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# REGIONAL WORKSHOP ON EUROPEAN WASTE MANAGEMENT REPORTING

## WASTE DATA & STATISTICS FOR REPORTING IN EUROPE

Webex, 21 February 2023

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## OVERVIEW

- EU waste reporting obligations
- Latest developments in waste statistics
- Data transmission to Eurostat
- Waste Statistics Regulation (2150/2002/EC)
- Waste-related indicators: overview
- Eurostat Environmental Data Centre on Waste
- Eurostat Dissemination Database

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## REPORTING ON WASTE STATISTICS - EU

- **Statistics are compiled on the following topics:**
  - Waste generation and treatment
  - Management of waste
  - Shipment of waste between countries
- **Key waste streams:**
  - Batteries (BATT)
  - End of life vehicles (ELV)
  - Hazardous waste (HW)
  - Municipal waste (MW)
  - Food waste
  - Packaging and packaging waste
  - Annual consumption of lightweight plastic carrier bags
  - Waste electrical and electronic equipment (WEEE)
  - Waste oils
  - Waste excluding major mineral wastes

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## REPORTING ON WASTE STATISTICS - EU

### Legislation (revised - Circular Economy Package)

- Waste Framework Directive (WFD) 2008/98/EC → 2018/851/EC
- Waste Statistics Regulation (WStatR) 2150/2002/EC
- Packaging and packaging waste Directive (PPWD) 94/62/EC → 2018/852/EC
- End of Life Vehicles Directive (ELV) 2000/53/EC → 2018/849/EC
- Waste Electrical and Electronic Equipment Directive (WEEE) 2012/19/EC → 2018/849/EC
- Batteries Directive (BATT) 2006/66/EC → 2018/849/EC
- Landfill Directive 1999/31/EC → 2018/850/EC
- Waste shipment Regulation (WSR) 1013/2006/EC

### European Strategy for Plastics

- Single Use Plastics Directive (SUP) 2019/904/EC

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## DATA TRANSMISSION TO EUROSTAT QUESTIONNAIRE, QUALITY REPORT TEMPLATE, GUIDANCE

Information is available on the Eurostat-  
website:

<https://ec.europa.eu/eurostat/web/waste/methology>

- [Guidance document\(s\)](#)
- [Questionnaire for reporting and methodology/quality report](#)
- [Data transmission via eDAMIS](#)

The screenshot shows the Eurostat website interface for the 'ANNUAL REPORTING ON FOOD WASTE AND FOOD WASTE PREVENTION' questionnaire. The page is titled '2020 DATA COLLECTION' and features a 'GETTING STARTED' section. A dropdown menu for country selection is visible, along with a 'Reference year' field set to '2020'. A message states 'The due date for reporting is 30 June 2022'. Below this, there is a question: 'Who is the primary contact point for the data collection "Annual reporting on food waste and food waste prevention" in your country?'. Fields for 'Name', 'Institution', 'Unit', 'Telephone', and 'Email address' are provided. A note at the bottom of the form reads: 'Eurostat would be grateful if you could send us the completed questionnaire ahead of the deadline.' The navigation bar at the bottom includes links for 'COVER', 'INDEX', 'Basic instructions', 'Methodology', 'Validation rules', and 'GETTING STARTED'.

