

Streamlining of Environmental indicators

**EXPERT GROUP MEETING ON THE REVISION OF THE FRAMEWORK FOR
THE DEVELOPMENT OF ENVIRONMENT STATISTICS (FDES)**

New York, 8-10 November 2010

STATISTICS DIVISION - UNITED NATIONS

Christian Heidorn, Eurostat, Environment statistics

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- Objectives
- Results from 2007 - 2008 project
- 2010 - 2011 project, current status
- The way forward

Background:

Go4 - Technical arrangement of Nov. 2005

"Eurostat will take the lead on a joint EEA/ESTAT/ENV inventory of the various indicator sets and the streamlining exercise. DG ENV and JRC will contribute to this work, which needs to take full account of the specific needs of different users".

***Group of Four, Go4**

EEA = European Environment Agency

ESTAT = Eurostat

ENV = Directorate General for the Environment of the European Commission

JRC = Joint Research Centre of the European Commission

Why?

■ Many indicator “owners”

- Give different names to the same indicator
- Use Meta-data differently
- Present indicators in very different ways
- Do not coordinate indicator production well
(= data collection)
- ... or often just do not know

See example:

Background (3): Example: Municipal waste

Environmental Data Centre on Waste

Municipal waste

Municipal waste generated, kg per capita (Structural Indicator)

Municipal waste consists of waste collected by or on behalf of municipal authorities and disposed of through the waste management system. The bulk of this waste stream is from households, though "similar" wastes from sources such as commerce, offices and public institutions are included. The "Structural Indicator" on municipal waste consists of a set of three indicators: municipal waste -generated, -landfilled and -incinerated, presented in kg/person.

See also: Treatment of municipal waste

See also: News - Eurostat newsrelease N°43/2010

Further down you find additional statistics presented in

Link to fullscreen

Municipal waste generated - [tsdpc210]
kg per capita

This indicator presents the amount of municipal waste generated.

Key policy question

Waste prevention: are we reducing the generation of municipal waste?

Key message

The generation of municipal waste per capita in western European countries has stabilised since 2000, although the EU27 average has increased slightly over the same period.

MEASURING PERFORMANCE

- Environmental performance can be assessed against national objectives and international agreements such as OECD Decisions and Recommendations and the Basel Convention (1989).
- The indicators presented here relate to amounts expressed per capita and per unit of activity, and changes since 1980 and 1990. [Data source: ...]
- When interpreting these indicators, it should be noted that they are first approximations of potential environmental pressure. These indicators should be read in conjunction with information on levels and patterns.

MONITORING TRENDS

Key assessment

Country	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
EU-27	490	495	498	500	502	504	506	508	510	512	514	516	518	520	522	524	526	528	530	532	534	536	538	540	542	544	546	548	550

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OECD

Municipal

United Nations Statistics Division

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ENVIRONMENTAL INDICATORS

Waste last update: August 2009

Municipal waste collection

Percentage of Total Population Served by Municipal Waste Collection

Country	Year available	Municipal waste collected (1000 tonnes)	Population served by municipal waste collection (%)	Municipal waste collected per capita served (kg)
Albania	2005	634	77.0	265
Algeria	2003	8 500	80.0	333

Objectives:

“Streamlining”

- **means** *(simplified; a long and detailed list of recommendations exists)*
 - The same indicators should have the same name
 - Get the names / labels right (use correct label across indicator sets)
 - Use *as far as possible* a common presentation concept for indicators and meta-data (fact-sheets)
 - Agree on responsibilities and avoid multiple reporting for the same indicators
 - Eliminate redundant indicators
 - Make the process and results transparent, on the web

Results from 2007-2008 project:

