

Circular Economy Indicators related to waste (I)

SDG and Environment Statistics Unit, 2025
Early Warning and Assessment Division, UNEP

Indicator 6: Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities

Proportion of MSW collected and managed

This indicator corresponds to the SDG indicator 11.6.1 on the proportion of municipal solid waste (MSW) collected and managed in controlled facilities out of total municipal waste generated, by cities.

The presented methodology is based on the [UNSD Metadata for 11.6.1](#), UNEP's [Global chemicals and waste indicator review document](#) (2021) and UN-Habitat's [Metadata on SDGs Indicator 11.6.1. Indicator category: Tier II. UN Habitat](#) (2020).

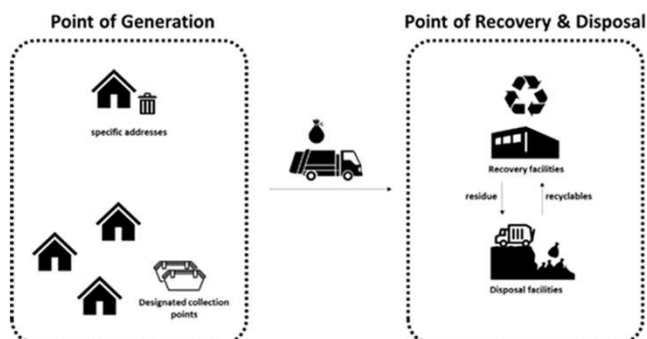
SDG target 11.6 aims to reduce, by 2030, the adverse per capita environmental impact of cities, including paying special attention to air quality and municipal and other waste management.

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Proportion of MSW collected and managed

Figure 2.1 What MSW collected means for SDG indicator 11.6.1 (UNEP, 2021 [Global chemicals and waste indicator review document](#))



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Proportion of MSW collected and managed

This indicator includes 4 sub-indicators in 3 levels.

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LEVEL I INDICATOR

Proportion of MSW collected and managed in controlled facilities out of total MSW generated, by cities

Modelled data based on available data (e.g. World Bank's What a Waste 2.0, UNSD/UNEP Questionnaire on Environment Statistics, Wasteaware Benchmark Indicators, etc.).

LEVEL II INDICATOR

Proportion of MSW collected and managed in controlled facilities out of total MSW generated, by cities

Reported data in line with the concepts and definitions provided by UN-Habitat's Waste Wise Cities Tool.

LEVEL III INDICATORS

Proportion of MSW collected out of total MSW generated, by cities

Proportion of MSW collected out of total MSW generated by cities is disaggregated from the level II indicator.

City Plastic Leakage

City Plastic Leakage can be obtained through the application of Waste Flow Diagram (GIZ, 2020), a rapid and observation-based assessment tool which visualizes the MSW flows and quantifies plastic leakage to the water system.

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Proportion of MSW collected and managed

Disaggregation

This indicator can be disaggregated at various levels in accordance with the country's policy information needs. For instance:

- Disaggregation by location (intra-urban)
- Disaggregation by source of waste generation e.g. residential, industrial, office, or MSW material received by recovery facilities
- Disaggregation by type of final treatment and disposal
- MSW generation rate by income level (high, middle, low)
- MSW generation rate in different cities

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Proportion of MSW collected and managed - Interpretation (I)

Urban households and businesses produce substantial amounts of solid waste that must be collected regularly, recycled or treated and disposed of properly to maintain healthy and sanitary living conditions.

Many cities are increasingly facing solid waste management challenges due to rapid urbanization, lack of technical and financial capacity or low policy priority.

The higher the income level of a city, the greater the amount of solid waste produced.

The economic growth to be experienced in the developing and emerging countries will pose greater challenges in solid waste management to local governments in the next decades.

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Proportion of MSW collected and managed - Interpretation (II)

The adverse environmental impact of uncollected waste in a city is significant.

Poor MSW collection and management trigger severe threats to public health and pollute air and water. Uncollected and mismanaged solid waste can end up in drains leading to blocked drainages and floods, is a main source of marine plastic pollution, and cause unsanitary conditions that have direct health impacts on residents.

Open burning of uncollected waste produces pollutants that are highly damaging locally and globally.

In 2015, the Global Waste Management Outlook estimated that at least 2 billion people do not have access to regular waste collection. This is particularly worse in informal settlements.

