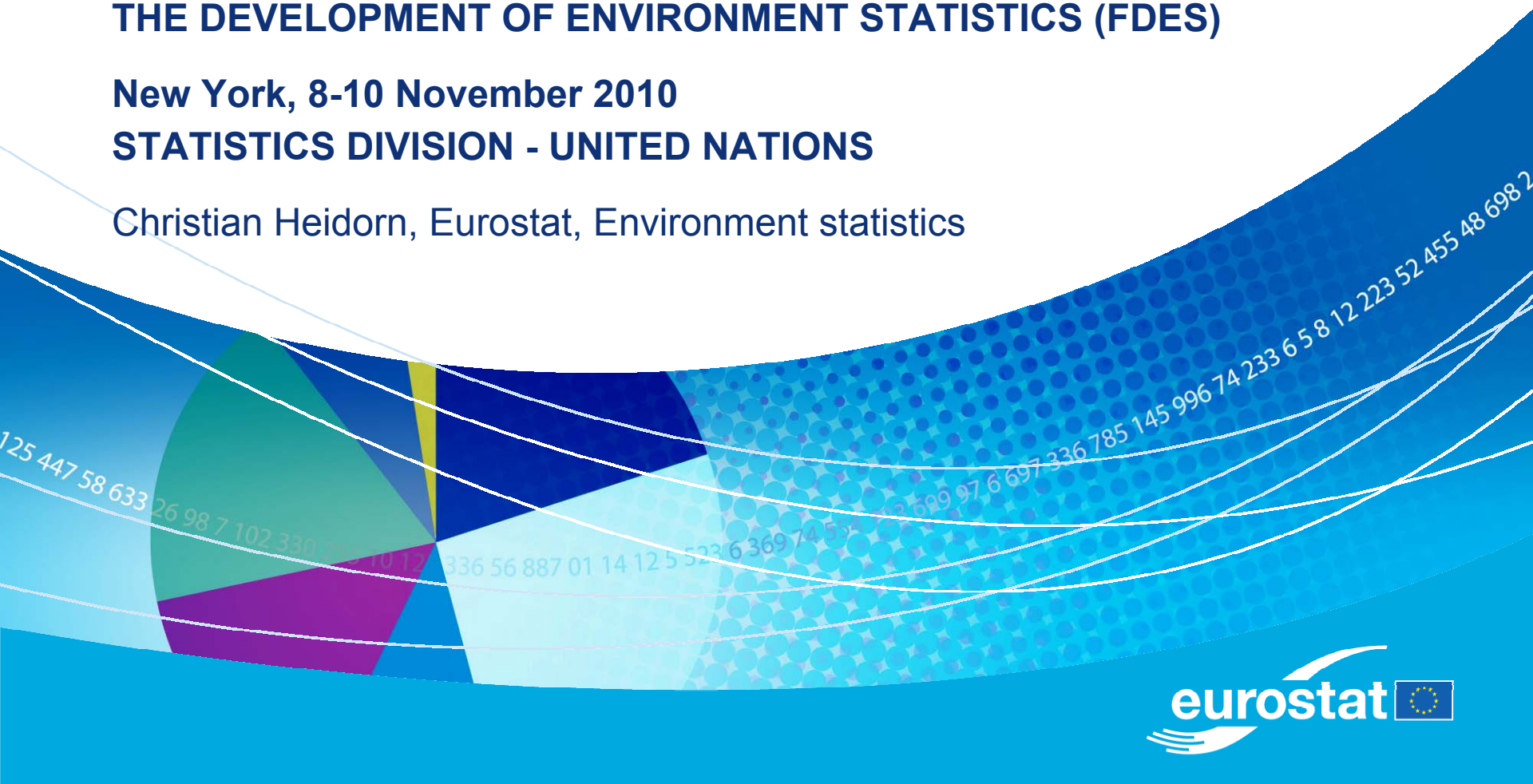
Streamlining of Environmental indicators

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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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

Background (2):

