

Municipal waste statistics

UNECE/Eurostat/EEA Workshop
on Waste Statistics

11-13 April 2012, Geneva

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Municipal waste statistics

- Why municipal waste
- Background
- Observations on comparability
- Suggestions for improvement
- Dissemination

Municipal waste statistics – why ?

- Municipal waste represents ca. 10 % of total waste
(ca. 30 % of non-mineral waste)

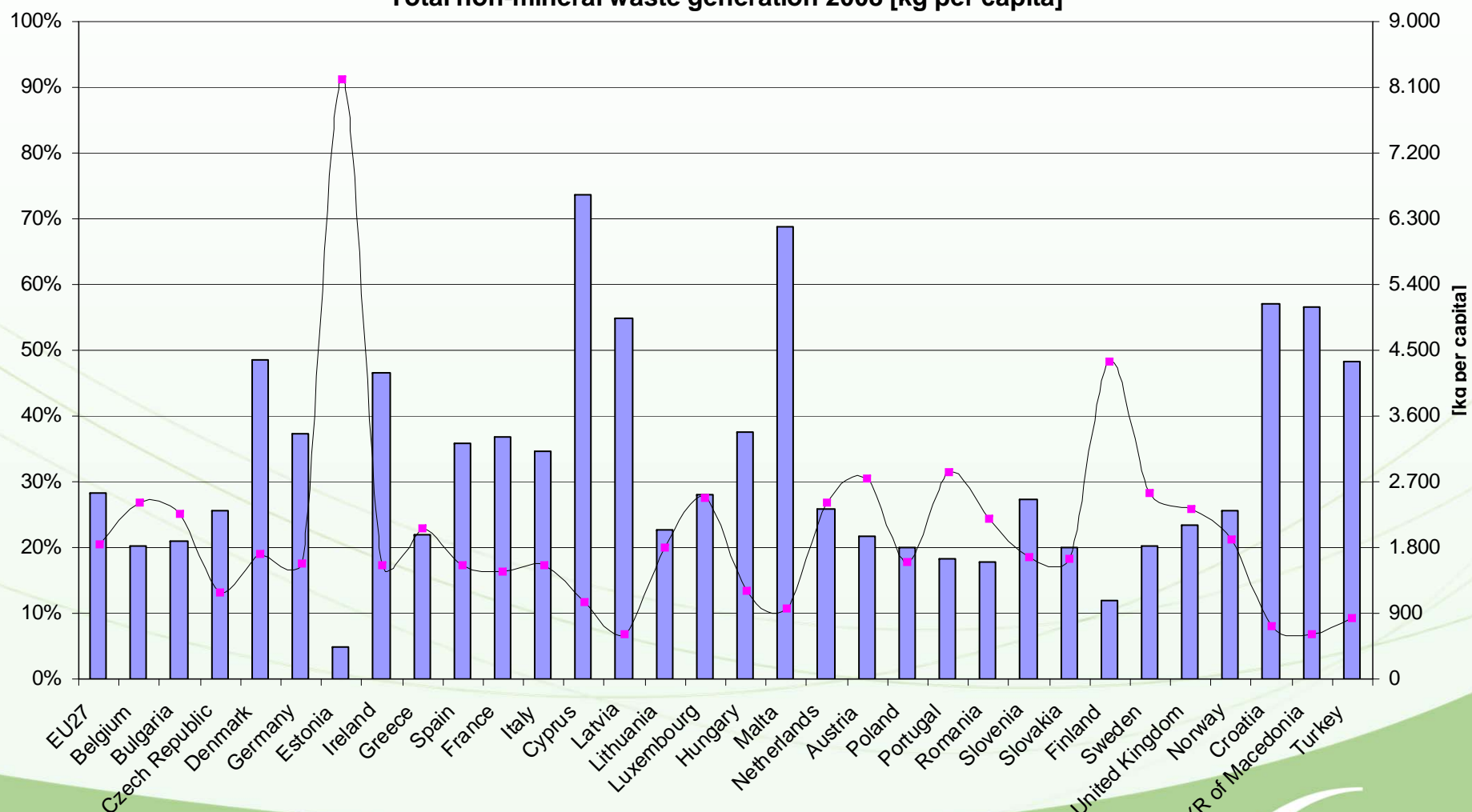
- ...but everybody is concerned
 - ⇒ Households – main generators