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Proportion of MSW collected and managed - Interpretation (III)

The global scale of urbanization and economic growth are creating a potential “time-bomb” regarding waste the world generates.

Uncontrolled disposal sites are already a major source of Greenhouse Gases (GHG).

Many developing and transitional country cities still have an active informal sector and micro-enterprise recycling, reuse and repair; often achieving recycling and recovery rates comparable to those in developed countries, resulting in savings to the waste management budget of the cities.

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Proportion of MSW collected and managed - Interpretation (IV)

There is a major opportunity for cities to build on these existing recycling systems, reducing and improving some unsustainable practices, and to reduce further the costs of cities to manage residual wastes.

Promoting this indicator can also help the formalization of the informal sector in the process of increasing the portion of 'solid waste with adequate discharge'.

Having data about MSW management is basic for helping cities and countries to better manage resources, mitigate and prevent environmental pollution, create business, employment and livelihood opportunities, and shift towards a circular economy.

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Proportion of MSW collected and managed Data availability

Data on amounts of waste can be obtained through:

- Collecting data from waste generators themselves either through regular reporting or special surveys
- Collecting data from waste management facilities (for example, municipal waste authorities)
- By type of material especially for high value recyclables, such as non-ferrous metals, ferrous metals, various packaging wastes, as these wastes tend to be treated by material type

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Proportion of MSW collected and managed

Limitations in the use of the indicator

In general, developed countries have good MSW data collection systems. For middle- and low-income countries the collection of the data remains a challenge for many national and local governments.

The judgement on the adequacy of treatment and disposal of all the waste management facilities, including composting, recycling, incineration facilities in a city, requires a high level of technical capacity and large investment in human resources.

Informal MSW collection and management data may be available from NGOs and community organizations.

It is important that all data sources are used for reporting, otherwise discrepancies are likely to introduce inconsistencies in reported figures.

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Proportion of MSW collected and managed

Limitations in the use of the indicator



Population with access municipal solid waste collection services (basic, improved or full)

SERVICE LEVEL	DEFINITION
Full	<input type="checkbox"/> Receiving door-to-door MSW collection service with basic frequency and regularity and MSW is collected in three or more separate fractions; or <input type="checkbox"/> Having a designated collection point within 200m distance served with basic frequency and regularity and without major littering and MSW is collected in three or more separate fractions
Improved	<input type="checkbox"/> Receiving door-to-door MSW collection service with basic frequency and regularity and MSW is collected in a minimum of two, separate fractions (e.g. wet and dry fractions) <input type="checkbox"/> Having a designated collection point within 200m distance served with basic frequency and regularity and without major littering and MSW is collected in a minimum of two, separate fractions (e.g. wet and dry fractions)
Basic	<input type="checkbox"/> Receiving door-to-door MSW collection service with basic frequency and regularity or <input type="checkbox"/> Having designated collection point within 200m distance served with basic frequency and regularity
Limited	<input type="checkbox"/> Receiving door-to-door MSW collection service without basic frequency and regularity; <input type="checkbox"/> Having a designated collection point within 200m distance but not served with basic frequency and regularity; or <input type="checkbox"/> Having designated collection point in further than 200 m distance.
No	<input type="checkbox"/> Receiving no waste collection service
Note: Basic frequency and regularity: served at least once a week for one year	



