

# European waste statistics

UNECE/Eurostat/EEA Workshop  
on Waste Statistics

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*Karin Blumenthal*

# European waste statistics – structure of presentation

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- Eurostat - general & legal setup
- Cooperation
- Objective of the waste statistics regulation
- Structure of datasets
- Validation routines
- Dissemination

# Eurostat – the general & legal setup

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- **The Statistical Office of the European Union**
- **A Directorate-General of the European Commission**
- **Legal framework - „European Statistical Law“**  
(Regulation EC 223/2009 of the European Parliament and of the Council)
  - statistical governance and quality principles
  - European Statistical System (ESS): NSI + all national authorities developing, producing and disseminating official statistics
- **Individual statistical laws for various domains**
  - e.g. Regulation 2150/2002/EC on waste statistics

# European waste statistics – cooperation

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## Partner in European Union

- DG Environment ⇒ *Policy monitoring*
- European Environment Agency ⇒ *Policy assessment*
- DG Joint Research Centre ⇒ *Research/Studies*
- DG ESTAT ⇒ *Data provider*

## International coordination

- OECD
- United Nations (UNSD, UNEP, FAO, ...)

# European waste statistics – monitoring of EU

## waste policy

### Data sets collected by Eurostat

Waste statistics based on Regulation 2150/2002/EC	Municipal waste	End-of-life vehicles Packaging waste WEEE (waste from electronic electrical equipment) Waste shipments Batteries (from 2013 onwards) Monitoring recycling targets on household waste and C&D waste
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*on behalf of DG Environment*

# European waste statistics

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## ■ Objectives – Waste Statistics Regulation

- Regular Community statistics on the production and management of waste from businesses and private households are required by the Community for monitoring the implementation of waste policy
- The Regulation on waste statistics creates the framework for the production of Community statistics on the generation, recovery and disposal of waste

# Waste Statistics Regulation

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## ■ The framework in 9 Articles

- Objectives (Article 1), Definitions (2), Data collection (3), Transitional period (4), Import and export of waste (5), Implementation measures (6), Committee procedure (7), Report (8) and the Entry into force of the Regulation (9)

## ■ ...the details in the Annexes

- **Annex I on waste generation**
- **Annex II on waste recovery and disposal**
- Annex III on the waste statistical nomenclature

# Waste Statistics Regulation – Annex I

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## Matrix structure for waste statistics reporting

### ■ Waste generation

- Breakdown by economic activity and households (based on NACE Rev 2 classification)
- Breakdown by waste type (EWC-Stat Rev 4, aggregating the waste categories of the European list of waste based on material types)



# Reporting structure – waste generation (Annex I)

## Data set 1

Waste	NACE	haz	01-02/ A	03 / B	04 - 13 / C	14 / D	...	20 / EP_HH	Total
01.1 - Spent solvents		haz							
02 - Chemical preparation wastes		haz							
03.1 - Chemical deposits/residues		nhaz							
....									
05 - Health care /biological wastes		haz							
06 - Metallic wastes		haz							
07.1 - Glass wastes		haz							
07.2 - Paper / cardboard wastes		nhaz							
07.3 - Rubber wastes		nhaz							
07.4 - Plastic wastes		nhaz							
08 - Discarded equipment		nhaz							
08.1 - Discarded vehicles		haz							
...		haz							
<b>Total Waste</b>									

51 waste categories = 36 haz and non-haz, 3 haz, 12 non-haz

# Waste Statistics Regulation – Annex II

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## Matrix structure for waste statistics reporting

### ■ Waste recovery and disposal

- by waste category  
(EWC-Stat Rev 4, aggregating the waste categories of the European List of Waste)
- by treatment operation  
(aggregating disposal and recovery operations of Annex I and Annex II – WFD)

### ■ Waste treatment infrastructure

# Reporting structure – waste treatment (Annex II)

## Data set 2

Description	H a z	Incineration		Recovery	Disposal	
		(R1)	(D10)	(R2 - R11)	(D1, D3 - D5, D12)	(D2, D6, D7)
01.1 - Spent solvents	H					
02 - Chemical preparation wastes	H					
03.1 - Chemical deposits/residues						
....						
05 - Health care /biological wastes						
06 - Metallic wastes						
07.1 - Glass wastes						
07.2 - Paper / cardboard wastes						
07.3 - Rubber wastes						
07.4 - Plastic wastes						
08 - Discarded equipment						
08.1 - Discarded vehicles						
...						
<b>Total</b>						

