

I-4: Final waste disposal

General description

a) Brief definition: The share of the total amount of waste generated – in total, broken down by sector (industrial and municipal waste) and broken down by negative impact (hazardous waste) – that is finally disposed of by:

- (1) incineration (without energy recovery or use as a fuel),
- (2) landfilling on a controlled or non-controlled site,
- (3) composting,
- (4) reuse or recycling,
- (5) other disposal.

b) Measurement unit: Percentage (%).

Context – Relation to other indicators from the Guidelines

This indicator relates to indicators “I-1: Waste generation”, “I-2: Transboundary movement of hazardous waste” and “I-3: Waste reuse and recycling”.

Relevance for environmental policy

a) Purpose: The indicator provides a measure of the pressure on the environment and the response to the efficiency of the waste management system.

b) Issue: The way a country manages its waste has significant long-term implications for public health, the economy and the natural environment. Therefore it is essential to promote an environmentally sound waste treatment and disposal programme. Generally, adequate waste management indicates that the authorities are aware of the health and environmental risks and that they support or impose suitable measures to prevent or reduce waste. Reducing the amount of waste that needs to be disposed of reduces the demand for natural raw materials, leading to a reduction in resource extraction. For waste that is not suitable for reuse or recycling, incineration is often considered the next-best option (provided that the incineration plants comply with legislation for emission standards and that energy from waste incineration is recovered), as it reduces the overall volume of waste. If reuse, recycling and incineration are excluded, waste should be landfilled on a controlled site, with suitable technical control in line with national legislation. Controlled landfilling requires adherence to a permit system and technical control procedures in compliance with the national legislation in force. Other final disposal methods may include permanent storage.

c) International agreements and targets:

Subregional level: The EECCA Environment Strategy calls for the development of inter-sector waste management action plans. In the EU, there are two basic directives on final disposal of waste: the Directive on the landfill of waste and the Directive on industrial emissions (IPPC), which includes amongst others waste incineration. The Waste Framework Directive provides for increased efforts to prevent and reduce waste generation, recover wastes and develop new techniques for final disposal of waste.

Methodology and guidelines

a) Data collection and calculations: To measure the proportion of waste disposed of by different methods, a combination of several methods can be used. To avoid double counting, it is important to be aware of where in the waste flow the data are collected. Municipalities or industries should have data available on waste they manage. Also, waste management and disposal facilities such as incineration plants and landfills should be aware of the amounts they are processing. Waste collection companies are another potential source of data. However, data can be scattered, and their collection and compilation for indicator purposes can be time-consuming. Calculation of the waste incineration rate should consider only waste incinerated through the registered waste management

system. Households or industries incinerating their own waste should not be included. Calculation of the landfill rate usually does not consider waste disposed of at illegal dumps.

b) Internationally agreed methodologies and standards: The UNSD/UNEP Questionnaires on Environment Statistics provides a methodology for calculating final disposal. In the EU, waste statistics (including waste generation and waste disposal (final disposal and recovery)) are dealt with by a specialized regulation (2150/2002).

Data sources and reporting

In EECCA countries, data on final disposal of waste are collected by ministries responsible for urban affairs and environment and by state statistical agencies. Data on the generation and disposal of industrial waste are usually collected by the authorities responsible for the environment, while data on municipal waste generation and disposal are collected by state statistical agencies. Special statistical forms are used. Data on waste generation and disposal are published in national state-of-the-environment reports and in statistical yearbooks in some countries.

References at the international level

- UNSD/UNEP Questionnaires on Environment Statistics 2004, 2006, 2008, 2010 (waste section);
- Basel Convention for the Control of Transboundary Movement of Hazardous Wastes and Their Disposal;
- United Nations. International Standard Industrial Classification of All Economic Activities. Series M, No. 4, Rev. 3.;
- Europe's Environment: The Third Assessment. (EEA, 2003) (Kiev Assessment);
- Europe's Environment, The 4th Assessment, EEA 2007;
- The European Environment-State and Outlook 2010: Synthesis, EEA 2010;
- Environmental Indicator Report 2012, EEA 2012;
- Regulation (EC) No. 2150/2002 of the European Parliament and of the Council of 25 November 2005 on waste statistics;
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Waste Framework Directive);
- Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste.
- Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
- UNSD: <http://unstats.un.org/unsd/environment/>;
- Basel Convention: <http://www.basel.int/> ;
- European Commission – Waste policy: <http://ec.europa.eu/environment/waste/index.htm>;
- EUROSTAT: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>;
- EIONET: <http://dd.eionet.europa.eu/datasets.jsp>;
- EEA: <http://www.eea.europa.eu/data-and-maps/indicators/>.