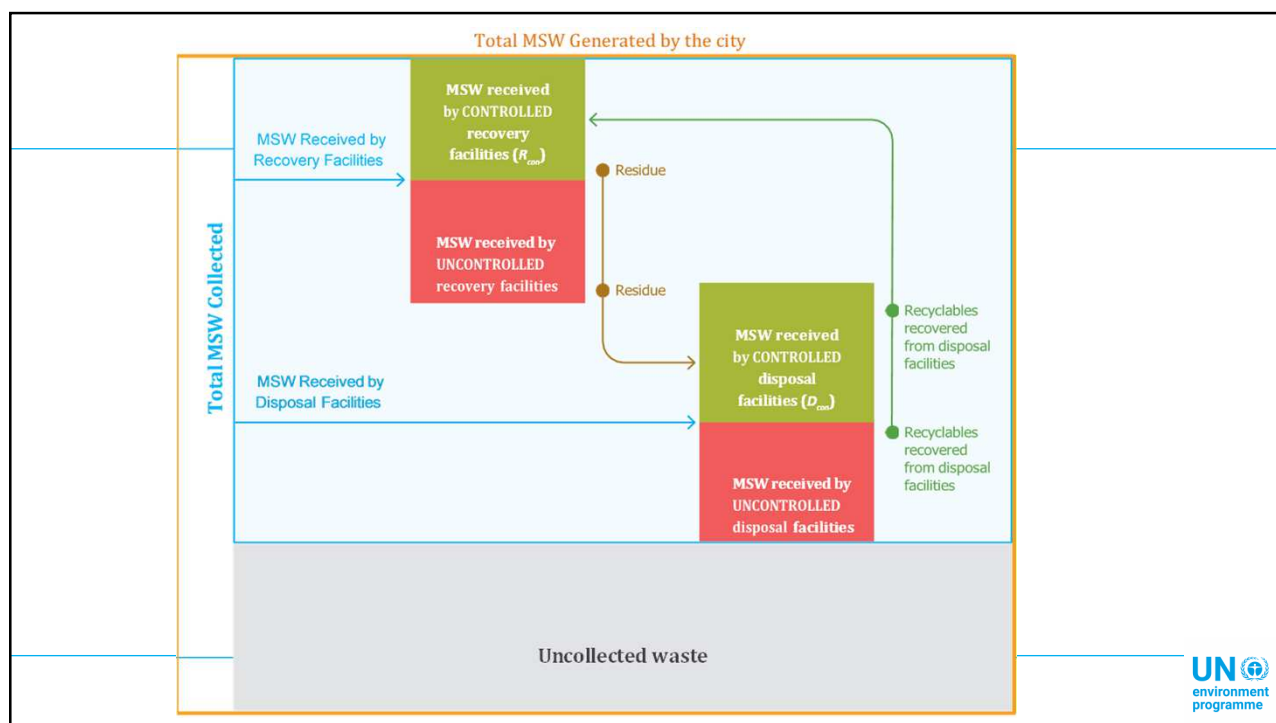
Proportion of MSW collected and managed Calculation

The proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities, is calculated as:

$$\% \text{ MSW collected \& managed in controlled facilities} = \frac{\text{Total MSW collected and managed in controlled facilities (t/day)}}{\text{Total MSW generated (t/day)}} \times 100(\%)$$

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Proportion of MSW collected and managed Calculation

Level I indicator

When data are not available (modeling based on the available data (e.g. World Bank's What a Waste 2.0, UNSD/UNEP Questionnaire on Environment Statistics, etc.) can be conducted.

Level II indicator

It is based in national data. When reliable data is unavailable, cities and countries are recommended to conduct a survey. The data points required include:

- Total MSW generated in the city (tonnes/day)
- Total MSW collected in the city (tonnes/day)
- Total MSW managed in controlled facilities (tonnes/day)

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UN
environment
programme

Proportion of MSW collected and managed

Level III indicator

Two sub-indicators can be used with varying policy implications

$$\% \text{ MSW collected out of MSW generated} = \frac{\text{Total MSW collected (t/day)}}{\text{Total MSW generated (t/day)}} \times 100 (\%)$$

$$\% \text{ MSW managed in controlled facilities} = \frac{\text{Total MSW managed in controlled facilities (t/day)}}{\text{Total MSW generated (t/day)}} \times 100 (\%)$$

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Proportion of MSW collected and managed

Level III indicator

Data collected for SDG indicator 11.6.1 can also be used to estimate a city's plastic leakage when combined with additional field observations, guided by the Waste Flow Diagram (WFD) (GIZ, 2020).

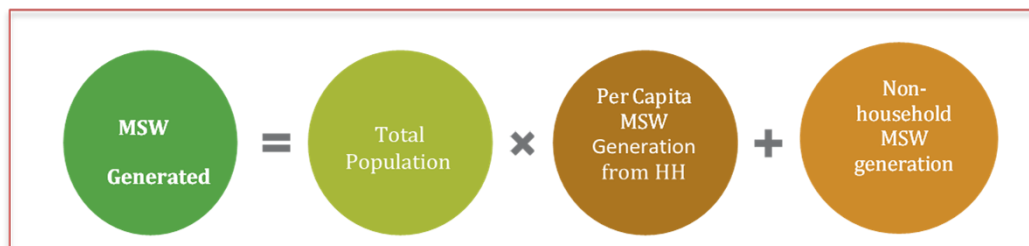
$$\text{City's Plastic Leakage} = \frac{\text{Total plastic leakage to water systems (kg/year)}}{\text{Total population}}$$

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Proportion of MSW collected and managed

For cities that do not have reliable data on MSW generation, it can be estimated through the multiplication of the total population and per capita MSW generation from the household. Detailed methodology for this is provided in Steps 1, 2 and 3 in Waste Wise Cities Tool (UN-Habitat, 2020).



