UNSD/UNEP QUESTIONNAIRE 2004 ON ENVIRONMENT STATISTICS

Section: WASTE

TABLE OF CONTENTS

Guidance	Introduction, Steps to Follow, Description of Tables
Definitions	List of Definitions
Table R1	Generation of Waste by Sector
Table R2	Treatment and Disposal of Municipal Waste
Table R3	Composition of Municipal Waste
Table R4	Treatment and Disposal of Hazardous Waste
Table R5	Waste Treatment and Disposal Facilities
Table R6	Selected Waste Variables at City Level
Table R7	Supplementary Information Sheet on the Waste Section

Section: WASTE

GUIDANCE

INTRODUCTION

Waste management is a key concern for the environment and the sustainable management of natural resources. The primary targets of waste management are:

* Reducing toxicity and volume of waste generated in the different production and consumption processes;
* Increasing the share of recovered waste materials;
* Sound environmental management of waste for disposal.

The purpose of the waste questionnaire is to provide consistent data to draw reliable information and trends on:

* generation of waste;
* municipal waste composition, generation, collection and treatment;
* hazardous waste generation and treatment;
* waste treatment facilities.

The data collection is a joint action between the United Nations Statistics Division (UNSD), Department of Social and Economic Affairs, and of the United Nations Environment Programme (UNEP). It contributes to the development of the UNSD International Environment Statistics Database. The data will be analyzed and consolidated by UNSD for use in international work, in particular for UNEP's Global Environmental Outlook, and will be made available to countries, United Nations specialized agencies and other regional and international organizations, as well as to the general public.

Changes to the UNSD Questionnaire 2001 on Environment Statistics:

The waste section of the UNSD 2004 questionnaire targets municipal and hazardous waste, for which more reliable data are expected to be available in the countries.

The tables ask for data for the years 1990, 1995 and then for each year thereafter.

A new table has been added in order to collect data in main cities within the country, as municipal waste statistics may be more developed at the local, than at the national level.

If your country responded to the 2001 Questionnaire, the tables have been prefilled with the data you supplied.

Section: WASTE

GUIDANCE

STEPS TO FOLLOW

For all the tables you are kindly asked to:

- ☑ Fill in the contact information at the top of each table.
- ☑ Check the pre-filled data and, if required, kindly update in the table. Tables were prefilled with the data received from the 2001 questionnaire.
- ☑ Fill in the requested variables with data in accordance with the definitions provided (see the Definitions worksheets). If a different definition or methodology has been used, please explain the differences in a footnote (see below) or provide the definition and/or methodology applied in the supplementary information sheet.
- ☑ If data are not available for the years stated in each table, please provide the data you might have for other years and add a footnote for the years to which the data apply.
- ☑ Use footnotes to give additional information on data. For this purpose, use the first column after the data for an alphabetical code, and write your explanatory text in the footnote text column, preceded by the code of the footnote. Check also pre-filled footnotes and correct them if necessary.
- ☑ Please distinguish between 'data is not available', in which case the field should be left blank, and 'data is zero', in which case the field should be filled with a "0".
- ☑ Please report data in the requested unit.
- ☑ Please note that the exclamation mark in the first column of each table indicates high priority data for international work. In the event that complete data are not available from your country, please make efforts to submit data for those variables marked as priority.
- ☑ Please note that the use of indentation in the category column of each table indicates which variables are subsets and which variables are totals.
- ☑ Do not hesitate to attach any documents or reference which could help UNSD to interpret your data.
- ☑ Please deliver all suitable data you have available.
- ☑ If you have any questions, do not hesitate to contact Ulrich Wieland at UNSD, e-mail: wieland@un.org, tel. +1 917 367 4201, fax +1 212 963 0623.

Section: WASTE

GUIDANCE

DESCRIPTION OF TABLES

Table R1: Generation of Waste by Sector

This table asks for data on the total amount of waste (both non-hazardous and hazardous), generated by various economic activities and households.

The sectoral breakdown follows the International Standard Industrial Classification of all Economic Activities (ISIC.Rev.3). (URL: http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=2).

Municipal waste is treated as a separate item, though not directly related to one specific economic sector. It covers household and similar waste generated in households, services, small industries, etc., generally removed by a municipal waste collection system. Waste from industrial activities removed by municipal waste collection should in principle be reported under the respective sector of generation; if it is not possible to separate the data, please report it under municipal waste and indicate it with a footnote. Double counting should be avoided as much as possible.