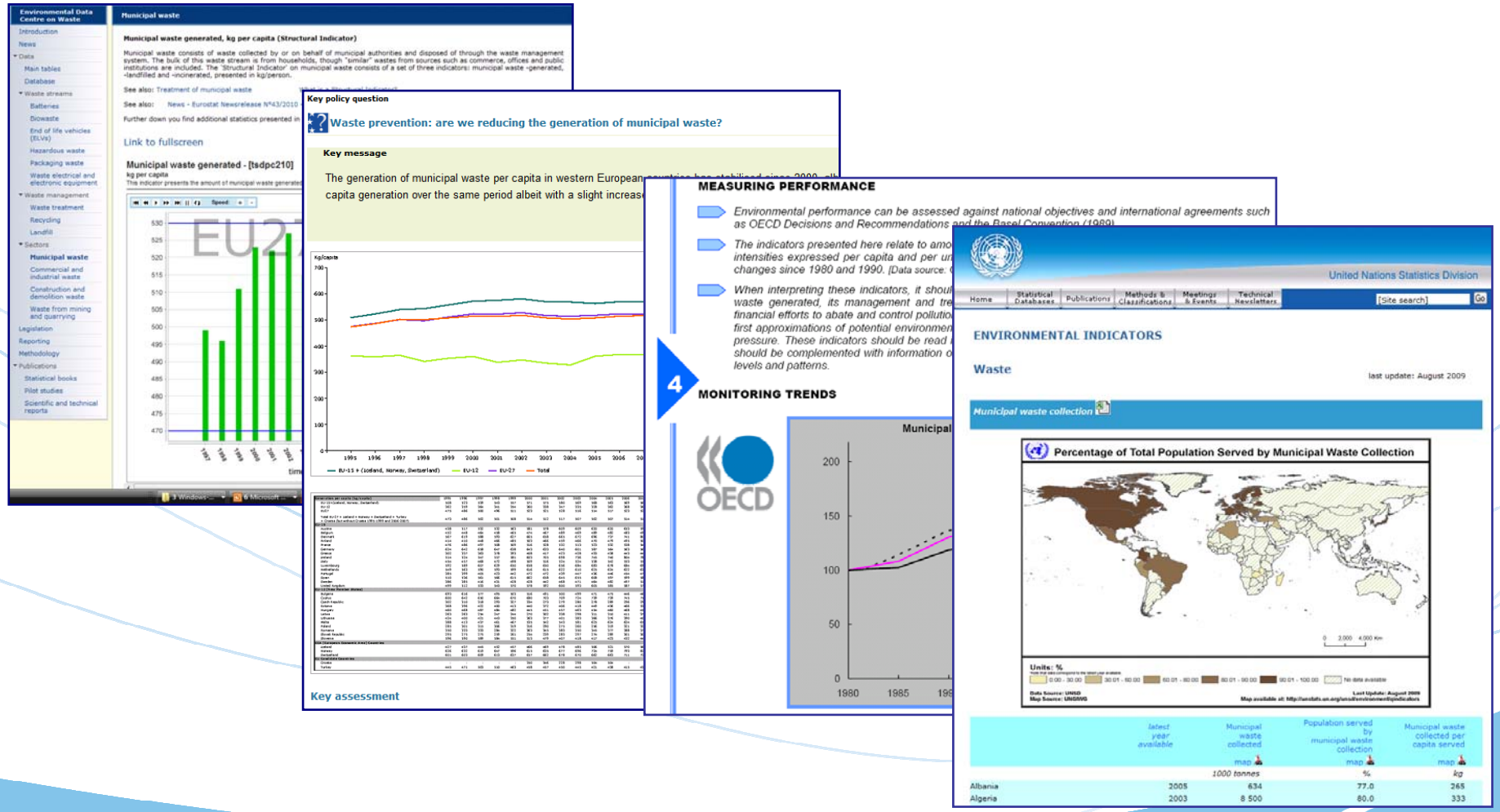
Why?