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Municipal solid waste (MSW) generated									
Category	Unit	2000	2001	2002	2003	2004	2005	2006	2007
Total municipal solid waste generated	Tonnes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total population	habitants								
Per capita municipal solid waste generation from households	tonnes/habitant								
Non-households municipal solid waste generation	Tonnes								

Notes:

- Please note that the unit in this table is "habitants, tonnes and tonnes/habitant".
- If the requested data are not available, please leave the cell blank. If the requested variable is not applicable (the phenomenon does not exist), please enter "NA".
- Please provide in the Footnotes Section below information on the source and data collection methodology for the values provided.

Footnotes

Code	Footnote text

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Total MSW collected in the city



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Municipal solid waste (MSW) collected

Category	Unit	2000	2001	2002	2003	2004
Municipal solid waste collected	tonnes	0.00	0.00			
MSW received by recovery facilities	tonnes					
MSW received by disposal facilities	tonnes					
Residue from recovery facilities	tonnes					
Recyclables recovered from disposal facilities	tonnes					

Notes:

- Please note that the unit in this table is "tonnes".
- If the requested variable is not applicable, enter 0.00. If the requested variable is not applicable, enter blank.
- Please provide the source and data collection methodology for each year.

Footnotes

Code	Footnote text
	Enter note(s) here

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MSW collected and managed in controlled facilities

Figure 2.1 Total MSW managed in controlled facilities



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MSW managed in controlled facilities

Figure 2.1 Entering data for MSW managed in controlled facilities calculation

Municipal solid waste (MSW) collected and managed in controlled facilities			2000	2001	2002	2003	2004	2005	2006	2007
Category	Unit									
MSW managed in controlled facilities	tonnes		0.00	0.00	0.00					
MSW received by controlled recovery facilities	tonnes									
MSW received by controlled disposal facilities	tonnes									
Residue from controlled recovery facilities	tonnes									
Recyclables recovered from controlled disposal facilities	tonnes									

Notes:

MSW managed in controlled facilities will appear here

Enter note(s) here

Footnotes

Code Footnote text

Enter reference for note(s) in this column

Enter MSW received by controlled disposal facilities

Enter amount of residue from controlled recovery facilities

Enter recyclables recovered from controlled disposal facilities

For each year, enter the MSW received by controlled recovery facilities



Results

Results								
• If the value turns red, please check if it is correct								
Category	Unit	2000	2001	2002	2003	2004	2005	
% MSW collected out of MSW generated	%	#REF!						% MSW collected out of MSW generated will appear here
% MSW collected and managed in controlled facilities	%	#REF!						% MSW collected and managed in controlled facilities out of MSW generated will appear here
Per capita MSW generation rate	tonnes/habitants	0.00						
Total population	habitants							
Total uncollected waste	tonnes	0.00						
Notes:								
• Please note that the units in this table are "% (percentage), tonnes/habitants, habitants and tonnes".								

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City's plastic leakage

Figure 2.1 Entering data in the city's plastic leakage tab

City's plastic leakage								
• If the value turns red, please check if it is correct								
Category	Unit	2000	2001	2002	2003	2004	2005	
City's plastic leakage	Kg/habitant	#REF!	0.00	0.00	0.00	0.00	0.00	Enter data on total plastic leakage to water system
Total plastic leakage to water system	Kg							Enter reference for note(s) in this column
Total population	habitants							Enter data on total population
Notes:								
• Please note that the unit in this table is "Kg (kilograms) and habitants"								
• If the requested data are not available, please leave the cell blank. If the requested variable is not applicable (the phe								
• Please provide in the Footnotes Section below information on the source and data collection methodology for the values								
Footnotes								
Code	Footnote text							
		Enter note(s) here						

Note: When data are inserted in the Excel file tabs, some cells might turn red. This is to alert users to possible inconsistencies or errors that need to be verified.