The amount reported under 'Total waste generation' should be equal to the sum of the waste amounts reported under the various economic activities and the amount of municipal waste. If this is not the case, please explain it with a footnote.

Hazardous waste here refers to categories of waste to be controlled according to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Article 1 and Annex I). If data are not available according to the Basel Convention, amounts can be given according to national definitions and labeled accordingly. The amount reported in this table should correspond with the amount in the first row of table R4.

Please note that the unit of measurement in this table is '**1000 tons**' except for hazardous waste, which is requested in '**tons**'.

Section: WASTE

GUIDANCE

Table R2: Treatment and Disposal of Municipal Waste

This table focuses on municipal waste. The total amount of 'municipal waste collected' is the part of generated waste, which is effectively collected by or on behalf of municipalities.

In some instances, part of the municipal waste collected may be exported to other countries before treatment. Countries may also have imported municipal waste for treatment or disposal. The total amount of 'municipal waste managed in the country' is calculated as: 'municipal waste collected in the country' - 'municipal waste exported' + 'municipal waste imported'.

In principle, the sum of the amounts 'recycled/ composted' + 'incinerated' + 'landfilled' + 'other' should be equal to the amount of 'municipal waste managed in the country'. Nevertheless, as there can be double counting due to secondary waste quantities (e.g. residues of incineration which are landfilled or residues from composting that are incinerated), the sum can be higher than the amounts to be managed.

The 'Share of total population served by municipal waste collection' is the estimated percentage of the total population that is covered by the municipal waste removal system. It is usually estimated on the basis of the percentage of addresses in the municipalities from where waste is collected. Similarly, the urban population served is expressed as a percentage of the total urban population, and the rural population served is expressed as a percentage of the total rural population. Please apply national definition for "urban" and "rural" population.

Table R3: Composition of Municipal Waste

Municipal waste is composed of a mix of different materials. Usually, the composition of municipal waste is determined from the physical analysis of waste samples. The table asks for the 'percentage proportion' of the main material groups in mixed municipal waste.

Table R4: Treatment and Disposal of Hazardous Waste

This table focuses on hazardous waste. Please note that the unit of measurement is '**tons**' for the entire table.

Hazardous waste here refers to categories of waste to be controlled according to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Article 1 and Annex I). If data are not available according to the Basel Convention, amounts can be given according to national definitions and labeled accordingly. The total amount of waste generated should correspond to the amount reported in table R1.

Part of the amount of hazardous waste generated may be exported to the other countries before treatment. Countries may also have imported hazardous waste either for treatment or disposal. The amount of 'hazardous waste managed in the country' can therefore be calculated as: 'hazardous waste generated in the country' - 'hazardous waste exported' + 'hazardous waste imported'.

Section: WASTE

GUIDANCE

In principle, the sum of the following variables: 'recycled' + 'incinerated' + 'landfilled' + 'other' should be equal to the amount of 'Hazardous waste managed in the country'. Nevertheless, as there can be double counting due to secondary waste quantities (e.g. residues of incineration which are landfilled or residues from composting that are incinerated), the sum can be higher than the amounts to be managed.

Table R5: Waste Treatment and Disposal Facilities

This table asks for data on the number and capacity (in **1000 tons**) of waste treatment and disposal facilities. Only the main types of treatment facilities are specified in the table. The capacity of treatment facilities refers to the annual capacity except for the landfill sites, where the annual input is requested instead. Under the category 'Other waste treatment facilities, please specify' should be reported the permanent storage facilities.

Table R6: Selected Waste Variables at City Level

This table aims to provide a comprehensive picture of the generation, collection, treatment and disposal of municipal waste at local level. Countries are kindly asked to provide data for 2 - 3 big cities, preferably the most populous cities of the country. Please do not hesitate to duplicate this table if you can provide data for more cities.

Table R7: Supplementary Information Sheet on the Waste Section

Please provide any additional information that can help the interpretation of your data, e.g. national definition, survey methods applied, quality statements on the data, etc.

In addition, countries are encouraged to provide or attach any complementary source of information such as website addresses, publications, results of surveys, etc., related to the waste topic, particularly if countries encountered difficulties filling in the questionnaire.