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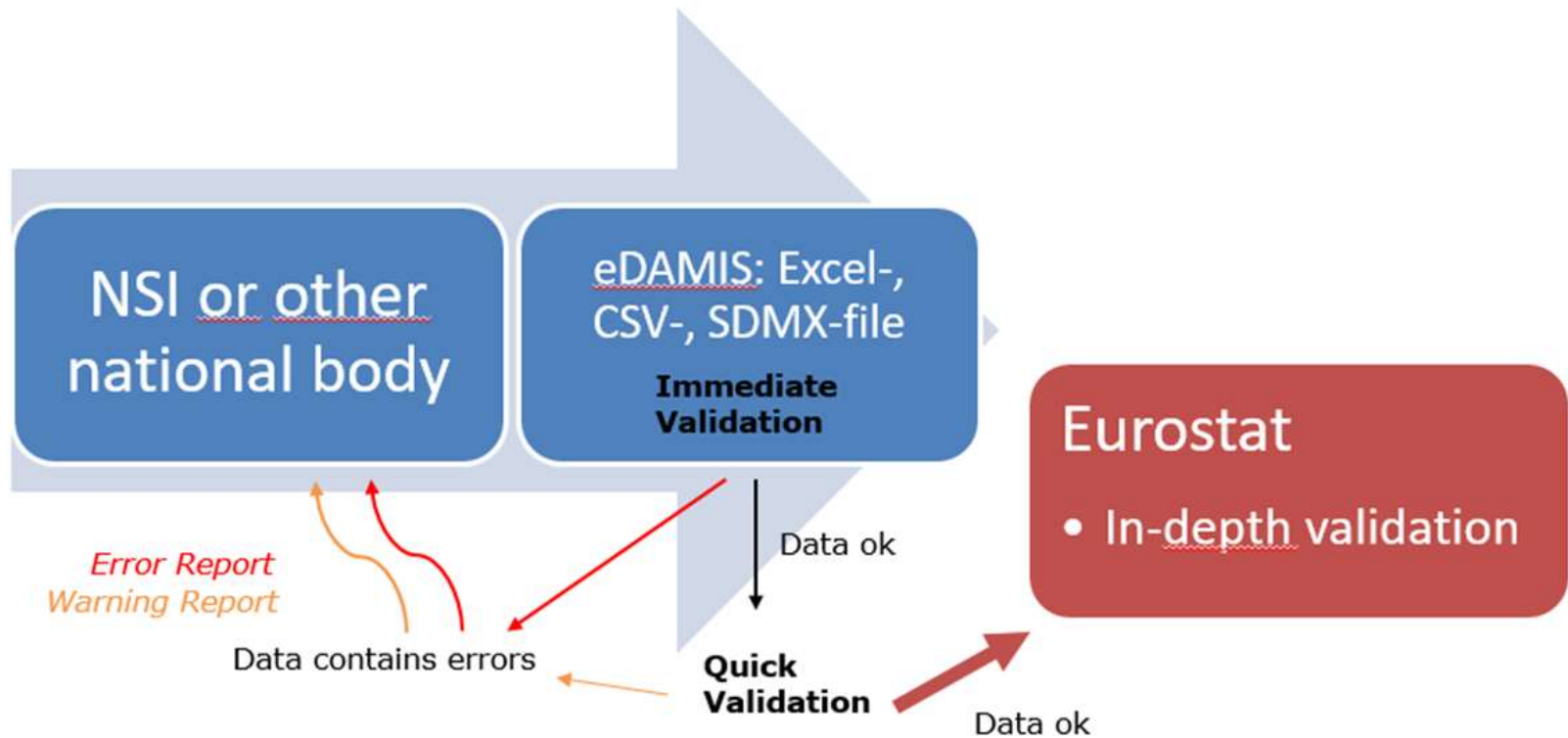




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## DATA TRANSMISSION TO EUROSTAT



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# WASTE STATISTICS REGULATION (2150/2002/EC)

## Legal Framework

- WStatR is embedded in European waste legislation:
  - **Waste Framework Directive (2008/98/EC) (WFD)**
    - Waste definition
    - Definition of waste treatment (→ recovery, disposal, waste treatment operations, ...)
    - Definition of hazardous waste
  - **List of Wastes (Commission Decision 532/2000/EC) (LoW)**
    - Basis for the statistical waste nomenclature EWC-Stat
  - **Landfill Directive (1999/31/EC)**
    - Definition of landfills
  - **Industrial Emission Directive (2010/75/EC)**
    - Definition of incineration

## Structure of Waste Statistics Regulation

- WStatR main text:
  - Definitions, methods for data collection, implementation measures, ...
- Annex I:
  - Generation of waste
- Annex II:
  - Recovery and disposal of waste
  - Treatment infrastructure (number, capacity of treatment facilities)
- Annex III:
  - Table of Equivalence between statistical waste nomenclature EWC-Stat and European List of Waste (LoW): e.g.