Additional data points

If information is available, 3 more very relevant data points can be calculated:

- Per capita MSW generation rate
- MSW composition
- Uncollected waste

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Per capita MSW generation rate

Figure 2.1 Per capita MSW generation rate calculation's tab

Results								
• If the value turns red, please check if it is correct.								
Category	Unit	2000	2001	2002	2003	2004	2005	
% MSW collected out of MSW generated	%	#REF!						
% MSW collected and managed in controlled facilities	%	#REF!						
Per capita MSW generation rate	tonnes/habitants	0.00						
Total population	habitants							
Total uncollected waste	tonnes	0.00						

Enter data of population

Per capita MSW generation rate will appear here

Notes:

- Please note that the units in this table are "% (percentage), tonnes/habitants, habitants and tonnes".

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MSW composition

The SDG indicator 11.6.1 assessment determines the waste composition at the point of generation (i.e. households) and at the point of disposal.

Understanding MSW composition at the beginning and end of the MSW service chain is a useful exercise for several reasons:

- Identifying how the existing recovery/recycling sector is functioning
- It enables further recovery facilities to be identified and planned,
- It helps to triangulate (i.e. test validity and reliability) of the collected data.

Note that MSW also includes waste from non-household sources. However, specific composition analysis on MSW from non-household sources is complex and resource intensive.

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Total uncollected waste

Figure 2.1 Uncollected waste (UNEP, 2021 [Global chemicals and waste indicator review document](#))



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Uncollected waste

Figure 2.1 Uncollected waste

Results

• If the value turns red, please check if it is correct.								
Category	Unit	2000	2001	2002	2003	2004	2005	
% MSW collected out of MSW generated	%	#REF!						
% MSW collected and managed in controlled facilities	%	#REF!						
Per capita MSW generation rate	tonnes/habitants	0.00						
Total population	habitants							
Total uncollected waste	tonnes	0.00						
Notes:								
• Please note that the units in this table are "% (percentage), tonnes/habitants, habitants and tonnes"								

Total uncollected waste will appear here

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Indicator 7: Hazardous generated by type, including e-waste



Hazardous waste generated

This indicator of circular economy corresponds to the SDG 12.4.2 (a) Hazardous waste generated per capita.

The presented methodology for this indicator is based on UNSD's [Metadata for 12.4.2](#), UNEP's [Step-by-step guide: SDG Indicator 12.42: Hazardous Waste Generation \(2023\)](#), UNEP's [Global Chemicals and Waste Indicator Review Document](#) (2021).

SDG target 12.4 aims to achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil to minimize their adverse impact on human health and the environment.

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Hazardous waste generated

LEVEL II INDICATOR

Hazardous waste generated (in tonnes, per km sq. of land area and per capita)

Hazardous waste collected + hazardous waste given by generator to treatment or disposal facilities + estimation of unaccounted for hazardous waste

Hazardous waste generated by type, including e-waste

A breakdown of hazardous waste generated by key type of waste, including e-waste

Hazardous waste intensity of production

Hazardous waste collected + hazardous waste given by generator to treatment or disposal facilities + estimation of unaccounted for hazardous waste

LEVEL III INDICATORS

Hazardous waste intensity of production

Quantity of hazardous waste generated during the reporting year / DMC in the reporting year

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Hazardous waste generated Disaggregation

Indicators described above can be further disaggregated depending on the country's policy information needs.

- Disaggregation at sector level by ISIC codes. Information on the generation of hazardous waste could be collected from industry or municipal level.
- Disaggregation by territorial division. Hazardous waste generation can significantly vary throughout the territory of a country as there might be hotspots of hazardous waste generation, concentrated around industry intensive areas.

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Hazardous waste generated Interpretation

Chemicals are part of everyday life. There are over 140,000 different substances used in all economic sectors globally.

Their benefits are many and their potential to impact human health and the environment if not properly managed.

There is a rapid increase in the generation of hazardous waste. There is also an increase in the complexity of products and unidentified hazardous components.

Hazardous wastes are produced in industrial and manufacturing operations, in non-industrial sectors, including sludge from the healthcare sector; waste-water treatment plants....

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Hazardous waste generated

Data availability (I)

Hazardous generation is highly dependent on national factors, so indicators should be calculated based on country data.

In case of lack of robust country data based on measurements, gap fillers should be used (such as sector-based estimations of quantities based on industry standards, data extrapolation, use of values from internationally accepted publications or databases, etc.).

