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MINISTARSTOVO SREDINE I PROSTORNONG PLANIRANJA
MINISTRY OF ENVIRONMENT AND SPATIAL PLANNING

KEPA
KOSOVO ENVIRONMENTAL PROTECTION AGENCY



MUNICIPAL WASTE MANAGEMENT IN KOSOVO

STATUS REPORT

Prishtinë
Priština
2018

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Report title:	Municipal Waste Management in Kosovo, Status report
Authors:	Ministry of Environment and Spatial Planning- Kosovo Environmental Protection Agency in collaboration with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Edition:	Prishtinë/Priština, May 2018

FOREWORD



Dear readers!

Sustainable waste management remains one of the main challenges to improving the state of environment in Kosovo. Despite achievements and progress made in strengthening legal and program foundations for the waste sector and despite improvement of waste management infrastructure, there is still commitment to be made and work to be done in improving the situation in the waste sector.

We are aware that an effective and sustainable coordination and cooperation between responsible institutions and organizations at all levels is required for the improvement of waste management. Accordingly, in addition to the engagement of legislative and executive institutions, an important role is also played by waste management companies, companies that manage sanitary waste landfills, civil society organizations, donors and other stakeholders. Therefore, in order to better coordinate with all actors and donors, we have also established the Steering Committee for the Waste Management Sector, which aims to coordinate activities, projects and donations for this sector.

At present, difficulties and problems in municipal waste sector are evident in all processes of their management, starting with collection, separation and recycling and up to treatment and disposal. Yet, we strongly believe that with more engagement and better coordination, Kosovo can manage to build a modern and functional municipal waste management system.

Above all, we need to change our perception of and approach to waste as a society. Good waste management practices treat waste as a resource, and, besides being managed, waste is also used as an important source of development. Therefore, time has come, in Kosovo as well, to think beyond concepts of waste collection, treatment and disposal. Time has come for waste and waste sector to be an important part of national sustainable development strategy, for waste to be an important part of green and circular economy and for waste to be the source of energy or even a raw material in many production processes.

Above all, improving waste management will help achieve the primary goal of the Ministry of Environment and Spatial planning, which is to improve and maintain our environment and natural resources for us and for the generations to come.

Dr. Sc. Albena Reshitaj, Minister of Ministry of Environment and Spatial Planning

ACKNOWLEDGMENTS



Dear readers and associates!

This is the Report on the State of Municipal Waste Sector. The report was prepared by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, in the framework of performing the duties and responsibilities of reporting on the state of waste as per Law on Environmental Protection Law and Law on Waste.

The main aim of the Report is to inform the public about the state of municipal waste in Kosovo, but it also aims to contribute to the improvement of waste management policies. The report will also serve as a proper guide to project orientation and donor support in the municipal solid waste sector.

The report contains information on legal, strategic and institutional frameworks in the municipal waste sector and the overall state of waste, including municipal waste generation, waste collection service, the amount of disposed waste and the status of sanitary waste landfills.

The data introduced in this report was collected during the field work done by AKMM teams i.e. data provided by regional public companies, Kosovo Landfill Management Company (KLMC) and other governmental and non-governmental institutions.

We consider that boosting cooperation between institutions responsible for waste management will significantly improve the process of data collection, exchange and processing as well as reporting on the state of environmental sector.

On this occasion, KEPA expresses its gratitude to all governmental and non-governmental institutions, economic operators, donors, and various enterprises for their cooperation in finalizing this Report.

In particular, we thank the German government, that throught the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is supporting the publication of this report and for the continued support to KEPA activities.

Dr. Sc. Ilir Morina, Kosovo Environmental Protection Agency
Chief Executive Officer



