



**SDG 11.6.1**  
in regard to

**Quantity of municipal waste  
collected by public utilities**

The indicator follows the achievement of the goal: avoiding and reducing waste generation

- **Sub-indicators:**
- O\_2\_1 Percentage of inhabitants covered by public waste disposal
- O\_2\_2. Quantity of waste from households collected by public utilities
- O\_2\_3 Quantity of household waste by average personal consumption from households
- O\_2\_4 Composition of municipal waste
- O\_2\_5 Quantity of waste from service activities collected by public utilities



# Coverage

- Regulation 2150/2002 on waste statistics (Regulation (EC) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics)
- International recommendations and Manual on waste statistics (Eurostat).
- Multiannual Statistical Program and Annual Plan of Statistical Activities
- Statistical classification of waste  
([http://bhas.ba/Arhiva/Klasifikacije/WST\\_CLA\\_2009\\_005\\_01-BH.pdf](http://bhas.ba/Arhiva/Klasifikacije/WST_CLA_2009_005_01-BH.pdf).)
- Lista otpada  
([http://bhas.ba/Arhiva/Klasifikacije/WST\\_CLA\\_2009\\_005\\_01-BH.pdf](http://bhas.ba/Arhiva/Klasifikacije/WST_CLA_2009_005_01-BH.pdf).)



## Source and form of data collection

Data on municipal waste are collected through statistical surveys that are adapted to international standards and national needs in the area of waste statistics:

- - Annual survey on municipal waste collectors (survey KOM-6aS)
- - Annual survey on waste brought to landfill sites (survey KOM-6aD)- and including the amount of waste that citizens brought to landfills
- - Annual survey on collected waste from production and service activities (OTP)
- - Annual survey on waste recycling / disposal (OTP-P)- data on waste vehicles (EWC-Stat. 08.120 i 08.121)



## Annual survey on municipal waste collectors (survey KOM-6aS)

- reporting units are business entities, who have been granted the right to waste collection, regardless of whether they are only waste collectors or at the same time manage the landfill site.
- waste from group 20 (Municipal waste - household waste and similar commercial, industrial and institutional waste) and 15 01 (Packaging - including separately collected municipal waste packaging) from the List of Waste
- In 2017, 155 reporting units were covered, and the response rate was 96%.



## Annual survey on waste brought to landfill sites (survey KOM-6aD)

- reporting units are the business entities that manage the municipal landfill
- In 2017, 124 reporting units were covered, the response rate was 99%.



# Annual survey on collected waste from production and service activities (OTP)

- Reporting units are business entities and parts of business entities that have 10 or more employees and are registered in sectors B by the Classification of Activities - Mining and quarrying, C - Manufacturing, D - Production and supply of electricity, gas, steam and air conditioning, F - Construction, G - Wholesale and retail; repair of motor vehicles and motorcycles (without 46.77 - Wholesale of waste and scrap), H - Transportation and storage, I - Accommodation and food service activities (hotel industry and catering).
- waste from group 20 (waste similar commercial, industrial and institutional waste)



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= (municipal solid waste that is regularly collected and with adequate final disposal) / (**total municipal solid waste**, by cities)





# Treatment of missing values

For those municipalities where the percentage of population covered by the public waste collection system is not exhaustive, the statistical estimation method is used to calculate the missing values of waste quantities

*Total generated municipal waste = total amount of collected waste \*  $\alpha$*

- $\alpha$  = correction factor (estimated value)
- $\alpha$  = (total population / population covered by public collection system) \*  $\beta$
- $\beta$  = impacts that are important for estimating the amount of waste generated by the population that is not covered by the public waste collection system



## Limitations and Challenges

- Methodology is needed to estimate the morphological composition of municipal waste and determine other physical and chemical characteristics of waste (density, heat power, organic / inorganic matter content) in order to calculate emissions of greenhouse gases from waste.
- Inadequate waste disposal
- The new principle of regional waste management
- Informing the public using official statistical data, as well as cooperation between municipalities and utilities are essential for an efficient waste management system