# Reporting structure – Facilities (Annex II)

## Data set 3

	1		2		3		4										
Treatment	Energy		Waste		Recovery		Landfilling										
categories	recovery		incineration		(R2-R11)		(D1, D5, D12)										
	(R1)		(D10)		3a	3 b	haz waste			non-haz waste			inert waste			landfills total	
Regions, NUTS 2 level	no. of facilities	cap.	no. of facilities	cap	no. of facilities	no. of facilities	no. of facilities	rest	closed	no. of facilities	rest	closed	no. of facilities	rest	closed	no. of facilities	rest
		t/a		t/a				cap			m <sup>3</sup>			m <sup>3</sup>			m <sup>3</sup>
Region 1																	
Region 2																	
Region 3																	
...																	
....																	
...																	
National total																	



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on Waste**

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Batteries

Biowaste

End of life vehicles (ELVs)

Hazardous waste

Packaging waste

Waste electrical and  
electronic equipment (WEEE)

## ▼ Waste management

Waste treatment

Recycling

Landfill

## ▼ Sectors

Municipal waste

**Methodology**

 ● **Waste statistics**

Manual on Waste Statistics - A handbook for data collection on waste generation and treatment ( updated version published 2 February 2011)

Supplement to the Manual on Waste Statistics - Definition and explanation of relevant EWCStat categories

In order to produce comparable and reliable data on waste generation and treatment a common understanding of waste classification is necessary. The present guidance document shall support the producers of statistical data to apply the statistical waste nomenclature EWC-Stat in correct way.

Reference Metadata Structure (ESMS)

Guidance for reporting on sludges : wet / dry conversion

Guidance on waste incineration statistics

**Links**

Eurostat partners in the "Group of 4"

European Environment Agency

Joint Research Centre

Directorate General for the  
Environment

**Countries**

National Statistical offices

**International organisations**

OECD

UNCEEA

# Quality Report

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## ■ Commission Regulation 1445/2005/EC

*defining the proper quality evaluation criteria and the contents of the quality reports for waste statistics*

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:229:0006:0012:EN:PDF>

## ■ Part 1 – general description of methods applied

- Survey
- Administrative source
- Modelling
- Others

More information on quality reports:

[http://cybernews.eurostat.cec/1-whoswho/dir\\_list/B/1/QualityStatGovernance.cfm](http://cybernews.eurostat.cec/1-whoswho/dir_list/B/1/QualityStatGovernance.cfm)

# Quality Report - Commission Regulation 1445/2005/EC

## ■ Part 2 – Report on quality attributes

1 Relevance

2 Accuracy

2.1 Sampling errors

2.2 Non-sampling errors

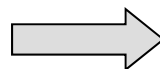
3 Timeliness and punctuality

4 Accessibility and clarity

5 Comparability

6 Coherence

7 Burden on respondents



Coverage

Measurement

Processing

Non-response

Model assumption

There is a QR template:

[http://circa.europa.eu/Public/irc/dsis/pip/library?l=/wastesstatistics/regulat/data\\_transmission&vm=detailed&sb=Title](http://circa.europa.eu/Public/irc/dsis/pip/library?l=/wastesstatistics/regulat/data_transmission&vm=detailed&sb=Title)

# European waste statistics – validation

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## ■ Feedback on data delivery to countries within 2 months – short and standardised

1. Completeness of data sets
2. Completeness of the quality report
3. Timeliness
4. Proper application of definitions and classifications
5. Sound statistical methods

Other observations (Missing flag, Estimation flag)



# European waste statistics – detailed validation 1

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## ■ Within the WStatR data sets:

- ⇒ Comparison with previous years (significant changes)
- ⇒ Comparison across countries (outliers)
- ⇒ Generation vs. treatment vs. treatment capacity

## ■ By using other reference variables (proxies):

- ⇒ population
- ⇒ employees
- ⇒ Value added

# European waste statistics – detailed validation 2

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## ■ With other waste data

- ⇒ Municipal waste
- ⇒ Packaging waste
- ⇒ End of life vehicle
- ⇒ WEEE
- ⇒ Transboundary shipments (Basel Convention data)

# European waste statistics – detailed validation 3

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## ■ Validation process further includes:

- ⇒ Requests to countries for clarification and /or revision
- ⇒ (retrospective) Data revisions
- ⇒ Improvement of validation routines
- ⇒ Documentation of correspondence with countries

# European waste statistics

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## ■ Potentially problematic waste streams

