

BIJELJINA, Bosnia and Herzegovina

City Information

Population: about 115,000

Area (km²): 734 km²

Climate: moderate-continental

Main Economic Activities: agriculture, industry, forestry, construction, craft production

City website: <https://www.gradbijeljina.org/en/>



Country Information

Population: 3.5 million

Area (km²): 51,209.2 km²

Economy and GNI/Capita: upper middle income

Main Economic Activities: industry, agriculture, processing industry, energy production, construction, tourism.

Government Agencies responsible for guidance on waste legislation

- Ministry of Foreign Trade and Economic Relations of BiH (<http://www.mvteo.gov.ba/>)
- Ministry of Spatial Planning, Civil Engineering and Ecology of RS (Republic of Srpska) (<http://www.vladars.net/eng/vlada/ministries/MSPCEE/Pages/default.aspx>)
- Ministry of Environment and Tourism of FBiH (Federation of Bosnia and Herzegovina) (<http://www.fmoit.gov.ba/>)
- Government of BD (Brčko District) (<http://www.bdcentral.net/index.php/sr>)

The key institutional actors for planning and preparation of legislation in the field of waste management are the Ministry of Environment and Tourism FBiH and the Ministry of Spatial Planning, Civil Engineering and Ecology of RS.

MSW Sector Overview: City Level

Classification of MSW: includes mixed household waste as well as waste from restaurants, nonhazardous industrial waste, demolition waste, etc.

MSW Generation: 38,000 t/year or 330 kg/year per capita

Collection Coverage and Type: approximately 75% of the waste generated is collected and disposed on sanitary landfill. Waste from other streams (tires, medical, industrial, hazardous waste, etc.) is not mixed with household waste. Separation of recyclables from household waste is not introduced in larger scale in the city. Small amount of recyclables are mostly separated by informal sector and waste producers itself (stores and shopping centers, restaurants, food producers, etc.), in total: about 5%.



Waste Composition

Composition of municipal waste (the annual average values) for the City of Bijeljina (2015-2016):

Bijeljina Waste category	Mass share				
	WINTER	SPRING	SUMMER	AUTUMN	AVERAGE
Garden waste	1.53%	8.27%	18.75%	12.26%	10.20%
Other biodegradable waste	27.69%	26.54%	40.93%	33.27%	32.11%
Paper	6.73%	14.26%	6.01%	5.64%	8.16%
Cardboard	5.94%	5.75%	4.39%	4.51%	5.15%
Composite materials	0.67%	0.90%	0.93%	0.51%	0.75%
Glass	4.31%	3.93%	2.34%	2.95%	3.38%
Metals (ferrous)	1.08%	0.37%	0.15%	0.27%	0.47%
Aluminum (non-ferrous)	0.24%	0.82%	0.73%	0.53%	0.58%
PET	2.63%	6.63%	2.48%	1.26%	3.25%
Other plastic packaging waste	1.47%	0.89%	2.48%	0.93%	1.44%
Plastic bags	7.62%	8.69%	7.21%	4.17%	6.92%
Other plastic / hard plastic	1.83%	1.65%	0.55%	1.15%	1.30%
Textile	4.02%	12.77%	5.15%	5.16%	6.77%
Diapers	2.18%	2.12%	3.22%	4.97%	3.12%
Construction and demolition materials	1.26%	1.02%	0.02%	0.21%	0.63%
WEEE	0.32%	0.00%	0.00%	0.01%	0.08%
Medical waste	0.13%	0.33%	0.00%	0.04%	0.12%
Leather	1.33%	0.41%	0.54%	0.37%	0.66%
Wood	1.44%	1.05%	0.81%	3.27%	1.64%
Other special waste streams	0.52%	0.09%	0.00%	0.00%	0.15%
Fine fraction < 10 mm	27.06%	3.50%	3.30%	18.51%	13.09%

Waste Management Practice: Waste is collected and taken to a sanitary landfill.

Formal Waste Sector:

- waste collection and transportation:
 - o 1. AD “KOMUNALAC”, Bijeljina (public utility company) and
 - o 2. “DULE TRGOTRANS” DOO, Bijeljina (private company)
- regional landfill: JP REGIONALNA DEPONIJA “EKO-DEP” doo, Bijeljina (public utility company)

Informal Waste Sector: No data available, since the informal sector makes up a small part of the waste sector.

Financing of MSW: through household fees only. The waste collection companies are in charge for the fees collection.

Waste Management Challenges

There are several areas in SWM in the City of Bijeljina that needs to be improved:

1. Increase the coverage of the collection of municipal waste to 100% of the area
2. Improve the waste collection system by introducing primary separation of SW in households
3. Further development of capacities of the regional sanitary landfill
4. Exploitation of landfill gas and useful components from municipal waste
5. Treatment of municipal waste before landfilling

However, the first three areas have priority.

While the timelines have not been specified by the Law on Waste Management and by-laws, the deadline set by the waste management strategy is 2025. However, having in mind the need for environmental protection and human health, the City of Bijeljina intends to resolve its priorities considerably earlier.