Section: WASTE

Definitions for Waste

	DEFINITIONS
Waste	Waste refers here to 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.
(Waste from) **Agriculture and forestry**	All waste from agricultural and forestry activities. Manure used as fertilizer should not be included; only 'surplus' (or excess) manure should be included. This category refers to ISIC divisions 01 and 02.
Industrial waste	For the purposes of this questionnaire, industrial waste comprises waste from mining and quarrying, manufacturing industries, energy production and construction.
(Waste from) **Mining and quarrying**	All waste from mining and quarrying activities. This category refers to ISIC divisions 10 to 14.
(Waste from) **Manufacturing industries**	All waste from manufacturing industries. This category refers to ISIC divisions 15 to 37.
(Waste from) **Energy production**	All waste from electricity, gas, steam and hot water supply. This category refers to ISIC division 40.
(Waste from) **Construction**	All waste from construction activities. This category refers to waste generated in ISIC division 45.
Other activities	For the purpose of this questionnaire, the category 'other activities' refers to all other economic activities not specified before.
Municipal waste	Municipal waste includes household waste and similar waste. The definition also includes bulky waste (e.g. white goods, old furniture, mattresses) and yard waste, leaves, grass clippings, street sweepings, the content of litter containers, and market cleansing waste, if managed as waste. It includes waste originating from: households, commerce and trade, small businesses, office buildings and institutions (schools, hospitals, government buildings). It also includes waste from selected municipal services, e.g. waste from park and garden maintenance, waste from street cleaning services (street sweepings, the content of litter containers, market cleansing waste), if managed as waste. The definition excludes waste from municipal sewage network and treatment, municipal construction and demolition waste.
Hazardous waste	Wastes that, owing to their toxic, infectious, radioactive or flammable properties pose a substantial actual or potential hazard to the health of humans and other living organisms and the environment.
Municipal waste generated	This amount is the sum of the amount of municipal waste collected plus the estimated amount of municipal waste from areas not served by a municipal waste collection service.

Section: WASTE

Definitions for Waste

	DEFINITIONS
Municipal waste collected	Municipal waste collected by or on behalf of municipalities, as well as municipal waste collected by the private sector. It includes mixed household waste, and fractions collected separately for recovery operations (through door-to-door collection and/or through voluntary deposits).
Municipal waste managed in the country	The amount of municipal waste collected in the country - amount exported before treatment or disposal + amount imported for treatment or disposal.
Share of population (total, urban, rural) served by municipal waste management services (in %)	The percentage proportion of the total, urban and rural population covered by regular municipal waste removal service in relation to the total, urban and rural population, respectively, of the country.
Recycled (waste)	Recycling is defined as any reintroduction of waste material in a production process that diverts it from the waste stream, except reuse as fuel. Both reprocessing as the same type of product, and for different purposes should be included. Recycling within industrial plants i.e. at the place of generation should be excluded.
Composted (waste)	Composting is a biological process that submits biodegradable waste to anaerobic or aerobic decomposition, and that results in a product that is recovered.
Incinerated (waste)	The controlled combustion of waste with or without energy recovery.
Landfilled (waste)	It includes all amounts going to landfill, either directly, or after sorting and/or treatment, as well as residues from recovery and disposal operations going to landfill. Landfill is the final placement of waste into or onto the land in a controlled or uncontrolled way. 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.
Other (waste treatment/disposal)	Any other final treatment or disposal different from recycling (composting), incineration and landfill. Permanent storage of waste is included here.
Treatment plant	Facilities for the physical, thermal, chemical, or biological processing of waste, that change the characteristics of the waste in order to reduce its volume, or hazardous nature, facilitate its handling, or enhance recycling. Composting plants are included here.
Incineration plant	Facilities for burning wastes under controlled conditions, with or without energy recovery.
Landfill site	Sites that manage the final placement of waste in or on the land in a controlled or uncontrolled way.
Other, please specify	Plants for waste treatment/disposal not elsewhere specified. It includes permanent storage.