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Hazardous waste generated

Data availability (II)

At the global level, UNSD collects data from all countries (except those covered by the OECD/Eurostat Joint Questionnaire on Environment Statistics) through the UNSD/UNEP Questionnaire on Environment Statistics (waste section).

Data collection on hazardous waste generation is usually done by the competent authorities designated under the Basel Convention (submission of annual reports in fulfilment of the Convention's obligations)



Hazardous waste generated Data availability (III)

On a national level, data on hazardous waste can be derived from hazardous waste generators.

Data on the generation of hazardous waste should ultimately be reported by generators to environmental authorities.

At a minimum, information on possible generators of hazardous waste can be derived from environmental authorities based on the environmental permits issued for industrial activities.

Hazard waste generation rates could be applied as a gap filler to production data, to estimate the quantity of hazardous waste generated by the specific industry.

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Hazardous waste generated Data availability (IV)

The National Statistical Offices can also be a data source for hazardous waste generation.

Information on exported hazardous waste is generally available through the customs office.

Hazardous waste generation statistics involve a large number of national and sub-national stakeholders which may create discrepancies. To address these possible discrepancies, inter-institutional stakeholder collaboration is always encouraged.

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Hazardous waste generated

Limitations in the use of the indicator

Data on hazardous waste generation may be scarce in some countries, due to a series of factors: lack or insufficient regulations on reporting; limited human, financial and technical resources within government agencies...

A general challenge in hazardous waste statistics is the sensitive public opinion.

Another challenge is related to the chemical transformations that may change their classification to hazardous or non-hazardous, in the time lag from chemical production to it becoming waste.

Inconsistencies may also arise from the way data is reported and then aggregated. In some cases, hazardous waste is reported by volume, with no indication on density.

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Hazardous waste generated

Level II – Hazardous generated



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Hazardous waste generated

The hazardous waste generated would be calculated as follows:

$$\text{Hazardous waste generated} = \text{hazardous waste collected through municipal services or private companies} + \text{hazardous waste given by generator to treatment or disposal facilities} + \text{estimation of unaccounted for hazardous waste}$$

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Section: WASTE

Country:

Contact:

Table R2: Management of Hazardous Waste

• If the value turns red, please

Line	Category	Unit	2002				
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 (=6+7+9+10)	tonnes					
6	Amounts going to:	tonnes					
	Recycling						
7	Incineration	tonnes					
8	of which: with energy recovery	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					

• Please note that the unit in this table is "tonnes (metric tons)".

• If the requested data are not available, please leave the cell blank. If the requested variable is not applicable (the phenomenon is not applicable), please leave the cell blank.

• Please provide in the Footnotes Section below information on the source and data collection methodology for the values provided, such as estimation or extrapolation.



Hazardous waste generated

Level II – Hazardous waste generated by type, including e-waste

Anex I Basel Convention

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Anex I Basel Convention

Y1	Clinical wastes from medical care in hospitals, medical centres and clinics
Y2	Wastes from the production and preparation of pharmaceutical products
Y3	Waste pharmaceuticals, drugs and medicines
Y4	Wastes from the production, formulation and use of biocides and phytopharmaceuticals
Y5	Wastes from the manufacture, formulation and use of wood preserving chemicals
Y6	Wastes from the production, formulation and use of organic solvent
Y7	Wastes from heat treatment and tempering operations containing cyanides
Y8	Waste mineral oils unfit for their originally intended use
Y9	Waste oils/water, hydrocarbons/water mixtures, emulsions
Y10	Waste substances containing or contaminated with PCBs, PCTs, and/or PBBs
Y11	Waste tarry residues from refining, distillation and any pyrolytic treatment
Y12	Wastes from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish
Y13	Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives
Y14	Waste chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on man and/or the environment are not known
Y15	Wastes of an explosive nature not subject to other legislation
Y16	Wastes from production, formulation and use of photographic chemicals and processing materials
Y17	Wastes resulting from surface treatment of metals and plastics
Y18	Residues arising from industrial waste disposal operations
Y46	Wastes collected from households



Hazardous waste generated

Waste streams can also be grouped according to ISIC industrial sectors:

