



Session 1: Generation of Waste by Economic Activities

Reena Shah

United Nations Statistics Division (UNSD)

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UNSD data collection in environment statistics

- UNSD/UNEP Questionnaire 2010 on Environment Statistics – sent out in April and focuses on water and waste statistics (<http://unstats.un.org/unsd/environment/questionnaire2010.htm>)
- Waste statistics – The tables cover the generation of waste, the generation and treatment of hazardous waste, and the generation, collection, treatment, and composition of municipal waste.



UNSD data collection in waste statistics

1. Generation of Waste (R1)
2. Management of Hazardous Waste (R2)
3. Management of Municipal Waste (R3)
4. Composition of Municipal Waste (R4)
5. Management of Municipal Waste – City data (R5)



UNSD data dissemination

UNSD disseminates data through:

- **UNSD Environmental Indicators** (Air and climate, Biodiversity, Energy and minerals, Forests, Governance, Inland water resources, Land and agriculture, Marine and coastal areas, Natural disasters, and Waste) (<http://unstats.un.org/unsd/environment/qindicators.htm>)
- **Country Files** (access restricted to countries and international organizations that participate in the data collection) (<http://unstats.un.org/unsd/environment/Questionnaires/index.asp>)
- **Country Snapshots** (include UNSD environmental indicators and other economic/demographic data) (http://unstats.un.org/unsd/environment/Questionnaires/country_snapshots.htm)
- **Environment statistics in UNData** (<http://data.un.org/>)



Waste Definition

- Materials that are not prime products (i.e. products produced for the market) for which the generator has no further use for his own purpose of production, transformation or consumption, and which he discards, or intends or is required to discard.
- It excludes residuals directly recycled or reused at the place of generation (i.e., establishment) and waste materials that are directly discharged into ambient water or air as wastewater or air pollution.



Approaches to waste classification

Activity-oriented breakdown by the generating activity

- For example according to the International Standard Industrial Classification of all Economic Activities (ISIC)

Material-oriented breakdown by the material content of the waste

- Paper, metal, glass, wood may come from various activities. However, a waste material can be produced exclusively from one activity only or be identical to the activity itself, e.g., mining.

Ideal situation is the cross-classification of the two breakdowns.

Generation of Waste by Source/Type

Year:1990

Unit 1000 t



Type of waste according to EU Regulation on statistics Source of waste according to UNSD Questionnaire	Chemical compound waste (01)	Chemical preparation wastes (02)	Health care and biological wastes (05)	Mixed ordinary wastes (10)	Mineral wastes (12)
Agriculture, forestry and fishing					
Mining and quarrying					
Manufacturing					
Electricity, gas, steam and air conditioning supply					
Construction					
Other economic activities excluding ISIC 38					
Households					



ISIC

- International Standard Industrial Classification of all Economic Activities - Rev. 4
- Allows the linkage of waste generation to economic data and facilitates the creation of indicators, e.g., waste intensity or decoupling indicators

<http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27>



Table R1: Generation of Waste by Source

Line	Category	Unit	1990
1	Agriculture, forestry and fishing (ISIC 01-03)	1000 t	
2	Mining and quarrying (ISIC 05-09)	1000 t	
3	Manufacturing (ISIC 10-33)	1000 t	
4	Electricity, gas, steam and air conditioning supply (ISIC 35)	1000 t	
5	Construction (ISIC 41-43)	1000 t	
6	Other economic activities excluding ISIC 38	1000 t	
7	Households	1000 t	
8	Total waste generation (=1+2+3+4+5+6+7)	1000 t	



Table R1: Data Validation and Main Issues

- Waste generated by an economic activity includes **all types** of waste generated by economic units within this activity.
- Total waste generation data provided is often the total amount of waste collected and not that which is generated.
- Total waste per \$1000 GDP should be within reasonable range (0.5 - 10 metric tons per \$1000 GDP).
- Household waste is sometimes confused with municipal waste - municipal waste comprises household waste and other waste (e.g. office buildings, institutions).
- Total is sometimes not the actual total of the sub-components when some values of the sub-components are blank. If blanks, it is not clear whether there are no data or if it is not applicable.
- Values are sometimes provided by volume and not by weight.



Table R1: Data Sources

- Surveys: using a questionnaire on waste from enterprises (they can be the generators of the waste, or companies engaged in the collection, transport and treatment of the waste (ISIC 38)).
- Administrative or other sources
- Statistical estimation procedures
- A combination of the above methods



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Thank you.

Any questions?