Photo 2. Transfer station, Gllogoc/Glogovac

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ABBREVIATIONS

AI	Administrative Instructions
AKM	Association of Kosovo Municipalities
BW	Bulky Waste
CAC	Civic Amenity Center
C&D	Construction & Demolition
CER	Clean Environment Race
CW	Commercial Waste
DEP	Department of Environmental Protection
EAR	European Agency for Reconstruction
ECP	European Cohesion Policy
EPR	Extended Producer Responsibility
EU	European Union
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IFC	International Finance Corporation (World Bank Group)
ISP	Institute for Spatial Planning
KCA	Kosovo Cadastral Agency
KEK	Kosovo Energy Company
KEPA	Kosovo Environmental Protection Agency
KHMI	Nature Conservation and Kosovo Hydro-meteorological Institute
KLMC	Kosovo Landfill Management Company
LoW	Law on Waste
LoEP	Law on Environmental Protection
M&E	Monitoring and Evaluation
MPC	Municipal Public Company
MED	Ministry of Economic Development
MEI	Ministry of European Integration
MESP	Ministry of Environment and Spatial Planning
MSC	Municipal Shareholder Committee
MPWM	Municipal Plan for Waste Management
MW	Municipal Waste
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organization for Economic Cooperation and Development
PAMKOS	Association of Public Waste Utilities in Kosovo
PC	Private Company
PoE	Publicly Owned Enterprises

PPP	Public Private Partnership
PRKWM	Plan of Republic of Kosovo for Waste Management
RL	Regional Landfill
RWC	Regional Waste Company
SAA	Stabilization and Association Agreement
SAK	Statistical Agency of Kosovo
SDP	Strategic Development Plan
SRKWM	Strategy of Republic of Kosovo for Waste Management
TS	Transfer Station
UNMIK	United Nations Mission in Kosovo
WM	Waste Management
WWRO	Water and Waste Regulatory Office



Photo 3. RWC "Pastrimi" in waste collection service provision, Gllogoc/Glogovac

1.0 INTRODUCTION

1.1 Purpose of the Report

The preparation of the report on the state of waste management in Kosovo falls under the responsibility of the Kosovo Environmental Protection Agency (Waste Law, Article 14, par.1.8).

The purpose of this report is to provide a strong and comprehensive knowledge base on waste management in Kosovo, with focus on municipal waste. The key data provided per municipality and region, provide a clear understanding of the current situation, the trends and their implications, and future plans.

Further, the data provided in the report can be used to steer the planning process for waste management through policies in national and local level. In the coming years big reforms in the sector are foreseen. The Ministry of Environment and Spatial Planning (MESP) plans to progresses with:

- Revising the Strategy of Republic of Kosovo for Waste Management (SRKWM) and Plan of Republic of Kosovo for Waste Management (PRKWM);
- an ambitious recycling agenda by introducing Extended Producer Responsibility and a Bottle Refund System.

On the local level there are also encouraging changes on priorities:
- Waste management and fighting illegal dumping rank high among Kosovo's Mayors priority list;
- Municipalities are striving to provide waste management service to all their clients and some municipalities have started with integrated waste management;

Also, there are promising signs from donors:
- EU intend on investing heavily in the environmental sector, prioritizing waste management;
- German Development Cooperation intends on investing in landfills and continues to support municipal development;
- Japanese Government likely to re-enter into the sector by 2019.

However, investments in big-scale infrastructure require comprehensive analysis and decision making. This report hopes to contribute to the basis for such decisions.

Furthermore the report takes stock of the current municipal waste management situation in Kosovo. It provides the status-quo on the waste collection situation, fee collection and illegal dumps. It reviews the objectives and respective financial planning of the national and local government. Finally, it outlines findings that can guide the processes of policy making and planning in the future.

1.2 Scope of the report

The report presents general information on several issues relevant for national and local policy making and planning:
- the amount of waste generated;
- the amount of waste regularly collected with adequate final discharge;
- the service provision coverage rate and fee collection rate; and
- the waste management infrastructure.

The report excludes all hazardous wastes including liquids, medical waste and waste from primary production activities (agriculture, industry, mining and forestry).

The report presents general information on several issues relevant for the national and local policies and planning:
- the amount of waste generated;
- the amount of waste regularly collected with adequate final discharge;
- the service provision coverage rate and fee collection rate; and
- the waste management infrastructure;

1.3 Methodology of data collection

Up to day, there is no single national information source on waste management data in Kosovo.

The information in this report has been gathered from different sources:
- The waste collection and transport operators (RWC, MC etc),
- The municipalities (generally the Public Utilities Department), and
- The landfill management companies (KLMC, RWC), etc.

The focus was mainly put on the data set for the 2016 and 2017 financial year, for which the information was more available and complete .