Unfortunately, the waste management capacities of the City of Bijeljina are not sufficiently developed, the available technical resources are small and it is necessary to work on finding available sources of financing for the necessary investments.

Technical Assistance

At this moment, the most appropriate assistance for the improvement of waste management in the City of Bijeljina would be the transfer of knowledge in the field of waste collection and transportation: collection of waste in rural areas where there is a small population density and introduction of primary waste separation.

An insight into case studies and good practice of cities that are similar to the City of Bijeljina could contribute to the improvement of institutional capacity in waste management.

General description and overview of common practice

BiH is a scarcely populated country (approximately 3.5 million inhabitants over 51,200km²) divided into 143 municipalities or an average size per municipality of about 25,000 inhabitants. Consequently, the generated waste quantity per average municipality is about 7,300 t/y of which approximately 70% is currently collected.

Waste Generation (per capita/year)

Waste generation in 2013 (tons/year)

	FBiH	RS	BD
Population	2,219,220	1,117,340	85,320
Waste generation	635,640	324,660	25,000
Collection coverage	68%	64%	80%

Note: these figures have to be taken with some caution as landfills are lacking truck weighbridges and quantities are estimated. Field tests indicate a waste generation rate in urban areas of 1.05kg/cap/day and 0.55 kg/cap/day in rural areas with an overall average of 0.8kg/cap/day. The average waste collection coverage is approximately 67% and thus 33% is illegally dumped.

Collection Coverage

The average waste collection coverage is approximately 67% and thus 33% is illegally dumped.

Number of Landfills/MSW Disposal rate (tonnes/year)

Over the last decade a total of eight regional landfills were established including Sarajevo, Mostar, Zenica and Livno in FBiH, and Banja Luka, Prijedor, Bijeljina and Zvornik in RS. Landfills in Živinice (FBiH) and Dobož (RS) are under construction. Although municipalities signed an association agreement to bring their waste to the regional landfill in reality it is not always happening mainly because of the high transport costs and thus these landfills have difficulties in receiving sufficient revenues needed for repaying their loans. A total of 53 municipalities out of a total of 143 municipalities are currently disposing at regional landfills of which 28 in FBiH and 25 in RS. Apparently, there is no enforcement for using the regional landfills although agreements were signed.

Recycling Rate

The total separated quantity is estimated at about 5% i.e. 3% being direct purchased from the CII sector and 2% from household waste collection.

Waste management of Organic fraction (composting, anaerobic digestion)

Separation and treatment of organic waste is occasional, as there is no demand for compost.

Energy Recovery Rate

There is no energy recovery. Landfill gas collected on sanitary landfills is utilized on gas torches.

City Level

Aimed at improving Waste Management in General

WM Plan of the City of Bijeljina (dated 2011)

Aimed at addressing Climate change and reducing SLCPs through waste related activities

There is no specific document in the City specifically addressing Climate change and reducing SLCPs through waste related activities



Country Level

Aimed at improving Waste Management in General

WM Strategy of the Republic of Srpska (dated 2015)

Environmental Protection Strategy of FBiH (dated 2008)

WM Plan of FBiH (dated 2015)

Aimed at addressing Climate change and reducing SLCPs through waste related activities

There are no specific documents specifically addressing Climate change and reducing SLCPs through waste related activities

City Level

Legislation governing MSW management

- *Decision on Communal Order (Official Gazette of the City of Bijeljina 5/13)*
- *Decision on Waste Collection, Transportation and Disposal (Official Gazette of the City of Bijeljina 5/13)*

Guidance for MSW management (after legislation, before inspection activities)

- *Ecological licenses for the communal companies*
- *Internal Rule Books on WM of the communal companies and the regional landfill*

Inspection activities/supervision and enforcement of legislation

Supervision of the City Inspectorate and the Department of Communal Police

National Level

Legislation governing MSW management

List of legislation governing MSW in RS is following:

- *Law on Environmental Protection (Official Gazette of RS, 71/12, 79/15)*
- *Law on Waste Management (Official Gazette of RS, 111/13)*
- *Law on Communal Activities (Official Gazette of RS, 124/11)*
- *Law on Communal Police (Official Gazette of RS, 28/13)*
- *Law on Waters (Official Gazette of RS, 50/06)*
- *Law on Spatial Planning and Construction (Official Gazette of RS, 4/13)*
- *Law on Air Protection (Official Gazette RS, 124/12)*
- *Law on Land Protection (Official Gazette of RS, 53/02)*
- *Law on Geological Surveys (Official Gazette of RS, 51/04 and 75/10)*
- *Rulebook on the conditions for the discharge of wastewater into surface waters (Official Gazette of RS, 44/2001).*
- *Decree on classification of waters and categorisation of watercourses of RS (Official Gazette, 44/2001).*
- *Rulebook on waste categories with a catalogue (Official Gazette RS, 39/05)*
- *Rulebook on the implementation of the law on issuing waste management licenses*
- *Rulebook on conditions for submitting an application for issuing the environmental permit*
- *Rulebook on types of waste and waste management activities for which a permit is required (Official Gazette of RS, 39/05)*
- *Decree on projects for which the environmental impact assessment is carried out (Official Gazette of RS, 7/06)*
- *Decree on plants that can be built and put into operation only if they have the environmental permit (Official Gazette of RS, 7/06)*