### **08.1 Discarded vehicles**

#### *08.12 Other discarded vehicles*

##### *0 Non-hazardous*

*16 01 06 end-of-life vehicles, containing neither liquids nor other hazardous components*

##### *1 Hazardous*

*16 01 04\* end-of-life vehicles*



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## WASTE STATISTICS REGULATION (2150/2002/EC)

### Methods for data compilation

- The WStatR does not prescribe a specific method for data collection but allows the countries to choose within a broad spectrum of methods.
- Article 3(1) WStatR specifies that the following methods may be applied:
  - Surveys
  - Administrative or other sources
  - Statistical estimations
  - Combinations of the above methods

### EWC-Stat: Statistical waste nomenclature

- EU has established two waste classifications:
  - **European List of Wastes (LoW)** (Commission Decision 2000/532/EC)
    - Mandatory classification for administrative purposes, e.g. for permits of waste treatment installations, for notification of hazardous waste...
  - **Statistical Waste Classification EWC-Stat**
    - Defined in Annex III of the WStatR
    - Mandatory for statistical reporting

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## WASTE STATISTICS REGULATION (2150/2002/EC)

### Unit of measure

- Waste generated and treated shall be reported in tonnes of **normal wet weight**, without decimals
  - Normal wet weight means the state / the condition in which the waste is produced / actually arises
- Exceptions: The following waste categories shall be reported in **dry matter**:
  - Industrial effluent sludges (EWC-Stat 03.2)
  - Sludges and liquid waste from waste treatment (EWC-Stat 03.3)
  - Common sludges (EWC-Stat 11)
  - Dredging spoils (EWC-Stat 12.7)

### Reporting

- Data have to be compiled for every second year (even years)
- Data shall be transmitted within 18 months after the end of the reference year
- Data quality shall be specified in a quality report

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## SUMMARY OF WSTATR REPORTING REQUIREMENTS

Data set (Description, no., code)	Waste generation 1 (GEN)	Waste treatment 2 (TRT)	Treatment infrastructure and collection 3 (FAC)
Characteristics:	Waste generated	Waste treated	No. and capacity of treatment installations
Breakdown by:	18 economic sectors (NACE) 1 sector 'households'	6 waste treatment categories	5 waste treatment categories
No of waste categories (EWC-Stat):	51	51	Not applicable
Reporting units:	tonnes	tonnes	tonnes/year m <sup>3</sup>
Geographical level:	national	national	NUTS 2
Legal basis:	Annex I	Annex II	Annex II

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# WASTE STATISTICS REGULATION

## SET OF DELIVERABLES – WASTE GENERATION (EXAMPLE)

Set 1. Waste generation by waste category (EWC-STAT) and economic activities (NACE), tonnes/year

Waste item	activity item number		hazardous	Dry	1 01_03	2 04_09	3 10_12	4 13_15	5 16	6 17_18	7 19	8 20_22	9 23	10 24_25	11 26_30	12 31_33	13 34_35	14 36+37+39	15 38	16 41_43	17 ex-cluded	18 46.77	19 HH	TA Total		
	NACE Rev. 2 →																									
	Code	Description																								
1	01.1	Spent solvents	H																							
2	01.2	Acid, alkaline or saline wastes																								
3	01.2	Acid, alkaline or saline wastes	H																							
4	01.3	Used oils	H																							
5	01.4, 02, 03.1	Chemical wastes																								
6	01.4, 02, 03.1	Chemical wastes	H																							
7	03.2	Industrial effluent sludges		T																						
8	03.2	Industrial effluent sludges	H	T																						
9	03.3	Sludges and liquid wastes from waste treatment		T																						
10	03.3	Sludges and liquid wastes from waste treatment	H	T																						
11	05	Health care and biological wastes																								
12	05	Health care and biological wastes	H																							
13	06.1	Metallic wastes, ferrous																								
14	06.2	Metallic wastes, , non-ferrous																								
15	06.3	Metallic wastes, mixed ferrous and non-ferrous																								
16	07.1	Glass wastes																								
17	07.1	Glass wastes	H																							
18	07.2	Paper and cardboard wastes																								
19	07.3	Rubber wastes																								
20	07.4	Plastic wastes																								
21	07.5	Wood wastes																								
22	07.5	Wood wastes	H																							
23	07.6	Textile wastes																								
24	07.7	Waste containing PCB	H																							
25	08 (excl. 08.1, 08.41)	Discarded equipment (excl. discarded vehicles, batteries/accumulators)																								