 - ⇒ Municipalities – main actors for collection and processing

- Data are needed for planning purposes
 - ⇒ Waste collection and treatment capacities

Municipal waste statistics – why ?

Share of Municipal waste from total non-mineral waste [%] & Total non-mineral waste generation 2008 [kg per capita]



MW share from total waste (non-mineral)
 Total waste (non-mineral)

Municipal waste statistics - background

- From 1988 to 2003 - waste statistics collection based on the OECD / Eurostat Joint Questionnaire on waste
- Since 2004 municipal waste data collection continues based on a subset of the Joint Questionnaire
 - Municipal waste generation and treatment
 - *Incineration (with and without energy recovery)*
 - *Recycling (excluding composting)*
 - *Composting*
 - *Landfilling*
 - Share of population served by MW collection schemes

in kg per capita
and year

Municipal waste statistics

Validation

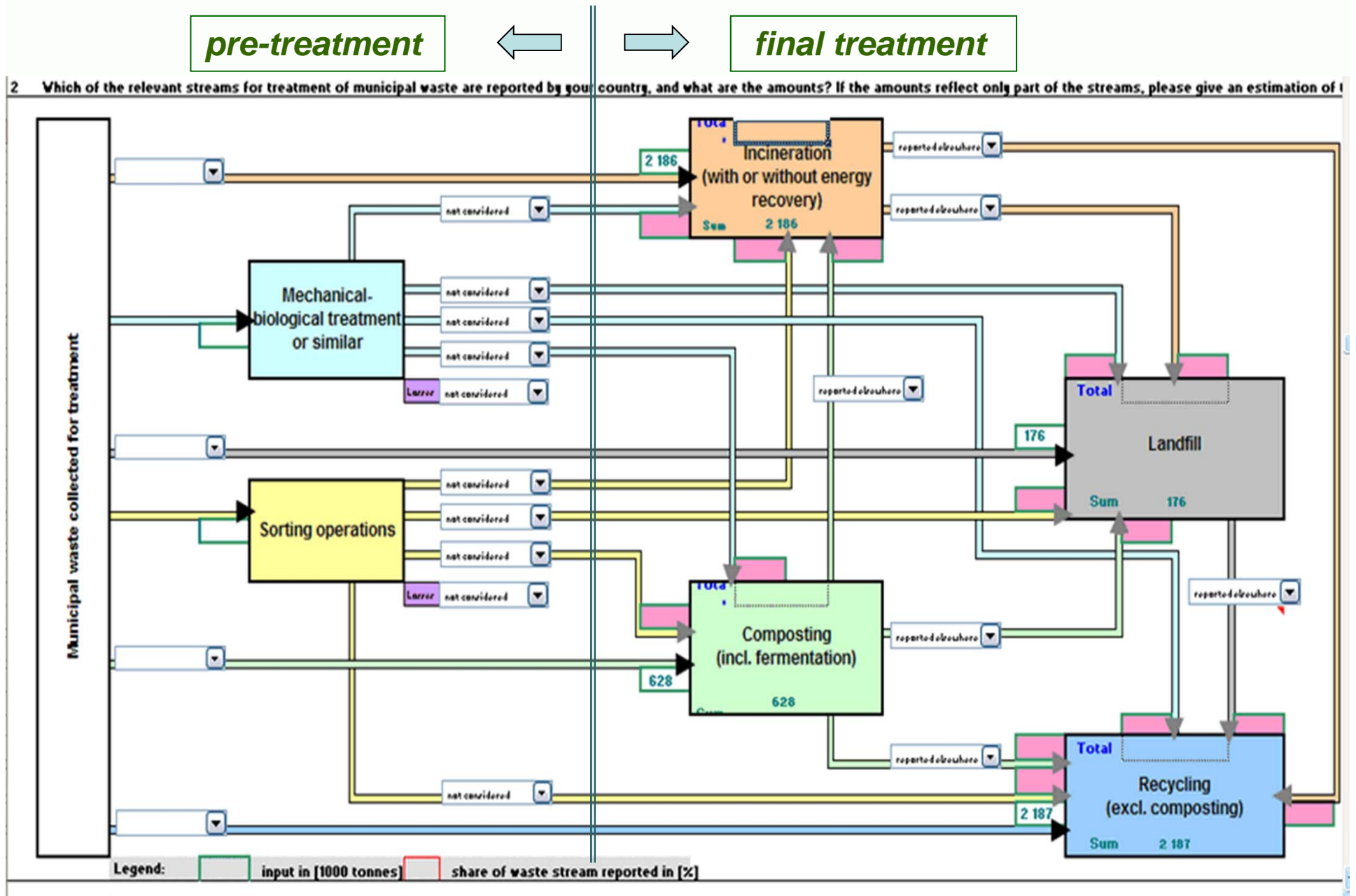
- Comparison over time
 - detect outliers
 - break in series
- Comparison within the dataset
 - waste generation and treatment
- Clarification requests addressed to countries