- Agriculture, forestry and fishing (International Standard Classification ISIC codes 01-03)
- Mining and quarrying (ISIC 05-09)
- Manufacturing (ISIC 10-33)
- Electricity, gas, steam and air conditioning supply (ISIC 35)
- Construction (ISIC 41-43)
- Other economic activities excluding ISIC 38, and
- Households

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Figure 2. 1 Hazardous waste by type tab (Adapted from UNEP [Step-by-step guide: SDG Indicator 12.42: Hazardous Waste Generation](#))

Hazardous waste generated by Basel Convention waste streams and UNSD/UNEP Questionnaire on Environment Statistics ISIC codes						
Hazardous Waste by stream, according to the Basel Convention			Unit	2000	2001	2002
				2003	2004	
Y1	Clinical wastes from medical care in hospitals, medical centres and clinics	tonnes				
Y2	Wastes from the production and preparation of pharmaceutical products	tonnes				
Y3	Waste pharmaceuticals, drugs and medicines	tonnes				
Y4	Wastes from the production, formulation and use of biocides and phytopharmaceuticals	tonnes				
Y5	Wastes from the manufacture, formulation and use of wood preserving chemicals	tonnes				
Y6	Wastes from the production, formulation and use of organic solvent	tonnes				
Y7	Wastes from heat treatment and tempering operations containing cyanides	tonnes				
Y8	Waste mineral oils unfit for their originally intended use	tonnes				
Y9	Waste oils/water, hydrocarbons/water mixtures, emulsions	tonnes				
Y10	Waste substances containing or contaminated with PCBs, PCTs, and/or PBBs	tonnes				
Y11	Waste tarry residues from refining, distillation and any pyrolytic treatment	tonnes				
Y12	Wastes from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish	tonnes				
Y13	Wastes from production formulation and use of resins, latex, plasticizers, glues/adhesives	tonnes				
Y14	Waste chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on man and/or the environment are not known	tonnes				
Y15	Wastes of an explosive nature not subject to other legislation	tonnes				
Y16	Wastes from production, formulation and use of photographic chemicals and processing materials	tonnes				
Y17	Wastes resulting from surface treatment of metals and plastics	tonnes				
Y46	Wastes collected from households	tonnes				
NEC	Wastes not elsewhere classified	tonnes				
Total hazardous waste generated			tonnes	0	0	

For each year, enter the amount of hazardous waste generated by type

Enter reference for note here

Total hazardous waste generated will appear here

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Hazardous Waste by source by economic activity, according to ISIC 4		Unit	2000	2001
1.	Agriculture, forestry and fishing (International Standard Industrial Classification (ISIC) codes 01-03)	tonnes		
2.	Mining and quarrying (ISIC 05-09)	tonnes		
3.	Manufacturing (ISIC 10-33)	tonnes		
4.	Electricity, gas, steam and air conditioning supply (ISIC 35)	tonnes		
5.	Construction (ISIC 41-43)	tonnes		
6.	Other economic activities excluding ISIC 38, and	tonnes		
7.	Households	tonnes		
Total hazardous waste generated		tonnes	0	0

Note:

- If the requested data are not available, please leave the cell blank. If a phenomenon is not observed, please indicate this in the Footnotes Section below information.
- Please provide in the Footnotes Section below information on the values provided, such as estimation methods.

Footnotes

Code	Text

For each year, enter the amount of hazardous waste generated by sector

Enter reference to note here

Total hazardous waste generated will appear here

Enter any note here

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e-waste generation

NO.	HAZARDOUS WASTE STREAM/TYPE	WASTE GENERATION RATE	COMMENTS
1	E-waste generated	20 Kg/capita/year out of which: <ul style="list-style-type: none"> 3.1 Kg: temperature exchange equipment 2.3 Kg: screens and laptops 6.5 Kg large household equipment 0.2 Kg: lamps 6.1 Kg: small household equipment 6 Kg small IT equipment 	Data valid for EU countries, year 2016
1	E-waste generated from households	15 Kg/capita/year out of which: <ul style="list-style-type: none"> 7.5 Kg large household appliances 1.5 Kg small household appliances 3Kg - ICT devices 3 Kg - Other consumer electronic waste 	Data valid for EU countries, year 2009