Facing the lack of current data regarding the pollution of the environment from illegal dumpsites, a field survey has been conducted in spring of 2017, encompassing the whole territory of the country. Additionally, data been drawn from a range of published reports from own sources, including:

- The State of Waste in Kosovo 2008 Report, KEPA,
- The state of waste and chemicals report, 2014, KEPA
- Annual Report, State of the Environment in Kosovo, 2017, KEPA, and from other sources:
- Annual Report on waste management, 2017, KMDK

The data for planned investments on waste management infrastructure was drawn from:
- Strategy of the Republic of Kosovo for Waste Management (2013-2022),
- Plan of the Republic of Kosovo for Waste Management (2013-2017) and
- Municipal Plans for Waste Management,from all municipalities.



Photo 4. School separation at source, Prishtina/Priština



Photo 5. Inert waste landfill, Prizren

2.0 LEGAL, POLICY AND INSTITUTIONAL FRAMEWORK FOR WASTE MANAGEMENT

2.1. Legal framework

Kosovo's waste sector legislation is in the process of elaboratingand harmonizaing with EU directives. Law on Waste (No. 2012/04-L-060) introduces European standards for Kosovo, also serving as a benchmark for the tasks that lie ahead. It aims at i) prevention and reduction of the generation of waste as much as possible, ii) reuse of used components from waste, iii) sustainable development through protection and preservation of human resources, iv) prevention of negative effects of waste in environment and in human health, and v) final storage of waste in an acceptable environmental method.

For implementation of the Law on Waste, the following administrative instructions (AIs) are approved:

1. AI No 08/2017 on landfill management, abrogates the: AI No.15/2012, on landfill management;
2. AI No.02/2017 for a list of hazardous waste according to the origin;
3. AI No.07/2016 for environmental information system;
4. AI No. 06/2016, on conditions for selecting the location of the waste landfill construction;
5. AI No.23/2015, for export, import and transit of certain hazardous chemicals, PIC-procedure;
6. AI No.22/2015, for management of waste containing asbestos;
7. AI No.21/2015, on form and contents of record for supervision of inspection;
8. AI No.15/2015, on waste management of fluorescent tubes containing mercury;
9. AI No.14/2015, for penalties with mandatory fines;
10. AI No.10/2015, for waste treatment of medical products;
11. AI No.22/2015, on waste management of wastes from construction and from demolition of the building objects;
12. AI No.05/2015, for management of biphenyls and triphenyl polychlorinated and wastes with PCB and PCT;
13. AI No.01/2015, on the OECD list of waste;
14. AI No.29/2014, on sludge management by treatment of polluted waters;
15. AI No.27/2014, for waste management by packaging and wrapping;
16. AI No.26/2014 on waste management from batteries and accumulators;
17. AI No.25/2014, on waste management of electrical and electronic equipment and restrictions on use of hazardous substances in electrical and electronic equipment;
18. AI No.21/2014, for waste management from the extractive industry and mining;
19. AI No.20/2014, biodegradable waste management;
20. AI No.09/2014, of waste management license;
21. AI No.07/2014, for powers of waste holders, manufacturers and product importers;
22. AI No.22/2013, on the management of medical human and veterinary waste;
23. AI No.16/2013, on the limit values for concentrations of hazardous components in waste;
24. AI No.13/2013, on state waste catalogue;

25. AI No.05/2013, on management of disposed and waste tires;
26. AI No.20/2012, for export, import and transit of waste;
27. AI No.19/2012, on management of end life vehicle and their components abrogates:
28. AI No.02/2009 on management of dumped vehicles and their waste;

2.2 Mainplanning documents for waste management

According to the Law on Waste, the main planning documents for waste management are as follows:
1. Strategy of Republic of Kosovo for Waste Management;
2. Plan of Republic of Kosovo for waste management;
3. Municipal plan for waste management;
4. Plan for waste management by waste owners; and
5. Plans for waste management by licensed persons.

According to Article 8, Planning Documents; all documents should be harmonized and should consistently comply with the strategy.

1. Strategy of Republic of Kosovo for Waste Management 2013-2022(SRKWM)

The Strategy of Republic of Kosovo for Waste Managementsets directions and goals in the field of waste management for the ten-year period, to be reviewed at least every five years.

The Strategy should be based on principles as listed in the Law on Waste. Here, also, the basic requirements for the content of the Strategy are stipulated.