Inventory and methodology

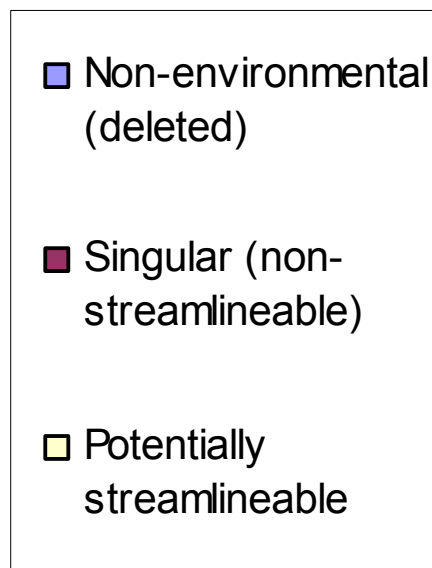
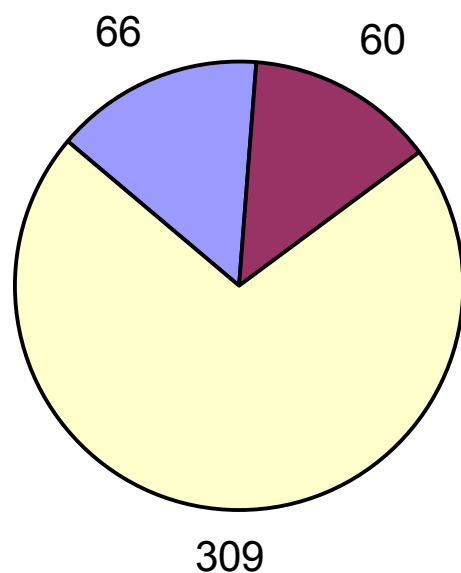
• A list of environmental indicators from 11 sets :

1. **AEI** (Agri-Environmental Indicators, ex-IRENA - Indicators Reporting on the Integration of Environmental Concerns into Agriculture Policy, EEA and Eurostat)
2. **KEI** (Key- environmental indicators, OECD)
3. **CEI** (... and Core-environmental indicators, OECD)
4. **CSI** (Core Set of Indicators, EEA)
5. **EERM** (Indicators of environmental integration of the energy sector, EEA)
6. **EPI** (Environmental Pressure Indicators, Eurostat and DG Environment)
7. **SDI** (Sustainable Development Indicators, Eurostat)
8. **SEBI 2010** (Streamlining European 2010 Biodiversity Indicators, EEA)
9. **SI** (Structural indicators, Eurostat), will become EUROPE 2020 indicators
10. **ISD** (Indicators of Sustainable Development, UNCSD)
11. **TERM** (Transport and Environment reporting System, Eurostat, DG Transport, DG Energy, EEA)

Results from 2007-2008 project (2):

Inventory and methodology

- **435** Indicators
 - Eliminate non-purely environmental Indicators – 66
 - Eliminate “non-streamlineable” Indicators – 60



Results from 2007-2008 project (3):

Inventory and methodology

- **309** “streamlineable” indicators
 - put in order, set a framework – 48 “clusters”
 - a (long) list of recommendations
 - discussed and agreed by ‘Go4’ - Steering Committee
 - this was only a start ...

Results from 2007-2008 project (4):

Inventory and methodology

Cluster n°	Domain	Sub-domain	N° of indic.	Cluster n°	Domain	Sub-domain	N° of indic.						
1	Agriculture	Agri-env. commitment	2	25	Waste	Hazardous waste	6						
2	Cluster n°	Domain	Cluster(s) name	n° of indic.	SI	SDI	AEI	SEBI	EPI	CSI	ISD	CEI	KEI
3	1-2-3-5	Agriculture	Agri-environmental management	8		2	3	1	1			1	

Cluster 33 Material use

	Streamlinable indicators	To be streamlined with	Coding
HIGH POTENTIAL FOR STREAMLINING			
1		Resource productivity	SDI-tdpc100
2	Resource productivity		SI - en 60
3	Domestic material consumption		ISD 46
4	Material intensity of the economy		ISD 45

Total number of streamlinable indicators: 4/4

Cluster n°	Domain	Sub-domain	N° of indic.	SI	SDI	AEI	SEBI	EPI	CSI	ISD	CEI	KEI
26-24-25-27	Waste	Municipal waste	17		3			5	1	4	3	
28-30	Biodiversity	Industrial waste, recycling, hazardous waste and radioactive waste	21	1	2	2	8		2	4	1	1
29 (TERM 7)	Biodiversity	Species and habitats indicators	11	1	1		2	1	1	3	1	
31 (TERM 5)	Land	Protected areas	6				1			1		
32 (TERM 3)	Land	Fragmentation	17		1	5		2	1	4	1	
33	Materials	Land use	6	1	3					2		
35-36	Forests	Material use	9		2		2	2		1	1	1
37-38	Fish. and Marine	Timber and forest resources	11	1	2		2	1	2	2		1
39 (TERM 9)	Marine	Fisheries and marine trophic index	5					1				
40 (TERM 2)	Transport	Oil discharges and spills	13	2	4					2		
41 (TERM 6)	Transport	Modal split – passenger and freight	16	2	3				2			
42-43	Waste and Water	Volume – passenger and freight	15		2	4		2	2	2	2	2