- **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



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)

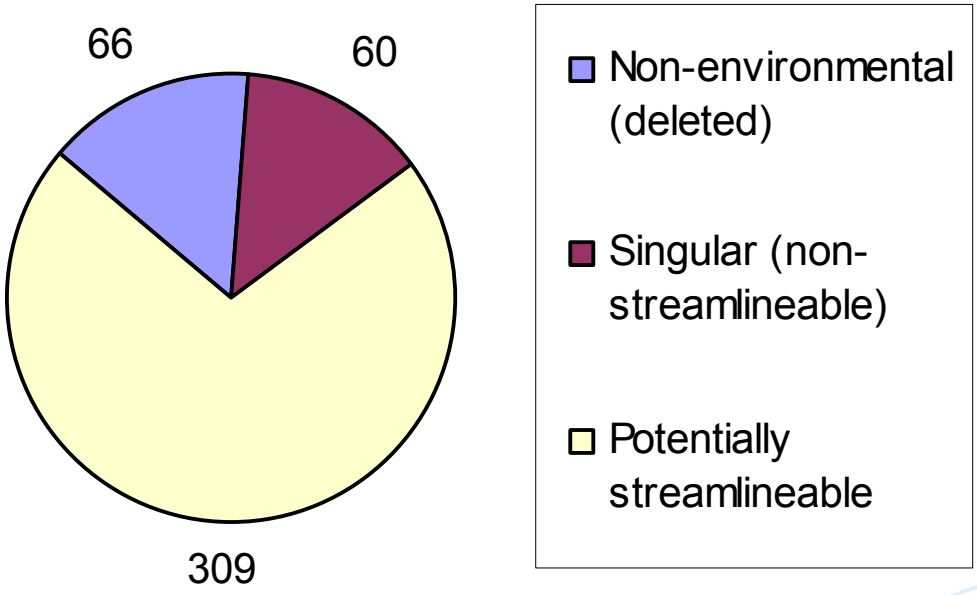
Results from 2007-2008 project (2):

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***

- 3

Cluster n°	Domain	Sub-domain	N° of indic.	Cluster n°	Domain	Sub-domain	N° of indic.
1	agriculture	Agri-env. commitmen	2	25	waste	Hazardous waste	6

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

Cluster 33 Material use			
	Streamlinable indicators	**To be streamlined with**	**Coding**
	HIGH POTENTIAL FOR STREAMLINING		
1		Resource productivity	SDI-tsdpc100
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			

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
- A
- I
-

- **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

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Contact person:

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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