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## WASTE STATISTICS REGULATION

### DATA COLLECTION ON **WASTE GENERATION**

#### Legal requirements:

- Statistics on waste generation shall be compiled for:
  - Waste from all economic activities (NACE Rev 2)
  - Waste from households
  - Waste from waste treatment operations (secondary waste)
- Waste that is internally recycled is excluded from reporting
- Statistics on waste generation cover all waste that is generated within the country
- Statistical units: local units (LU) or kind-of-activity units (KAU)

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## WASTE STATISTICS REGULATION DATA COLLECTION ON **WASTE GENERATION**

- Data on waste generation can be collected or derived from different data sources
- Data may be collected from
  - waste generators
  - waste collectors and transporters
  - waste treatment facilities
- In many countries, data from different sources are combined.

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## WASTE STATISTICS REGULATION DATA COLLECTION ON WASTE GENERATION

### Data collection directly from waste generators

- Data collection from generators is mostly designed as sample survey
  - sample surveys are often stratified by size of the companies and by activities
  - exclusion of small companies falling below defined thresholds (e.g. no. of employees)
- Advantages:
  - direct collection of the information on waste generation
  - reliable information on waste generating activity (NACE)
- Disadvantages:
  - high number of reporting units ⇒ high burden for enterprises and the institution in charge of data collection
  - questionable data quality because of limited waste expertise of the staff

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## WASTE STATISTICS REGULATION DATA COLLECTION ON WASTE GENERATION

### Data from collectors / transporters

- Approach:
  - usually full survey on licensed collectors / transporters
  - often combined with data collection from waste treatment facilities
- Advantages:
  - limited number of reporting units
  - good data quality expected due to educated staff
- Disadvantages:
  - possible double-counting if transported several times

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## WASTE STATISTICS REGULATION DATA COLLECTION ON WASTE GENERATION

### Data from waste treatment facilities

- Approach:
  - usually full survey covering licensed treatment facilities
- Advantages:
  - low number of reporting units
  - good data quality expected due to educated staff
- Disadvantages:
  - poor information on the waste generating activity (NACE)
  - waste streams of different origin get mixed in the course of collection and pre-treatment
  - treated amounts may include imported waste that shall not be counted as generated in the country
  - Data collection misses exported waste

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## WASTE STATISTICS REGULATION DATA COLLECTION ON **WASTE TREATMENT**

### Legal requirements:

- Statistics on waste treatment have to be compiled for all recovery and disposal facilities which run any of the operations referred to in **Section 8(2), Annex II**
  - Waste that is internally recycled is excluded from reporting
  - Pre-treatment activities are excluded (e.g. MBT, CP, sorting, temporary storage)
  - Statistics on waste treatment cover all waste that is **treated within the country**:
    - Includes waste that is imported for treatment but generated elsewhere
    - Excludes waste that is exported for treatment
- Collection of waste treatment data focusses on the final destination of the waste
- Where waste is pre-treated, the first treatment step is not covered by the waste treatment data
- **Different data coverage than on waste generation!**

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## WASTE STATISTICS REGULATION DATA COLLECTION ON **WASTE TREATMENT**

### General considerations:

- The most important requirement for comprehensive and reliable data on waste treatment is a complete, accurate and up-to-date **waste facility register**
- **Data collection is efficient** as the number of reporting units is low compared to surveys on waste generators
- **Treatment facilities** are **often unique** with regard to the waste types treated, their capacities, the technology applied; inference from a sample is hardly possible
- **Statistics on waste treatment** are usually based on total surveys which only exclude small facilities
- Treatment facilities are subject to a **strict supervision** which enhances the availability of administrative data