MESP drafted the Strategy in 2013, and it is valid through year 2022.

It's main focuses are on:
- Reducing quantity of waste generation at source, and reducing the quantity of disposable waste;
- Developing the infrastructure for establishing an integrated waste management system, by creating conditions for an effective and functioning system;
- Reducing the risk from waste;
- Contributing to the employment in the country;
- Capacity building for waste management;
- Improving waste collection services;
- Completing the legislation.

The Strategy sets out quantitative objectives with timetable for realization of the strategic goals.

The Strategy sets out quantitative objectives with time line for realising thestrategic goals.
The objectives for the year 2016 were not achieved, as the current 2016 data (see annex 1) show the MW collection is currently at ~ 60 % and the aim was to increase the collection up to 80 %. Additionally, the Strategy aimed to increase the amount of separated MW (from 0 to 30%) and the treated waste (from 10 to 35%), while reducing of the amount of biodegradable waste disposed with MW (from 95% to 70%), and the amount of waste disposed in landfills (from 90% to 65%). These objectives were not achieved.

2. Plan of Republic of Kosovo for waste management 2013-2017 (PRKWM)

The Plan is based in the valid national strategy and is issued for the period of five years, to be reviewed as necessary.
The basic requirements for the content of the Plan are stipulated in the Law on Waste.

MESP drafted the Plan in 2013, and was valid through 2017.

The main objectives of this plan are:
- Strengthening the waste management system,
- Investing in the significantly problematic areas and in waste infrastructure,
- Raising the level of awareness and information on waste management, in accordance to the objectives set out by the national strategy.

This is an implementation plan, containing the: implementation plan, main actions, timeline, and financial plan, structured according to priority.

As the PRKWM (2013-2017) expired last year, MESP in cooperation with GIZ will support the revision of the Plan as well as the Strategy that will outline the future path for Kosovo's waste sector.

3. Municipal plans for waste management (MPWM)

It is the task of the Municipalities to compile municipal plans

for waste management (Waste Law, Article 15), that are in line with the Strategy and national Plan.

The cooperation between the central government and local government is required in order to fully implement the legal and policy framework set by MESP. Additionally, not only the cooperation between different levels ofgovernment institutions is essential in this issue, but also the collaboration of the waste management companies with the municipalities including inter-municipal cooperation.
The basic requirements for the content of the Plan are stipulated in the Law on Waste.

Up to now 26 municipalities have drafted their respective MPWM of which 2 have expired. One municipality is currently drafting the Plan, and 11 municipalities don't have MPWM (see annex 4).

4. Plan for waste management by waste owners (PWMWO)
Waste owner or holders, can be waste producers or operators that manage facilities or equipment that require environmental permits. They need to draft Plans for waste management for a five-year period.
The basic requirements for the content of the Plan are stipulated in the Law on Waste.

As yet, there are no WM plans by waste owners submitted to the Ministry.

5. Plans for waste management by licensed persons (PWMLP)
All WM operators (including landfill operators) that must obtain a license to realize their activities must draft a Plan for WM for a three-year period.

The basic requirements for the content of the Plan are stipulated in the Law on Waste.
There are 76 WM plans by licensed operators submitted to the Ministry, as one of the requirements for licensing these operators.