Municipal waste – observations

- **Comparability across countries still limited**
 - coverage of materials (packaging waste) and sources (commercial waste)
- **Import and export of municipal waste**
 - subtract from / add to figures or not?
- **Exclusion of secondary waste and pre-treatment, but what to observe?**
 - first or last treatment step?
 - how to deal with MBT and sorting?
 - what is current practice?

MBT = mechanical biological treatment

Municipal waste – questionnaire to reporting countries



Municipal waste survey

Mechanical biological treatment and sorting

- Reporting varies, with considerable effect on comparability:

MBT \Rightarrow allocation to one treatment category leads to overestimation in this category (e.g. incineration, composting)

Sorting \Rightarrow complete allocation to recycling leads to overestimation of the recycling rate

Municipal waste survey

Export / import and coverage of waste materials

- A minority of countries include imports and exports in their data
 - ⇒ exclusion of exports for recycling leads to an underestimation of recycling rates

- What is included in municipal waste?
 - ⇒ separately collected fractions are often excluded for methodological reasons (e.g. packaging waste)

Municipal waste workshop - guidance

- Working definition on municipal waste and guidance on data collection
 - i. Contains a discussion on the available municipal waste definitions
 - ii. Describes the scope and coverage of municipal waste treatment
- Summarises the suggestions for reporting on municipal waste generation and treatment

Municipal waste workshop - guidance

- Working definition – including a discussion on the available municipal waste definitions
 - ⇒ The most comprehensive definition on municipal waste is the one of the OECD/Eurostat joint questionnaire on waste
 - ⇒ It is suggested to apply this definition

Municipal waste workshop – UNECE definition

Municipal waste, collected by or on behalf of municipalities, by public or private enterprises, **includes:**

■ Waste originating from

- *households, commerce and trade, small businesses, office buildings and institutions (schools, hospitals, government buildings).*

■ It also includes:

- *bulky waste (e.g. white goods, old furniture, mattresses); and*
- *waste from selected municipal services, i.e. waste from park and garden maintenance, waste from street cleaning services (street sweepings, the content of litter containers, market cleansing waste), if managed as waste.*

■ The definition excludes:

- *waste from municipal sewage network and treatment,*
- *municipal construction and demolition waste.*