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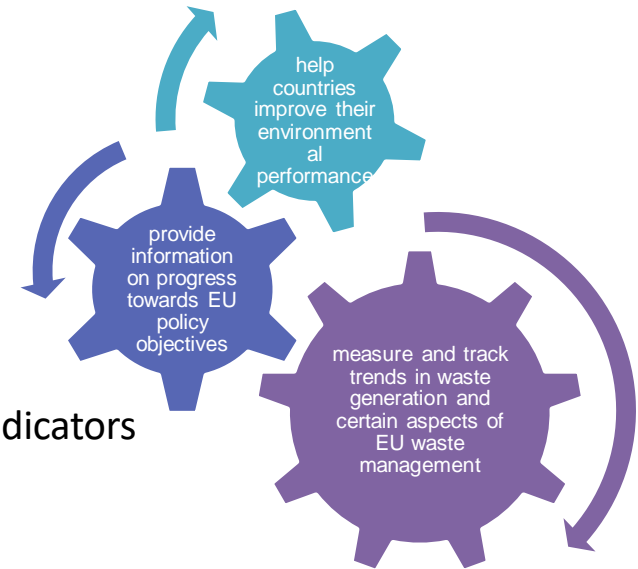
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## WASTE-RELATED INDICATORS

### Eurostat indicator sets which include waste indicators

- Sustainable Development Goals (SDGs) indicators
  - EU SDG monitoring indicator set -> 100 indicators, 2 waste indicators
- Resource efficiency indicators (REI)
  - Monitoring framework for the EU strategy „Roadmap to a resource-efficient Europe“ (part of Europe 2020 strategy)
  - Theme „Transforming the economy“ includes 4 waste indicators
- Circular Economy Indicators (CEI)
  - Monitoring framework for the „Circular Economy Action Plan“ (adopted in March 2020) -> 11 waste indicators



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## EUROSTAT ENVIRONMENTAL DATA CENTRE ON WASTE

- Eurostat produces regular statistics on waste generation and treatment for the whole economy and on specific waste streams

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

DIRECT ACCESS TO...

			
Complete database	Selected tables	Indicators by topic	Information on data
			
Publications	Statistics Explained	Methodology	Legislation
			
Policy context	Targets	Links to further information	Reporting

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## EUROSTAT DISSEMINATION DATABASE

- regularly updated with the most recent data on the generation and treatment of waste
- provides statistics collected under the Waste Statistics Regulation as well as data collected for key waste streams under thematic reporting obligations on waste
- Data is usually available for the 27 European Union Member States and Turkey and Norway

<https://ec.europa.eu/eurostat/data/database>



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# EUROSTAT DISSEMINATION DATABASE

## Tables on EU policy

- ZIP Circular economy indicators
  - ZIP Production and consumption (cei\_pc)
  - ZIP Waste management (cei\_wm)
    - ZIP Recycling rate of municipal waste (cei\_wm011)
    - ZIP Recycling rate of all waste excluding major mineral waste (cei\_wm010)
    - ZIP Recycling rate of packaging waste by type of packaging (cei\_wm020)
    - ZIP Recycling rate of e-waste (cei\_wm050)
    - ZIP Recycling of biowaste (cei\_wm030)
    - ZIP Recovery rate of construction and demolition waste (cei\_wm040)

## ZIP Sustainable development indicators (Information note)

- ZIP Goal 11 - Sustainable cities and communities (sdg\_11)
  - ZIP Overcrowding rate by poverty status (sdg\_11\_10)
  - ZIP Population living in households considering that they suffer from noise, by poverty status (sdg\_11\_20)
  - ZIP Settlement area per capita (sdg\_11\_31)
  - ZIP People killed in road accidents (source: DG MOVE) (sdg\_11\_40)
  - ZIP Exposure to air pollution by particulate matter (source: EEA) (sdg\_11\_50)
  - ZIP Recycling rate of municipal waste (sdg\_11\_60)
  - ZIP Population living in a dwelling with a leaking roof, damp walls, floors or foundation or rot in window frames of floor by poverty status (sdg\_01\_60)
  - ZIP Population connected to at least secondary waste water treatment (sdg\_06\_20)
  - ZIP Share of busses and trains in total passenger transport (sdg\_09\_50)
  - ZIP Population reporting occurrence of crime, violence or vandalism in their area by poverty status (sdg\_16\_20)

## ZIP Europe 2020 indicators

- ZIP Resource efficiency indicators (t2020\_r)
  - ZIP Lead indicator (t2020\_rl)
  - ZIP Dashboard indicators (t2020\_rd)
  - ZIP Transforming the economy (t2020\_rt)
    - ZIP Turning waste into a resource (t2020\_rt1)
      - ZIP Generation of waste excluding major mineral wastes (t2020\_rt100)
      - ZIP Landfill rate of waste excluding major mineral wastes (t2020\_rt110)
      - ZIP Recycling rate of municipal waste (t2020\_rt120)
      - ZIP Recycling rate of e-waste (t2020\_rt130)
    - ZIP Supporting research and innovation (t2020\_rt2)
    - ZIP Getting the prices right (t2020\_rt3)
  - ZIP Nature and ecosystems (t2020\_rm)
  - ZIP Key areas (t2020\_rk)