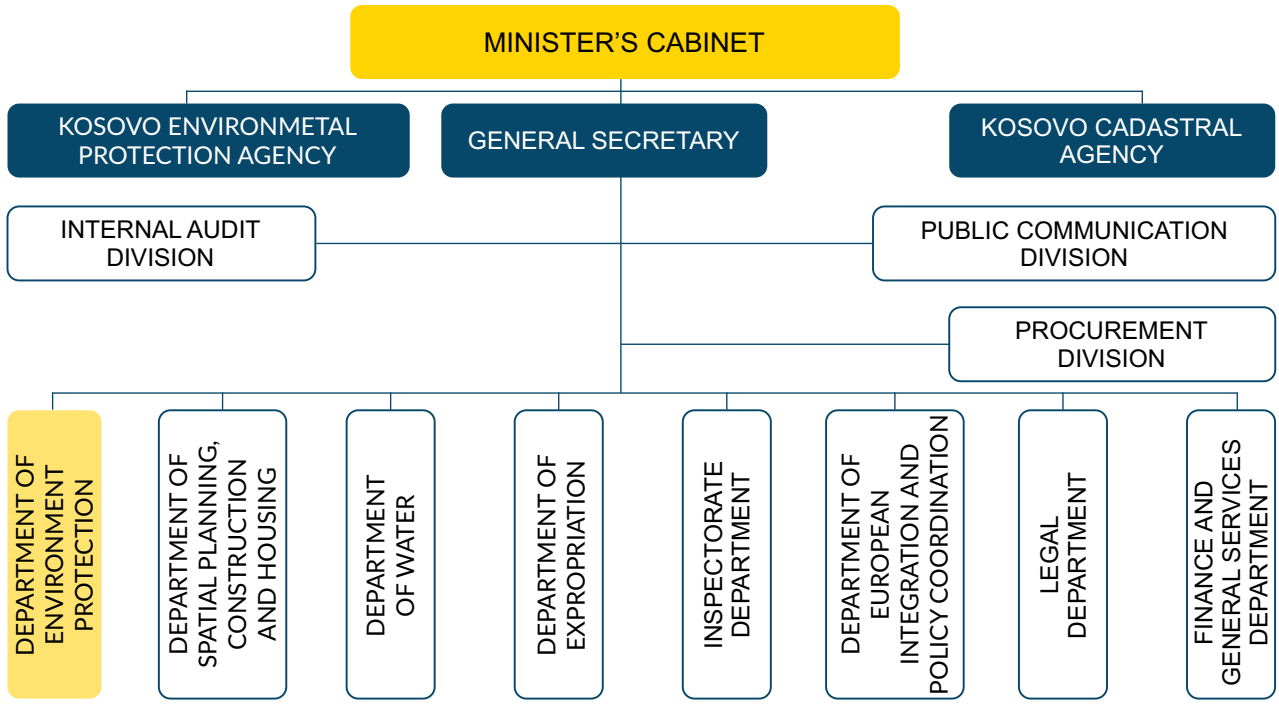


Figure 1. Organizational Chart MESP

2.3 Institutional Setup

2.3.1 Ministry of Environment and Spatial Planning – MESP

The Ministry of Environment and Spatial Planning consists of six main departments, each dealing with one of the main sectors, department of spatial planning, construction and housing with two of the major areas, and department of environment protection with six of the major areas, with additional units for support and cross-cutting issues as well as management of the Ministry. Corporate, executive and supportive hierarchy is clearly defined. The Ministry is also responsible for four institutions: Kosovo Environmental Protection Agency (KEPA) including the Institute for Nature Conservation and Kosovo Hydro-meteorological Institute (KHMI), Kosovo Cadastral Agency (KCA) and Institute for Spatial Planning (ISP).

In the waste management sector, according to the waste law, and based on the regulation on internal organization and systematization of job positions in the MESP, the Department of Environmental Protection has the following responsibilities:

- Determines the waste management policies;
- Develops legal acts that regulate the waste management sector;
- Develops the waste management strategy and plan;
- Issues licenses, and keeps records on the companies that deal with waste management activities;
- Issues permits for waste import, export and transit shipment;
- Implements international agreements in the area of waste management;

Ministry of Environment and Spatial Planning (MESP) is responsible for environmental policy, the application of laws