Mining waste and Construction & demolition waste

- ⇒ Huge masses of material have to be moved / handled  
*high impact on waste statistics*
- ⇒ Varies from unpolluted soil to hazardous waste
- ⇒ Waste may be stored for a long time before being recovered or disposed of
- ⇒ Infrastructure projects have a high impact on the generation of this wastes, statistics varies

## Waste generation and treatment

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](#)
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- [17. Coherence](#)
- [18. Cost and burden](#)
- [19. Data revision](#)
- [20. Statistical processing](#)
- [21. Comment](#)

# European waste statistics – data centre on waste

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## Dissemination in 2011/12:

- Key waste streams in **Eurobase**: Eurobase tables, TGM
- A series of '**Statistics Explained**' articles published:
  - Waste statistics
  - Waste shipment statistics
  - Recycling – secondary material price indicator
  - Municipal waste statistics
  - Packaging waste statistics
  - Greenhouse gas emissions from waste disposal
- **2 Statistics in Focus**: Generation and treatment of waste in Europe 2008  
... of municipal waste – 2009
- **Commission Report** (COM(2011) 131 final) on waste statistics and their quality <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52011DC0131:EN:NOT>
- **3 News releases**:
  - 1800 kg of non-mineral waste per capita [...]
  - 25% Recycling of municipal waste [...]
  - 40% Landfill of municipal waste [...]



Introduction - Microsoft Internet Explorer provided by European Commission

http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/introduction

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**Environmental Data Centre on Waste**

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**Introduction**



**The main objectives of the Data Centre on Waste**

- Provide robust data, indicators and other relevant information for the assessment of policy effectiveness;
- Manage data, perform quality assurance, and coordinate data and information managed by other bodies (Directorate General for the Environment, Eurostat, Joint Research Centre, European Environment Agency, other EU institutions, international organisations such as OECD and UN etc.);
- Be the central entry point for reporting of data under Community legislation on waste;
- Be the reference point for answering specific policy questions related to (statistical) information on waste and the associated environmental impacts;
- Develop and coordinate the necessary methodologies to produce statistical data, information and indicators on the environmental impacts of waste generation and waste management taking a life cycle perspective, in cooperation with the Go4 partners.

**Information about progress in the stepwise implementation of the Waste Data Centre**

**See also**

- **Statistics Explained**  
Your guide to European waste statistics
- **Demo tours**  
Instructions to use the data explorer (making and completing an extraction ...)

**Links**

Eurostat partners in the "Group of 4"

- European Environment Agency
- Joint Research Centre
- Directorate General for the Environment

Done

Local intranet 100%

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  - Database**
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    - Construction and demolition waste
    - Waste from mining and quarrying
  - Legislation
  - Reporting 2011
  - Reporting 2012

### Database



Regulation (EC) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics (Waste Statistics Regulation) came into force on 29 December 2002. The Regulation establishes a framework for the production of Community statistics on the generation, recovery and disposal of waste.

The Regulation was designed after careful consideration of the complexities and difficulties of producing waste statistics.

The Eurostat dissemination database (EUROBASE) 'Database' contains the full range of public data available at Eurostat. They are presented in multi-dimensional tables with multiple selection features and export formats.

EUROBASE has been updated with the 2009 data concerning the generation and treatment of waste. 2009 data is available for the 27 European Union Member States and Croatia, Turkey and Norway. To access the data please click on the icons below. The complete statistical database is accessible by clicking on the icon.

- Waste statistics (env\_was)
  - Waste generation and treatment (env\_wasgt)
    - Generation of waste (tonnes, kg per person) (env\_wasgen)
    - Treatment of waste (tonnes) (env\_wastrt)
    - Non-mineral waste generation (env\_wasnmin)
  - Waste streams (env\_wasst)
    - Packaging waste (env\_waspac)
    - Waste Electrical and Electronic Equipment (WEEE) (env\_waselee)
    - End-of-life vehicles: Detailed data (env\_waselv)
    - End-of-life vehicles: Reuse, recycling and recovery, Totals (env\_waselvt)
    - Municipal waste (env\_wasmun)
    - Hazardous waste generation by economic activity (env\_washaz)
    - Regional generation and treatment of municipal waste (1 000 t) (env\_rwas\_gen)
    - Regional coverage rate of municipal waste collection (%) (env\_rwas\_cov)



# Thank you for your attention

More information is available on the  
Data centre waste website:

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

and on Circa:

<http://circa.europa.eu/Public/irc/dsis/envirmeet/library>

[Karin.blumenthal@ec.europa.eu](mailto:Karin.blumenthal@ec.europa.eu)