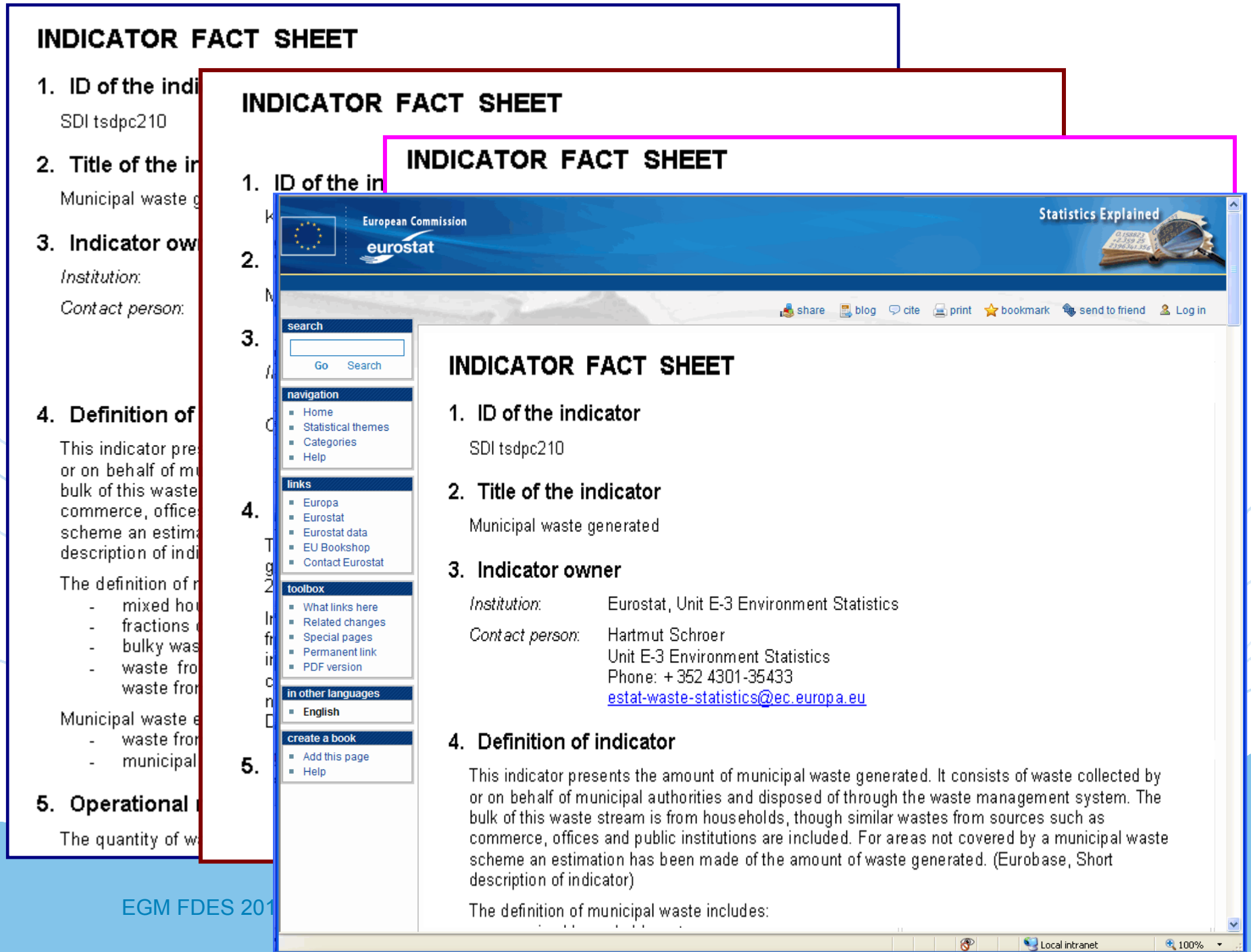
4. Definition of indicator

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)

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)*

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)*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Contact person: Hartmut Schroer
Unit E-3 Environment Statistics
Phone: +352 4301-35433
estat-waste-statistics@ec.europa.eu
4. 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:
Local intranet
100%

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 way forward:

The Website – "Indicator clearing house"

- Information on (European and international) environmental indicator activities
- "Registration" functionality for indicator projects
- Present results from streamlining project
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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)

1. ID of Indicator: APE003 - EEA-32
2. Title of Indicator: Ammonia (NH_3) 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 NH_3 have declined by 22% between the years 1990 and 2007. Agriculture was responsible for 93% of NH_3 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.

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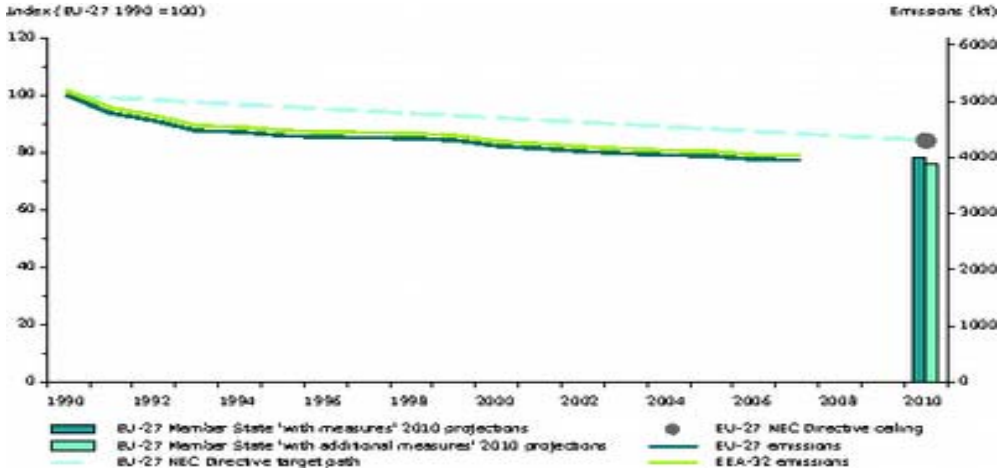
6. Data, maps and diagrams:



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.

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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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