Example:

Streamlining municipal waste

Indicator owner	Eurostat	Eurostat	EEA	OECD
Framework	SI (tsien120)	SDI (tsdpc210)	CSI (016)	KEI/CEI
Indicator name	MW generated		MW generation	MW generation (intensities)
Same definition?	x		x	x
Measurement unit	kg/cap,a		kg/cap,a	kg/cap,a kg/1000 USD PFC
Data provider/source	Eurostat		Eurostat	OECD/Eurostat
Indicator production	Eurostat		?	?
Metainformation	Reference Metadata ESME Eurostat Quality Profiles		CSI	OECD
Geographical coverage	EU, TR, IS, NO, CH		EU,HR,TR,IS,NO,CH Different aggregates	OECD countries
Publication of data	NewCronos		EEA-website	OECD reports

2010 - 2011 project, current status:

Project team... and expected results

- Umweltbundesamt Austria

- **Task I: Recommendations for streamlining of European environmental indicators**

- **Task II: Practical implementation of**

Presentation of interim results from the first year:

Workshop 22 – 23 February 2011

INDICATOR FACT SHEET

1. ID of the indicator

SDI tsdpc210

2. Title of the indicator

Municipal waste generated

3. Indicator owner(s)

Institution:

Contact person:

4. Definition of indicator

This indicator presents the amount of municipal waste collected by or on behalf of municipal authorities and disposed of through landfill, or through incineration with or without energy recovery. The bulk of this waste stream is from households, though similar wastes from sources such as commerce, offices and public institutions are included. (New Cronos: [Short description of indicator](#))

The definition of municipal waste includes:

- mixed household waste,
- fractions collected separately for recovery operations,
- bulky waste,
- waste from selected municipal services, i.e. waste from park and garden maintenance, waste from street cleaning.

Municipal waste excludes:

- waste from municipal sewage network and treatment,
- municipal construction and demolition waste. (OECD/Eurostat Joint Questionnaire)

5. Operational details

The quantity of waste generated

INDICATOR FACT SHEET

1. ID of the indicator

KEI 4

2. Title of the indicator

Municipal waste generated

3. Indicator owner(s)

Institution:

Contact person:

4. Definition of indicator

The indicators present the amount of municipal waste generated internally in the country in 2006, and related to the population of the country.

In general, municipal waste is generated from households, offices and public institutions and disposed of through landfill, or through incineration with or without energy recovery. The definition of municipal waste includes:

5. Operational details

- kg per person
- kg per person
- developed

INDICATOR FACT SHEET

1. ID of the indicator

SI - tsien130

2. Title of the indicator

Municipal waste by type of treatment

3. Indicator owner

Institution:

Eurostat, Unit E-3 Environment Statistics

Contact person:

Hartmut Schroer

Unit E-3 Environment Statistics

Phone: + 352 4301-35433

estat-waste-statistics@ec.europa.eu

4. Definition of indicator

The indicator presents the amount of municipal waste collected by or on behalf of municipal authorities and disposed of through landfill, or through incineration with or without energy recovery. The bulk of this waste stream is from households, though similar wastes from sources such as commerce, offices and public institutions are included. (New Cronos: [Short description of indicator](#))

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Landfill is defined as deposit of waste into or onto land; it includes specially engineered landfills and temporary storage of over one year on permanent sites. The definition covers both landfill in internal sites (i.e. where a generator of waste is carrying out its own waste disposal at the place of generation) and in external sites. (Eurostat ESMS)

INDICATOR FACT SHEET

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This indicator presents the amount of municipal waste generated or on behalf of municipal authorities and disposed of through the waste management system. The bulk of this waste stream is from households, though similar wastes from sources such as commerce, offices and public institutions are included. For areas not covered by a municipal waste scheme an estimation has been made of the amount of waste generated. (Eurobase, Short description of indicator)

The definition of municipal waste includes:

- mixed household waste
- fractions of household waste
- bulky waste
- waste from commerce
- waste from offices
- waste from public institutions

