# Session 5: Waste Statistics and Indicators

United Nations Statistics Division (UNSD)

Workshop on Environment Statistics
(Yaoundé, Cameroon,
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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)

# 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 R2: Management of Hazardous Waste

| Line | Category | Unit |
|:---:|:---|:---:|
| 1 | Stock of hazardous waste at the beginning of the year | tonnes |
| 2 | Hazardous waste generated during the year | tonnes |
| 3 | Hazardous waste imported during the year | tonnes |
| 4 | Hazardous waste exported during the year | tonnes |
| 5 | **Hazardous waste treated or disposed of during the year** | tonnes |
| 6 | *Amounts going to:*    Recycling | tonnes |
| 7 | Incineration | tonnes |
| 8 | Landfilling | tonnes |
| 9 | Other, please specify in the footnote | tonnes |
| 10 | Stock of hazardous waste at the end of the year (=1+2+3-4-5) | tonnes |

# Table R3: Management of Municipal Waste

| Line | Category | Unit | 1990 |
|:---:|:---|:---:|:---:|
| 1 | Municipal waste collected from households | 1000 t | |
| 2 | Municipal waste collected from other origins | 1000 t | |
| 3 | **Total amount of municipal waste collected (=1+2)** | 1000 t | |
| 4 | Municipal waste imported for treatment/disposal | 1000 t | |
| 5 | Municipal waste exported for treatment/disposal | 1000 t | |
| 6 | **Municipal waste managed in the country (=3+4-5)** | 1000 t | |
| 7 | *Amounts going to:*<br>    Recycling | 1000 t | |
| 8 |     Composting | 1000 t | |
| 9 |     Incineration | 1000 t | |
| 10 |      *of which:*  with energy recovery | 1000 t | |
| 11 |     Landfilling | 1000 t | |
| 12 |      *of which:*  controlled land filling | 1000 t | |
| 13 |     Other, please specify in the footnote | 1000 t | |
| | | | |
| 14 | Total population served by municipal waste collection | % | |
| 15 | Urban population served by municipal waste collection | % | |
| 16 | Rural population served by municipal waste collection | % | |

# Table R4: Composition of Municipal Waste

| Line | Category | Unit | 1990 |
|:---:|:---|:---:|:---:|
| 1 | Paper, paperboard | % | |
| 2 | Textiles | % | |
| 3 | Plastics | % | |
| 4 | Glass | % | |
| 5 | Metals | % | |
| 6 | Other inorganic material | % | |
| 7 | Organic material | % | |
| 8 | *of which*: food and garden waste | % | |
| 9 | TOTAL | % | 100 |

# Table R5: Management of Municipal Waste – City Data

| Line | Category | Unit | 1990 |
|:---:|:---|:---:|:---:|
| 1 | Total population of the city | 1000 inh. | |
| 2 | Percentage of city population served by municipal waste collection | % | |
| 3 | Municipal waste collected from households | 1000 t | |
| 4 | Municipal waste collected from other origins | 1000 t | |
| 5 | **Total amount of municipal waste collected (=3+4)** | 1000 t | |
| 6 | *Amounts going to:*<br>   Recycling | 1000 t | |
| 7 |    Composting | 1000 t | |
| 8 |    Incineration | 1000 t | |
| 9 |     *of which:* with energy recovery | 1000 t | |
| 10 |    Landfilling | 1000 t | |
| 11 |     *of which:* controlled landfilling | 1000 t | |
| 12 |    Other, please specify in the footnote | 1000 t | |

# Agreed Set of ECOWAS Core Waste Indicators

- Quantity of waste generated (Table R1 – Generation of waste by source)
- Municipal waste collected per capita (Table R5 – Management of municipal waste – City Data)
- Proportion of population served by municipal waste collection (Table R3 – Management of municipal waste)
- Quantity of hazardous waste generated (Table R2 – Management of hazardous waste)

# Quantity of waste generated

The main purpose is to show the trend in the generation of waste produced by different human activities.

Definitions/concepts:

- The precise definition of what constitutes waste is variable, but principally it can be considered as 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 on the site of generation and pollutants that are directly discharged into ambient water or air as waste water or air emission.

# Municipal waste collected per capita

The main purpose is to track the quantity of municipal waste collected per capita, and by implication, the effects of measures to reduce municipal waste.

Definitions/concepts

- Total quantity of municipal waste collected refers to municipal waste collected by or on behalf of municipalities, as well as municipal waste collected by the private sector. It includes mixed waste, and fractions collected separately for recovery operations

# Proportion of population served by municipal waste collection

The indicator is a measure of the capacity of municipal authorities to collect waste and may be used together with population data to estimate the level of service coverage for waste management.

Definitions/concepts

Population served by municipal waste collection refers to the total population covered by regular municipal waste collecting/removal service.

# Quantity of hazardous waste generated

It provides a measure of the extent and type of industrialization in a country and in this connection the nature of the industrial activities including technologies and processes generating hazardous wastes.

Definitions/concepts:

- Definition of the Basel Convention is used

# UNSD Questionnaires: 1999-2010: Responses as of 15 February 2011

| Country | 1999 | 2001 | 2004 | 2006 | 2008 | 2010 |
|---|---|---|---|---|---|---|
| Cameroon | | Cameroon | | | Cameroon | Cameroon |
| Central African Republic | | | | | | Central African Republic |
| Chad | | | | | | Chad |
| Congo | | | | | Congo | |
| Equatorial Guinea | | | | | | |
| Gabon | Gabon | | | | | |
| Sao Tome and Principe | | | | | | |

Thank you.