critical metals or has very limited reserves and therefore depends almost entirely on imports.
Summary

- Waste generation is growing or stabilised
- Waste management is improving
- Large differences between countries in Europe
- Transboundary shipments of waste is increasing
- Environmental impacts from waste management is decreasing
- Better waste management also offers social and economic benefits
Thank you for your attention

www.eea.europa.eu

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