Municipal waste generated

- waste from households
- municipal waste

5. Operational

The quantity of waste

INDICATOR FACT SHEET

INDICATOR FACT SHEET

1. ID of the indicator

European Commission
eurostat

Statistics Explained

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- Title of the indicator**
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- Indicator owner**
Institution: Eurostat, Unit E-3 Environment Statistics
Contact person: Hartmut Schroer
Unit E-3 Environment Statistics
Phone: + 352 4301-35433
estat-waste-statistics@ec.europa.eu
- Definition of indicator**
This indicator presents the amount of municipal waste generated. It consists of waste collected by or on behalf of municipal authorities and disposed of through the waste management system. The bulk of this waste stream is from households, though similar wastes from sources such as commerce, offices and public institutions are included. For areas not covered by a municipal waste scheme an estimation has been made of the amount of waste generated. (Eurobase, Short description of indicator)

The definition of municipal waste includes:

search

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navigation

- Home
- Statistical themes
- Categories
- Help

links

- Europa
- Eurostat
- Eurostat data
- EU Bookshop
- Contact Eurostat

toolbox

- What links here
- Related changes
- Special pages
- Permanent link
- PDF version

in other languages

- English

create a book

- Add this page
- Help

The way forward:

The Website – “Indicator clearing house”

• Task III: Preparation of ‘Indicator Clearing House’ web-site

- Information on (European and international) environmental indicator activities
- “Registration” functionality for indicator projects
- Present results from streamlining project
- To be placed on the Eurostat homepage

The Website – “Indicator clearing house”

- Home
- Statistiken
- Veröffentlichungen
- Über Eurostat
- Hilfe

 **Datenbank**

 **Veröffentlichungs-kalender**

Am meisten besuchte Datenbank-Tabellen

- > In PPS pro-Kopf-PI
- > Reale BIP-Wachstum
- > Gesamtbevölkerung
- > Arbeitslosenquote
- > Beschäftigungsquot
- > Die Inflation (monat
- > (Jährliche) Inflation

Ausgewählte Stati

- > Strukturindikatoren
- > Euroindikatoren/WE
- > Indikatoren für nac
- Entwicklung
- > Finanzstatistiken de
- Staat
- > Preis (HVPI)

Ausgewählte Veröffentlichungen

- > Eurostat Jahrbuch
- > Europäische Unternehmen (EN)
- > Jahrbuch der Regionen

Neueste Pressemitteilungen Pressezentrum | RSS 

€	11.06.2010	EU27 verzeichnet Leistungsbilanzdefizit von 23,4 Mrd. Euro
€	04.06.2010	BIP in der Eurozone und in der EU27 um 0,2% gestiegen
€	03.06.2010	Absatzvolumen im Einzelhandel sowohl in der Eurozone als auch in der EU27 um 1,2% gefallen

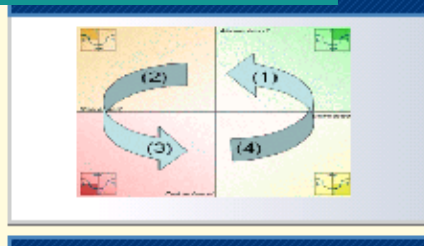
Suche

 **Anmelden | Registrieren | Abmelden**

 **Statistics explained**

- Information on (European and international) environmental indicator activities
- “Registration” functionality for indicator projects
- Present results from streamlining project
- To be placed on the Eurostat homepage

€	28.05.2010	Tax revenue in the European Union - Issue number 23/2010
D	28.05.2010	Natural gas prices for second semester 2009 - Issue number 21/2010
D	28.05.2010	Electricity prices for second semester 2009 - Issue number 22/2010



Indicator assessment	Metadata	Background documents	Services/ contacts	News
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All Masters
Agriculture (link)
Air pollution (link)
Climate change
Energy (link)
Fisheries (link)
Land Use/ Biodiversity/ Forestry (link)
Transport (link)
Waste (link)
Water (link)

- ID of Indicator: APE003 - EEA-32**
- Title of Indicator: Ammonia (NH₃) emissions**

3. Key policy question:

Just one short question highlighting the main problem behind the indicator. Eg. What progress has been made in reducing greenhouse gas emissions in Europe?