# The amount of municipal waste collected by the public collection system, BiH, tons

	2016	2017
<b>TOTAL</b>	920.478	914.232
<b>Separately collected types of waste<sup>1)</sup></b>	33.517	38.175
<b>Waste from gardens and parks <sup>1)</sup></b>	25.639	26.499
<b>Other municipal waste<sup>2)</sup></b>	844.111	830.567
<b>Ppackaging waste</b>	17.211	18.991

Table 3. The amount of municipal waste collected by the public collection system, BiH, tons

•Waste from gardens and parks (biodegradable waste, soil, stone and other non-biodegradable waste)

•Other municipal waste (mixed municipal waste, waste from market, street cleaning, sewage treatment, cabbage waste)



# Source of collected municipal waste, BiH, tons

	2016	2017
UKUPNO	920.478	914.232
Household waste	706.450	700.062
Waste from productive and service activities	187.232	188.494
waste from public utility services	26.797	25.676



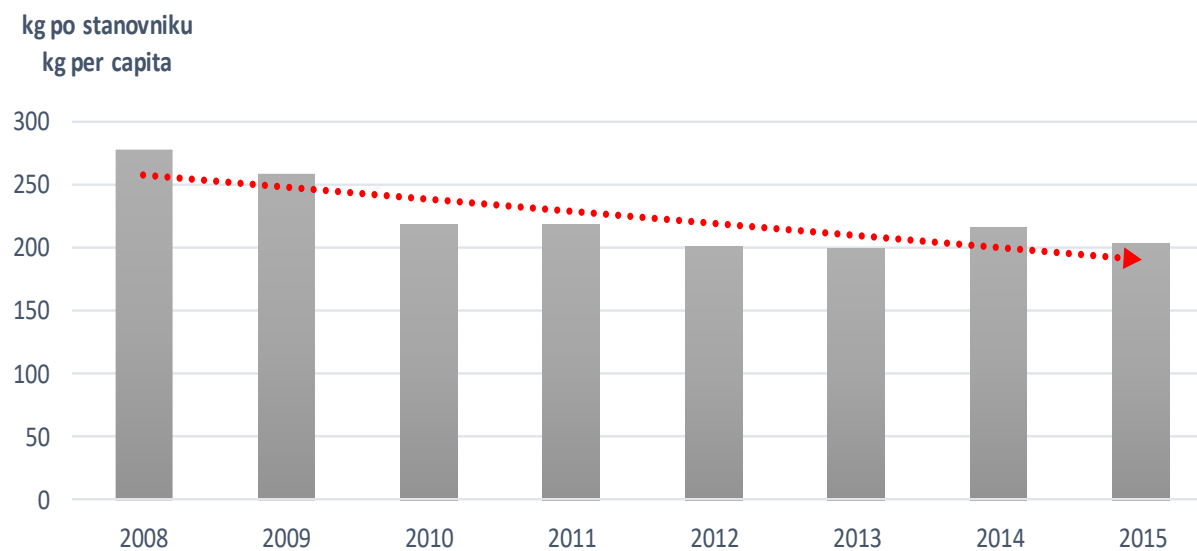
# Treatment with municipal waste, BiH, tons

	2016	2017
UKUPNO <sup>1)</sup>	952.975	950.599
Waste permanently disposed in landfill	946.775	945.537
waste is otherwise disposed <sup>3)</sup>	510	1.324
Treated waste <sup>4)</sup>	5.691	3.738



Table 6. Quantities of generated municipal waste and household waste, kg per capita

<i>year</i>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b><i>Municipal waste</i></b>	356	328	332	340	340	337	378	355
<b><i>From that:</i></b>								
<b><i>Household waste</i></b>	277	259	218	218	202	200	216	203



Thank you

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