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e-waste generation

NO.	HAZARDOUS WASTE STREAM/TYPE	WASTE GENERATION RATE	COMMENTS
1	E-waste generation rate	<ul style="list-style-type: none"> • 0.05 Kg/capita/day in high income countries • 0.02 Kg/capita/day in upper middle-income countries • 0.01 Kg/capita/day in lower middle-income countries • <0.01 in low income countries 	What a waste 2.0, generation rates per income level
2	Waste engine oils	Data in litres/year/vehicle <ul style="list-style-type: none"> • 4.25 for automobile • 31.5 for minibus • 425 for bus • 92.5 for truck or pickup truck • 31 for tractor 	Inventory from Turkey, year 2006

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e-waste generation

NO.	HAZARDOUS WASTE STREAM/TYPE	WASTE GENERATION RATE	COMMENTS
3	Hazardous household waste	3-5 Kg/capita/year	Usually estimated based on the quantities of waste collected at designated collection points.
4	Healthcare waste	10-25% of generated healthcare waste is hazardous. High income countries ¹ : Total waste generated 0.9-10.7 Kg/occupied bed/day. Out of which infectious waste 0.038-2.79 Kg/occupied bed/day	Estimation of World Health Organization Depends on type of healthcare facility WHO reference includes additional estimates for low-income countries.

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Line	Category	Unit	2000	2001	2002	2003	2004
1	Total E-waste generated	1000 t	0.00	0.00	0.00	0.00	0.00
2	Amounts going to: Large equipment	1000 t					
3	Screens, monitors, and equipment containing screens	1000 t					
4	Temperature exchange equipment (cooling and freezing equipment)	1000 t					
5	Small E-waste	1000 t	0.00	0.00	0.00	0.00	0.00
6	of which: lamps	1000 t					
7	of which: small equipment	1000 t					
8	of which: small IT and telecommunication equipment	1000 t					
9	Total E-waste collected	1000 t	0.00	0.00	0.00	0.00	0.00
10	Amounts going to: Large equipment	1000 t					
11	Screens, monitors, and equipment containing screens	1000 t					
12	Temperature exchange equipment (cooling and freezing equipment)	1000 t					
13	Small E-waste (=14+15+16)	1000 t	0.00	0.00	0.00	0.00	0.00
14	of which: lamps	1000 t					
15	of which: small equipment	1000 t					
16	of which: small IT and telecommunication equipment	1000 t					

Total e-waste generated
will appear here

For each year, enter the
amount of e-waste
generated by type

Enter reference for note
here

Total e-waste collected will
appear here

For each year, enter the
amount of e-waste
collected by type

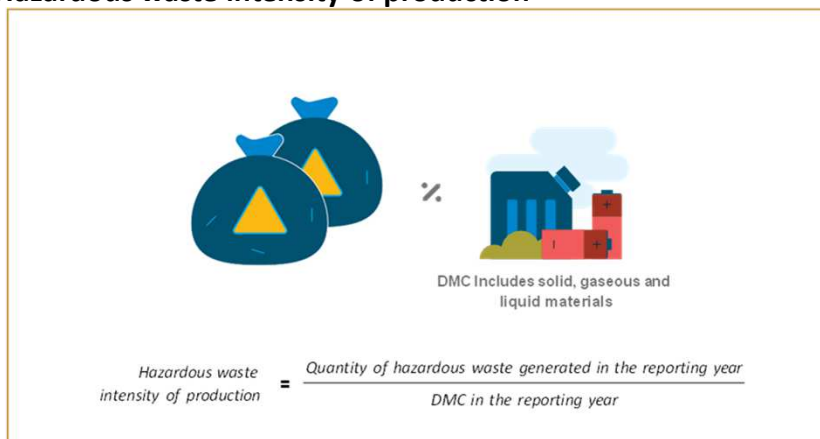
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note here

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Hazardous waste generated

Level III – Hazardous waste intensity of production



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Hazardous waste generated

Hazardous waste intensity of production

Category	Unit	2000	2001	2002
Total hazardous waste generated	Tonnes	0.00	0.00	0.00
Domestic Material Consumption (DMC)	Tonnes			
Hazardous waste intensity of production		#DIV/0!	#DIV/0!	#DIV/0!

Notes:

- Please note that the units in this table are "tonnes".
- If the requested data are not available, please leave the cell blank, then half the unit of measurement.
- Please provide in the Footnotes Section below information on the source and data collection.

Footnotes

Code	Footnote text

For each year, enter the DMC

Enter reference for note here

The hazardous waste intensity of production will appear here

Enter any note here

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Thank you



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