## Tables by themes

- Waste (t\_env\_was)
  - Waste generation and treatment (t\_env\_wasgt)
    - ZIP Generation of waste by economic activity (ten00106)
    - ZIP Generation of waste by waste category (ten00108)
    - ZIP Waste generated by households by year and waste category (ten00110)
  - Waste streams (t\_env\_wasst)
    - ZIP Generation of waste excluding major mineral wastes by hazardousness (sdg\_12\_50)
    - ZIP Landfill rate of waste excluding major mineral wastes (t2020\_rt110)
    - ZIP Recovery rates for packaging waste (ten00062)
    - ZIP Recycling rates for packaging waste (ten00063)
    - ZIP Recycling rate of municipal waste (t2020\_rt120)
    - ZIP Recycling rate of e-waste (t2020\_rt130)

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# EUROSTAT DISSEMINATION DATABASE - EXAMPLE

## Municipal waste by waste management operations

online data code: ENV\_WASMUN last update: 17/02/2023 23:00 view: DEFAULT

source of data: Eurostat

Selection  Format

Row

Geopolitical entity (reporting) [39/39] Time [10/27]

39 values displayed

Column

10 values displayed

Drag and drop here for breakdowns

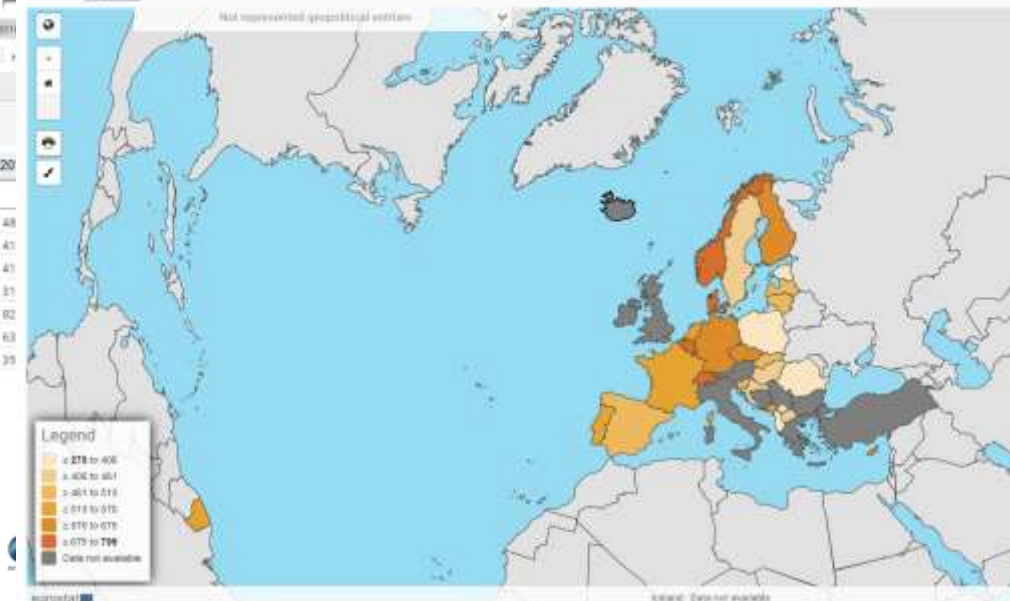
Drag and drop

Time frequency: Annual

Municipal waste by waste management operations (online data code: ENV\_WASMUN) Source of data: Eurostat

Table Line Bar Map

	TIME	2012	2013	2014	2015
<b>GEO</b>					
European Union - 27 countries (from 2020)		458	479	479	48
Belgium		445	436	425	41
Bulgaria		469	432	442	41
Czechia		388	387	318	31
Denmark		808	813	808	82
Germany (until 1990 former territory of the FRG)		615	615	631	63
Estonia		288	293	357	35
Ireland		585		582	59



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