4. Key message:

- EEA-32 emissions of NH₃ have declined by 22% between the years 1990 and 2007. Agriculture was responsible for 93% of NH₃ emissions in 2007.
- The reduction in emissions within the agricultural sector is primarily due to a reduction in livestock numbers (especially cattle) since 1990, changes in the handling and management of organic manures and from the decreased use of nitrogenous fertilisers. The reductions achieved in the agricultural sector have been marginally offset by the increased emissions which have occurred during this period in sectors such as transport and to a lesser extent the energy industry and other (non-energy) sectors.
- In general, Member States have made excellent progress in reducing emissions below the level of their respective emission ceilings set in the National Emission Ceilings Directive (NECD). Twenty-one of the EU-27 Member States have already achieved their ceilings. Only Finland, Germany and Spain still need to make significant further reductions in order to meet their respective ceilings under the NECD.
- Environmental context: NH₃ contributes to acid deposition and eutrophication. The subsequent impacts of acid deposition can be significant, including adverse effects on aquatic ecosystems in rivers and lakes and damage to forests, crops and other vegetation. Eutrophication can lead to severe reductions in water quality with subsequent impacts including decreased biodiversity, changes in species composition and dominance, and toxicity effects. NH₃ also contributes to the formation of secondary particulate aerosols, an important air pollutant due to its adverse impacts on human health.

Scroll down

All Masters

[Agriculture \(link\)](#)

[Air pollution \(link\)](#)

Climate change

[Energy \(link\)](#)

[Fisheries \(link\)](#)

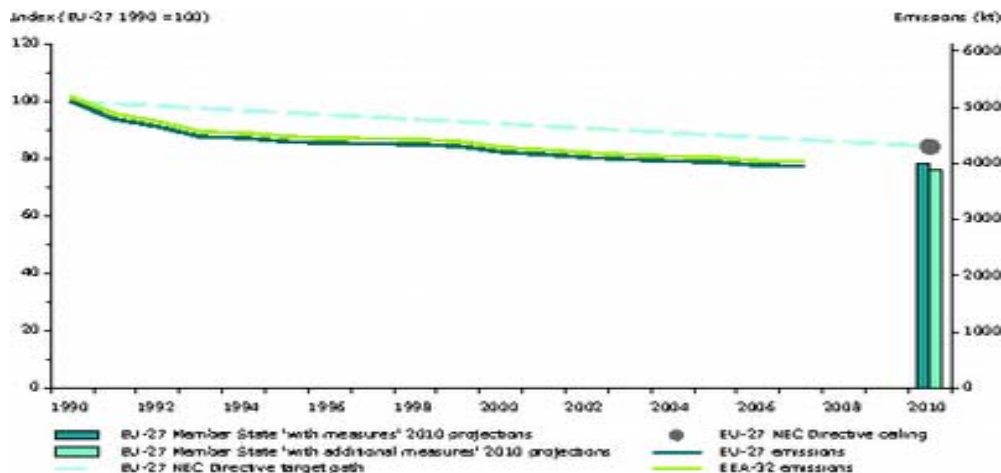
[Land Use/
Biodiversity/ Forestry
\(link\)](#)

[Transport \(link\)](#)

[Waste \(link\)](#)

[Water \(link\)](#)

6. Data, maps and diagrams:



Other relevant figures and latest available data (links)

7. Analysis of trends (assessment):

EEA-32 ammonia emissions have decreased by 22% between 1990 and 2007.

In general, the EU Member States have made excellent progress in reducing emissions below the level of their respective emission ceilings set in the National Emission Ceilings Directive (NECD), with 21 of the EU-27 Member States having already achieved their ceilings. These Member States are: Belgium, Bulgaria, Cyprus, the Czech Republic, Estonia, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Sweden and the United Kingdom.

However, a small number of Member States still require relatively significant reductions in NH_3 emissions to be made if they are to meet their 2010 ceilings under the NECD. These Member States are Finland, Germany and Spain.

[Home](#)

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Conclusions / questions

- Environmental indicators are widely used to present the outcome of data collection, validation and aggregation of environmental data in a concise and easily understood manner. Should the revised FDES therefore pay particular attention to environmental indicator production?
- The new FDES could propose a continuous streamlining and coordination of environmental indicator production among major indicator 'owners' at the international level.
- Do the experts on the Revision of the Framework for the Development of Environment Statistics share Eurostat's view?

Streamlining of Environmental Indicators

Thank you for your attention

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