Section: WASTE

Country:	Contact person:	Tel:
Contact institution:	E-mail:	Fax:

Table R1: Generation of Waste by Sector

Priority	Category	Unit	1990		1995		1996		1997		1998		1999		2000		2001		2002	
	Agriculture and forestry (ISIC 01-02)	1000 t																		
	Industrial activities	1000 t																		
	of which : Mining and quarrying (ISIC 10-14)	1000 t																		
	Manufacturing industries (ISIC 15-37)	1000 t																		
	Energy production (ISIC 40)	1000 t																		
	Construction (ISIC 45)	1000 t																		
	Other activities, please specify	1000 t																		
	Municipal waste	1000 t																		
!	**Total waste generation**	1000 t																		
	of which: hazardous waste	tons																		

Footnotes

Code	Footnote text

Section: WASTE

Country: Contact person: Tel:

Contact institution: E-mail: Fax:

Table R2: Treatment and Disposal of Municipal Waste

Priority	Category	Unit	1990		1995		1996		1997		1998		1999		2000		2001		2002	
!	**Municipal waste collected** (1)	1000 t																		
	Municipal waste imported for treatment/disposal (2)	1000 t																		
	Municipal waste exported for treatment/disposal (3)	1000 t																		
!	**Municipal waste managed in the country** (4) = (1) + (2) - (3)	1000 t																		
!	*of which* : Recycled/ composted	1000 t																		
!	Incinerated	1000 t																		
!	Landfilled	1000 t																		
	Other, please specify	1000 t																		
!	Share of total population served by municipal waste collection	%																		
!	Share of urban population served by municipal waste collection	%																		
!	Share of rural population served by municipal waste collection	%																		

Footnotes

Code	Footnote text

Section: WASTE

Country: Contact person: Tel:

Contact institution: E-mail: Fax:

Table R3: Composition of Municipal Waste

Priority	Category	Unit	1990		1995		1996		1997		1998		1999		2000		2001		2002	
	Paper, paperboard	%																		
	Textiles	%																		
	Plastics	%																		
	Glass	%																		
	Metals	%																		
	Organic material	%																		
	of which : food and garden waste	%																		
	Other inorganic material	%																		
	TOTAL	%	100		100		100		100		100		100		100		100		100	

Footnotes

Code	Footnote text

Section: WASTE

Country:	Contact person:	Tel:
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Table R4: Treatment and Disposal of Hazardous Waste

Priority	Category	Unit	1990		1995		1996		1997		1998		1999		2000		2001		2002	
!	**Hazardous waste generated** (1)	tons																		
	Hazardous waste imported (2)	tons																		
	Hazardous waste exported (3)	tons																		
!	**Hazardous waste managed in the country** (4) = (1) + (2) - (3)	tons																		
!	*of which* : Recycled	tons																		
!	Incinerated	tons																		
!	Landfilled	tons																		
	Other, please specify	tons																		

Footnotes

Code	Footnote text

Section: WASTE

Country: Contact person: Tel:

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Table R5: Waste Treatment and Disposal Facilities

Priority	Category	Unit	1990		1995		1996		1997		1998		1999		2000		2001		2002	
!	**Treatment plants:** number	number																		
!	capacity	1000 t																		
!	**Incineration plants:** number	number																		
!	capacity	1000 t																		
!	**Landfill sites:** number	number																		
!	annual inputs	1000 t																		
	Other waste treatment/disposal facilities, please specify: number	number																		
	capacity	1000 t																		

Footnotes

Code	Footnote text

Section: WASTE

Country: Contact person: Tel:

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Table R6: Selected Waste Variables at City Level

CITY NAME:

Priority	Category	Unit	1990		1995		1996		1997		1998		1999		2000		2001		2002	
!	Total population of the city	**1000 inh.**																		
!	Share of city population served by municipal waste collection	%																		
!	**Total amount of municipal waste generated**	1000 t																		
	Municipal waste collected from households (1)	1000 t																		
	Municipal waste collected from other origins (2)	1000 t																		
!	**Total amount of municipal waste collected** (3) = (1) + (2)	1000 t																		
!	*of which* : Recycled/ composted	1000 t																		
!	Incinerated	1000 t																		
!	Landfilled	1000 t																		
	Other, please specify	1000 t																		

Code	Footnote text

Section: WASTE

Country:	Contact person:	Tel:
Contact institution:	E-mail:	Fax:

Table R7: Supplementary Information Sheet on the Waste Section

National definition of waste, hazardous waste, municipal waste, complementary information on waste treatment etc.