Municipal waste workshop – addition in JQ

- It includes collected waste from these sources:
 - *door-to-door through traditional collection (mixed household waste),*
 - *fractions collected separately for recovery operations (through door-to-door collection and/or through voluntary deposits).*
- The definition also includes waste from the same sources and similar in nature and composition which:
 - *are collected directly by the private sector (business or private non-profit institutions) not on behalf of municipalities (mainly separate collection for recovery purposes),*
 - *originate from rural areas not served by a regular waste service, even if they are disposed by the generator.*

Illustration of municipal waste coverage

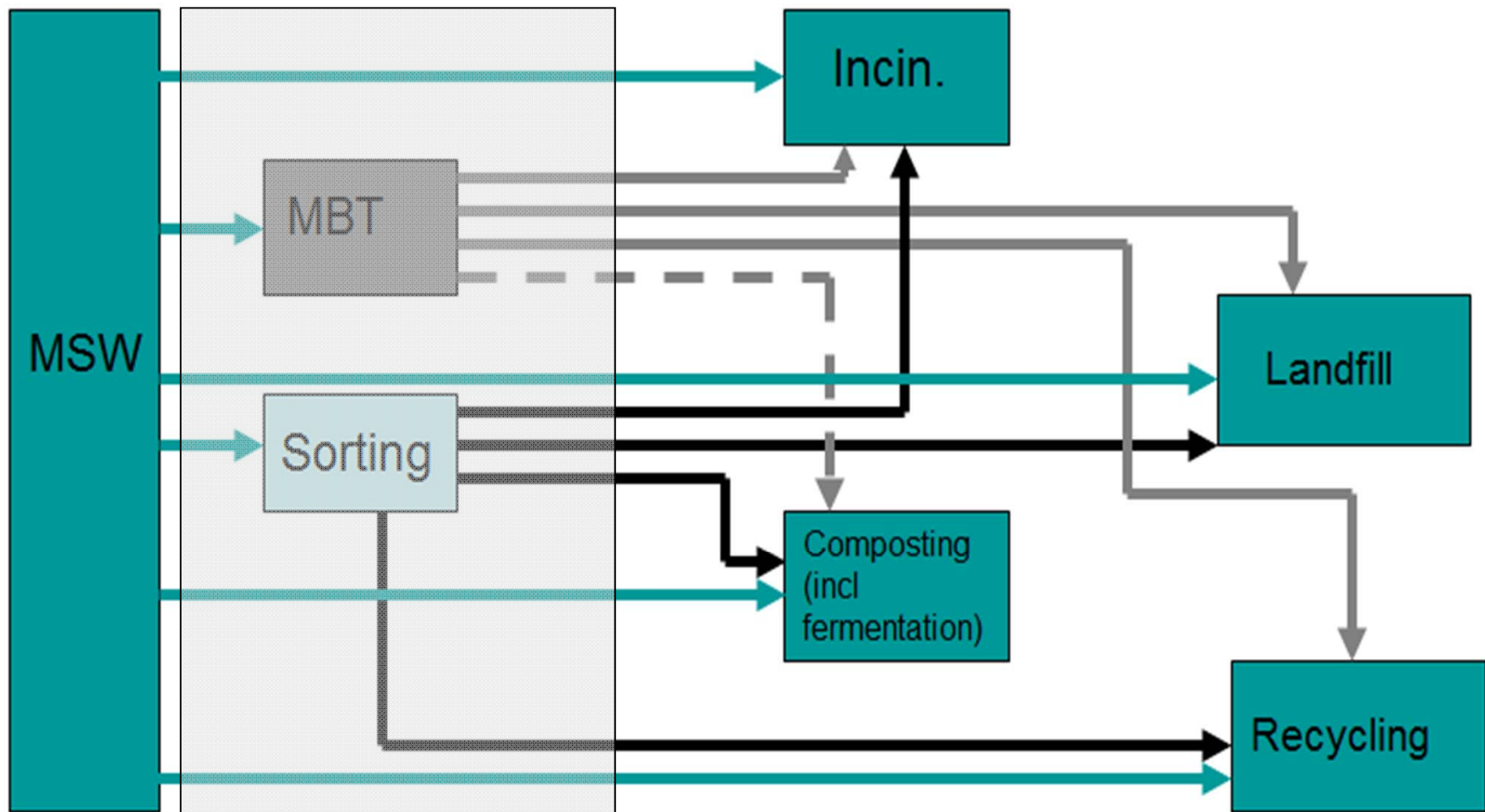
Waste	hazard	01 - 02 / A01-A03	03 /B	04 - 13 / C10-C33	14 /D	15 -16 / E36-E39	17 /F	18 /G- U_X_G46 77	19 / G4677	20 / EP_HH	20 / HH, share by EWC-Stat
08.41 - Batteries and accumulators wastes	NHAZ							8		10	0.0%
08.41 - Batteries and accumulators wastes	HAZ							9		11	0.0%
09 (not 9.11, 9.3) - Animal and vegetal wastes	NHAZ							11		14	9.4%
09.11 - Animal waste of food preparation and products	NHAZ										
09.3 - Animal faeces, urine and manure	NHAZ										
10.1 - Household and similar wastes	NHAZ	6	7	7	7	8	7	13	6	16	68.1%
10.2 - Mixed and undifferentiated materials	NHAZ							11		10	2.7%
10.2 - Mixed and undifferentiated materials	HAZ							6			0.0%
10.3 - Sorting residues	NHAZ										
10.3 - Sorting residues	HAZ										
11 (not 11.3) - Common sludges (excluding dredging spoils)	NHAZ									6	0.1%
11.3 - Dredging spoils	NHAZ										
12.1 to 12.5 (not 12.4) - Mineral wastes	NHAZ							6		10	2.2%
12.1 to 12.5 (not 12.4) - Mineral wastes	HAZ										0.0%
12.4 - Combustion wastes	NHAZ										
12.4 - Combustion wastes	HAZ										
12.6 - Contaminated soils and polluted dredging spoils	HAZ										
13 - Solidified, stabilised or vitrified wastes	NHAZ										
13 - Solidified, stabilised or vitrified wastes	HAZ										
total - Total Waste	TOTAL										100%

