

BOSNIA AND HERZEGOVINA

Country Information

Population: 3.5 million

Area (km²): 51,209.2 km²

Economy and GNI/Capita:

Classification according to WB: Upper middle income

GNI/Capita: 4,940 USD (2017)

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 (Bosnia and Herzegovina) (<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

General description and overview of common practice

The institutional architecture of the SWM sector in BiH is divided over several levels such as the (i) State level with the Ministry of Foreign Trade and Economic Relations (MoFTER) as the overall coordinator of all activities and harmonization of plans of the entity bodies, (ii) entity level (FBiH, RS) and the level of BD each having its own Parliament/Assembly and Ministries and the (iii) Cantonal level including the 10 Cantons in FBiH and (iv) the local level consisting of about 143 municipalities.

Since 2000 the municipal waste management sector in BiH is under reform driven by the policy framework of the European Union (EU). As a potential candidate country for EU accession Bosnia and Herzegovina (BiH) has initiated harmonization of its legislation with that of the EU. Both entities, Federation of Bosnia and Herzegovina (FBiH) & Republika Srpska (RS) and Brcko District (BD), have prepared Waste Management Strategies (WMS).

The main objectives of the WMSs are related to the reduction of risks for environment and human health, reduction of waste disposed in landfills and strengthening of the legal, institutional and economic framework. FBiH and RS have partially implemented a regional disposal system with financing from the World Bank and the EU-IPA. Despite progress made in solid waste management (SWM), BiH continues to experience various difficulties such as high operational costs, lack of financing for investments, low waste collection coverage, very low waste separation, waste disposal at non-sanitary landfills, legislation not fully harmonized with EU Directives, weak institutional framework, insufficient staff capacity at all levels and low level of public awareness with respect to SWM. The Entity Governments and BD are committed to improve the current situation and enhance the performance of the sector in a more economically, financially and environmentally sustainable manner.

- **Waste Generation (per capita/year):**

Waste generation in 2013 (tons/year)

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

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.

- **Classification of MSW:** Not only household waste is classified as MSW, but also wastes from restaurants, nonhazardous industrial and hospitals waste, demolition waste, etc.
- **Waste Composition:** Composition of municipal waste (the annual average values) for the City of Bijeljina (2015-2016):

Bijeljina	Mass share				
Waste category	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%

- **Collection Coverage and Type:** 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 Management Practice

- **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.

Formal Waste Sector

Waste collection, transport and landfill management are carried out by municipal companies. Waste collection is mostly by the bring system using 1,100 litre containers. Some municipalities use also 120/240 litre containers for door-to-door collection and large skips (5-8m³) mainly for non-hazardous industrial waste collection. Collection frequency depends on the municipality but can vary from 1x week up to 5x week. Collection coverage in urban areas is 90% and in rural areas average 40%. The municipal companies operate also their own landfill, which is normally a dumpsite not complying with the most essential environmental criteria such a bottom liner, gas collection and leachate treatment. Landfill operations are poor due to lack of compaction equipment, covering of the waste layers, waste acceptance procedures resulting in all kind of wastes being dumped. Municipal landfills are not provided with truck weighing scales and the waste quantity is estimated on basis of the truck volume. In addition to the official municipal landfills there are many illegal dumpsites.

Informal Waste Sector

The informal sector makes a small part of the waste sector and is mainly focused on collection of scrap metal, PET and paper in urban areas.

Financing of MSW

Mainly through household fees and (in very small part) through grants of environmental funds of FBiH and RS.

Waste Management Challenges

- (i) Setting up of a reliable statistical information system by improving the cooperation between the various organizations collecting statistical information, introducing a practical reporting system based on weight-based data;
- (ii) Improvement of the waste collection coverage from 67% up to 85-90% by renewing and extending the collection fleet;
- (iii) Further harmonization of legislation with EU Directives meeting the affordability principle and strengthening the enforcement of its implementation;
- (iv) Reduction of cost increases as a result of shifting up in the waste hierarchy by creation of more efficient waste collection systems based on regionalization and reducing the costs for waste collection companies;
- (v) Strengthening of the institutional framework at Entity (ministry), Cantonal (cantonal ministry) and Local (municipality) level by reforming the organizational structure such as the creation of specialised SWM sections;

- (vi) Involving all stakeholders in the development of improvements especially the Association of Municipalities and the professional umbrella organizations such as BASWA and Association of Communal Utilities for advice and dissemination of information;
- (vii) Introduction of regular public communication and awareness programmes by municipalities including budget allocation obligation for this activity;
- (viii) Creation of financially sustainable services by reforming the tariffs and the tariff collection system;
- (ix) Revisit and enhance the regional landfill concept and allocation of the service areas based on the experience gained during the past 17 years;
- (x) Introduction of environmental taxes to enforce compliance with the objectives of the Reform Plan such as introduction of environmental tax on usage of non-compliant landfills;
- (xi) Preparation of investment projects to improve collection, transport, separation and disposal of MSW including capacity building at all levels.

Plans, Strategies, Policies (incl. financial instruments) & National Objectives

Country Level

Aimed at improving Waste Management in General

Both entities (FBiH and RS) and Brcko District have prepared Waste Management Strategies (WMS) and FBiH also prepared a Waste Management Plan (WMP) for implementation (WMP in RS is under development). The main objectives of the WMSs are related to the reduction of risks for environment and human health, reduction of waste disposed in landfills and strengthening of the legal, institutional and economic framework. FBiH and RS have partially implemented a regional disposal system with financing from the World Bank and the EU-IPA.



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

Above stated documents do not address climate change and reducing SLCPs directly, but through prevention of air pollution.

Legislation

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)

Various municipal regulations and decisions that differ from municipality to municipality.

Inspection activities/supervision and enforcement of legislation

Inspection, supervision and enforcement of legislation are conducted through different activities and by different government and local institutions:

- *Republic of Srpska: Ministry of Spatial Planning, Civil Engineering and Ecology of RS, RS Inspectorate (Urban Planning, Construction and Environment Protection Sector), Public Institution "Vode Srpske", municipal inspectorate, municipal communal police*
- *Federation of BiH: Federal Ministry of Environment and Tourism, Federal Administration for Inspection Affairs, Water Resources Agency of the Sava River, municipal inspectorate, municipal communal police*

Current Projects or Activities Aimed at Reducing SLCP Emissions

Activities related at reducing SLCP emissions in WM sector are mainly related to conduction of measurement for prevention of air pollution, through construction of modern sanitary landfills equipped with landfill gas collection systems and flares, daily covering of disposed waste, recycling of organic waste in agricultural production (especially in rural areas), etc.

Key Stakeholders

Ministry of Spatial Planning, Civil Engineering and Ecology of RS
(<http://www.vladars.net/eng/vlada/ministries/MSPCEE/Pages/default.aspx>)

Federal Ministry of Environment and Tourism (<http://www.fmoit.gov.ba/>)

Regional landfills in RS: Bijeljina (<http://ekodep.com/>), Banja Luka (<http://www.dep-ot.com/>), Prijedor (<https://www.komunalneusluge.com/>) and Zvornik from RS. Regional landfill in Doboj is in implementation stage.

Regional landfills in FBiH: Sarajevo (<http://www.rad.com.ba/>), Zenica (<http://www.rdm.ba/>), Mostar (<http://www.jpdeponija.ba/>), Livno (<http://www.komunalno-livno.ba/>). Regional landfill in Živinice is in implementation stage.

Municipal utility companies for collection and transportation of waste from RS and FBiH.