List of legislation governing MSW in FBiH is following:

- *Law on Environmental Protection (Official Gazette of FBiH, 33/03, 38/09),*
- *Law on Waste Management (Official Gazette of FBiH, 33/03 and 72/09),*
- *Law on Waters (Official Gazette of FBiH, 70/06),*

- Rulebook on plants and installations for which environmental impact assessment is required, and plants and installations that can be built and put into operation only if they have an environmental permit (Official Gazette 19/04),
- Rulebook on categories of waste with lists (Official Gazette of FBiH, 9/05),
- Rulebook on issuing a license for small business activities in waste management Official Gazette of the Federation of BiH, 09/05
- Rulebook on the requirements for transfer of obligations from the producer and seller to the operator of the waste collection system Official Gazette of the Federation of BiH, 09/05
- Rulebook determining the treatment of hazardous waste that is not on the waste list or whose content is unknown Official Gazette of the Federation of BiH, 09/05
- Rulebook on the content of the waste adjustment plan for existing waste treatment and disposal facilities and activities undertaken by the competent authority Official Gazette of the Federation of BiH, 9/05
- Decree on types of financial guarantees to ensure transboundary transport of hazardous waste Official Gazette of the Federation of BiH, 41/05
- Decree on financial and other guarantees for covering the costs of the risk of possible damage, cleaning and procedures after closing the landfill Official Gazette of the Federation of BiH, 39/06
- Decree on selective collection, packaging and labelling of waste Official Gazette of the Federation of BiH, 38/06)
- Decree regulating the obligation of reporting to operators and producers of waste on the implementation of the program for supervision, monitoring and keeping records according to the requirements referred to in the permit Official Gazette of the Federation of BiH, 31/06)
- Rulebook on the form, content and procedure of notification of important characteristics of products and packaging by the manufacturer Official Gazette of the Federation of BiH, 6/08
- Rulebook on animal waste and other non-hazardous materials of natural origin that can be used for agricultural purposes Official Gazette of the Federation of BiH, 8/08
- Rulebook on the management of medicinal waste Official Gazette of the Federation of BiH, 77/08
- Decree on fees for plastic bags, dated 14.01.2014
- Decree on the requirements for discharging wastewaters into natural recipients and public sewerage systems (Official Gazette of FBiH, 04/12),
- Decree on buildings and requirements of importance for the Federation of Bosnia and Herzegovina and buildings, activities and actions that can significantly affect the environment, life and health of people of the Federation of Bosnia and Herzegovina and beyond, for which the urban planning permit is issued by the Federal Ministry of Physical Planning (Official Gazette of FBiH, 85/07),
- Law on Air Protection (Official Gazette of FBiH, 33-03)
- Law on Amendments to the Law on Air Protection (Official Gazette of FBiH, 4/10)
- Law on Protection against Noise Official Gazette of FBiH, 110/12
- Law on spatial planning and land use at the level of the Federation of Bosnia and Herzegovina ("Official Gazette of the Federation BiH", 2/06, 72/07, 32/08, 4/10, 13/10 and 45/10).

Guidance for MSW management (after legislation, before inspection activities)

WM licenses for communal companies and the regional landfill

Ecological license for the regional landfill

Inspection activities/supervision and enforcement of legislation

Republic of Srpska: supervision of the Ministry of Spatial Planning, Civil Engineering and Ecology of RS and Administration of Inspection Affairs

Federation of BiH: supervision of the Ministry of Environment and Tourism of FBiH and Administration of Inspection Affairs

Current Projects or Activities Aimed at Reducing SLCP Emissions

Activities aimed at reducing SLCP emissions: Regional sanitary landfill in Bijeljina is equipped with a system for landfill gas collection. Collected gas is transferred to the torch on the landfill and safely utilized.

Apart from this, a small portion of the collected gas is used for heating up the workshop the regional landfill, via IC heaters.

Future projects: JP "EKO-DEP" is looking for grant funds to extend use of landfill gas as an energy to heat up all premises at the regional landfill.

Key Stakeholders

1. City of Bijeljina (<https://www.gradbijeljina.org/en/>)
2. JP REGIONALNA DEPONIJA "EKO-DEP" doo, Bijeljina (www.ekodep.com)

Additional Useful Information

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Contacts

Waste Initiative City Contact:

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Waste Initiative Country Contact

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Municipal Waste Representative (if different from the city contact for the Waste Initiative)

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Other Municipal Representative

Tomica Stojanović, Head of the Department for Housing and Communal Affairs and Environment, the City of Bijeljina