Legend and Notes:

	6 to 9
	10 to 13
	>13

Municipal waste workshop - guidance

Scope and coverage of municipal waste treatment



Municipal waste workshop - guidance

■ Scope and coverage of municipal waste treatment

Guiding principles on data collection

- ⇒ Reporting should be done on the **input** the four treatment categories (landfill, incineration, recycling and composting)
- ⇒ For sorting and MBT, the **outputs** shall be allocated to these four above treatment categories
- ⇒ Secondary wastes from the above four treatment operations shall not be considered



Municipal waste

Compiling agency: Eurostat, the statistical office of the European Union

Eurostat metadata

Reference metadata

- [1. Contact](#)
- [2. Metadata update](#)
- [3. Statistical presentation](#)
- [4. Unit of measure](#)
- [5. Reference period](#)
- [6. Institutional mandate](#)
- [7. Confidentiality](#)
- [8. Release policy](#)
- [9. Frequency of dissemination](#)
- [10. Dissemination format](#)
- [11. Accessibility of documentation](#)
- [12. Quality management](#)
- [13. Relevance](#)
- [14. Accuracy and reliability](#)
- [15. Timeliness and punctuality](#)
- [16. Comparability](#)
- [17. Coherence](#)
- [18. Cost and burden](#)
- [19. Data revision](#)
- [20. Statistical processing](#)
- [21. Comment](#)

For any question on data and metadata, please contact: [EUROPEAN STATISTICAL DATA SUPPORT](#)

1. Contact

[Top](#)

1.1. Contact organisation	Eurostat, the statistical office of the European Union
1.2. Contact organisation unit	Unit E3: Environmental and Forestry Statistics

- End of life vehicles (ELVs)
- Hazardous waste
- Packaging waste
- Waste electrical and electronic equipment (WEEE)
- ▼ Waste management
 - Waste treatment
 - Recycling
 - Landfill
- ▼ Sectors
 - Municipal waste**
 - Commercial and industrial waste
 - Construction and demolition waste
 - Waste from mining and quarrying
- Legislation
- Reporting 2011
- Reporting 2012
- Methodology
- ▼ Publications
 - Statistical books
 - Scientific and technical reports
 - Statistics in focus

Table Graph Map

2.2.8-r1822-2012-04-02 (PROD) Online support Legal Notice

eurostat

Municipal waste generation and treatment, by type of treatment method

kg per capita

Waste generated

Code: tsdpc240

 Municipal waste consists to a large extent of waste generated by households, but may also ... [more](#)

 wst_oper Waste generated Flags Codes Labels Codes & Labels

geo	time	2005	2006	2007	2008	2009	2010
EU (27 countries)		516	522	523	520	510	502
Euro area (16 countries)		546	553	556	555	549	542
Belgium		479	483	495	489	489	466
Bulgaria		475 ⁱ	461 ⁱ	433 ⁱ	474 ⁱ	470	410
Czech Republic		289	296	293	305	316	317
Denmark		736	740	790	830	762	673 ^e
Germany		565	564	582	589	592	583 ^e
Estonia		436	399	449	391	346	311
Ireland		731	794	780	729	662	636
Greece		437	442	447	452	457	457 ^s

:=not available b=break in series i=see metadata e=estimated s=Eurostat estimate

Source of Data: Eurostat

[Footnote](#)

Municipal waste landfilled

- Bulgaria** The landfill site in Sofia was closed between October 2005 and December 2007. This lead to temporary storage of collected municipal waste in these years amounting to shares from the MW generated between 2.5% (2005) and 10% (2006, 2007). These amounts are included in the figures for MW generated and caused a drop in MW landfilled in 2006 and 2007
- Denmark** Ban on landfilling of waste suitable for incineration since 1 January 1997 (Source: Danish Environment Protection Agency, 2005: Waste Statistics 2003 Environmental Review No.4 2005).
- Germany** Ban on landfilling of organic waste since 1 June 2004 (Source: Abfallablagungsverordnung vom 20. Feb. 2001 (BGBl. I S. 305)).
- Estonia** 2001 introduction of new waste classification.
- Italy** Includes landfilling of residues from other treatment operations.
- Latvia** The break in the time series from 2002 onwards is due to the use of a new data source.
- Lithuania** From 1999 the decrease in the amount of waste can be explained by modernisation of the dumping grounds; therefore, waste is now weighted, while previously its weight was estimated approximately according to volume
- Hungary** From 2000, improved data quality due to weighting of the waste amounts in the treatment sites.
- Malta** Increased amounts of landfilling in 2007 due to refurbishment of recycling and composting facilities of the solid waste treatment plant which started in the course of 2007.
- Netherlands** Lower amounts of landfilling since 2003 due to new legislation which bans direct

Publications

- Statistical books
- Scientific and technical reports
- Statistics in focus

	2007	2008	2009	2010
Ireland	731	794	780	729
Greece	437	442	447	452

:=not available b=break in series i=see metadata e=estimated s=Eurostat estimate

[Footnote](#)

treatment method

Code: tsdpc240

may also ... [more](#)

Flags Codes Labels Codes & Labels

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	523	520	510	502
	556	555	549	542
	495	489	489	466
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	293	305	316	317
	790	830	762	673 ^e
	582	589	592	583 ^e
	449	391	346	311
	449	391	346	311

Source of Data: Eurostat

Thank you for your attention

More information is available on the
Data centre waste website:

<http://ec.europa.eu/eurostat/waste>

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