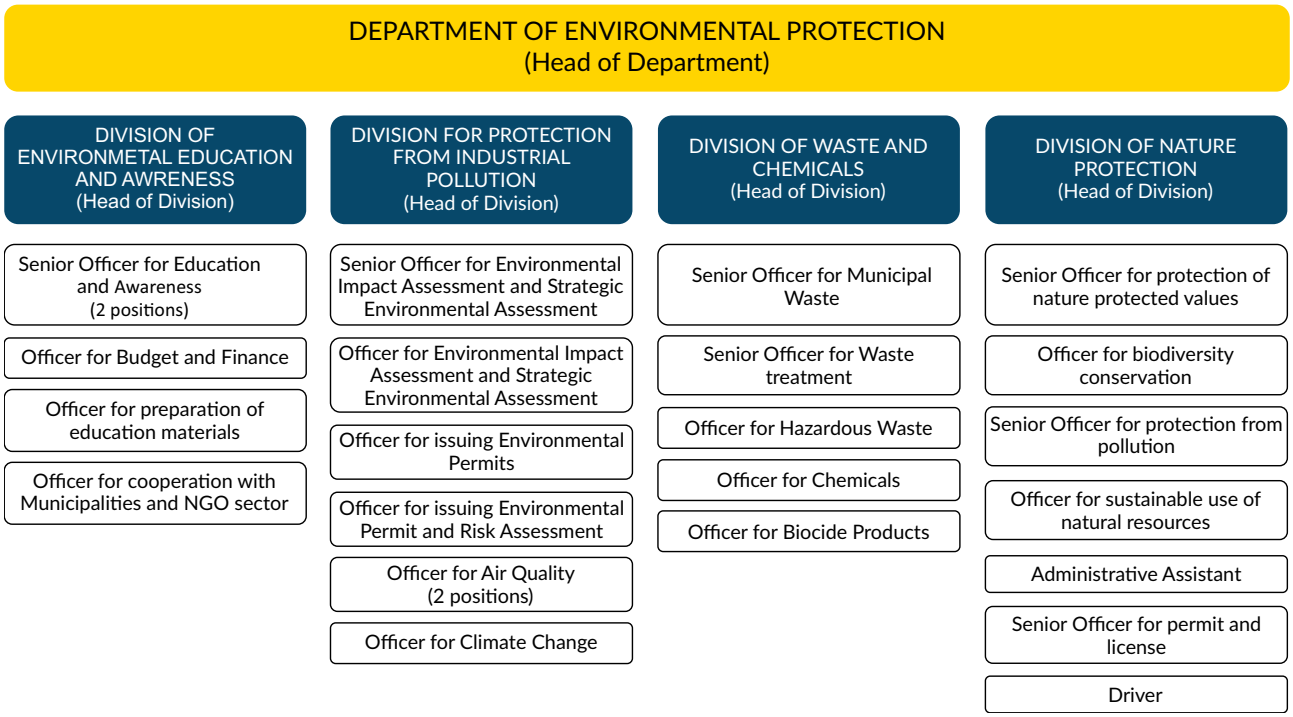


Figure 2.Organizational Chart for the Department of Environment Protection (DEP)

and supervision of waste activities. Among other duties, MESP verifies and controls the implementation of waste management plans, operations and activities in collection, transportation and handling of waste.

2.3.2 Kosovo Environmental Protection Agency - KEPA

The Kosovo Environmental Protection Agency (KEPA) is the national body the data is reported to (Art. 14, 1.7-1.8, Waste Law). KEPA is obliged to create a database on waste management and to compile reports.

KEPA reports on it in their annual environmental report and also verifies reported dumpsites, however relying on the self-reporting of municipalities.

According to LoW, Article 14, the responsibilities and duties of KEPA are: (1.7.) creation of databases and information system for waste management by the Environmental Protection Agency of Kosovo in compliance with environmental legislation; (1.8.) compilation of reports on waste management in the Republic of Kosovo by the Environmental Protection Agency of Kosovo.

In 2011, under the reorganization of the Ministry of Environment and Spatial Planning, based on the Strategic Development Plan 2010 -2014 of MMPH; and pursuant to the Decision of the Government of Kosovo No. 09/26, Minister of Environment and Spatial Planning has signed the Administrative Instruction No. 13, on organizational structure, and responsibilities of the Kosovo Environmental Protection Agency. (KEPA Profile, 2011)

Additionally, according to LoEP, Article 60, KEPA's duties extend to: (1.1.) providing proper information for administration, Government and Kosovo Assembly for the implementation of environmental protection policies; (1.2.) developing and coordinate unique system of information on environmental protection regarding to system for conduction of environmental state in Kosovo as well as collecting the records for environment; (1.3.) emplacement and keeping of referent centers with data base regarding to environmental monitoring (socio economic records, pressures on environment, state and quality of environment.

2.3.3 Municipalities

According to the law, municipalities are responsible for establishing a waste management system for their respective territory, drafting/developing local plans for waste management in line with the national plan, and ensuring their implementation through public utility departments and local inspectorates.

The legal basis for environmental inspection can be found in the Law on Waste and the Law on the Inspectorate of Environment, Waters, Nature, Spatial Planning and Construction. Art. 15.3. LoW sets as a general rule that inspection is carried out on the local level: "Municipality exercises supervision and control measures and waste management activities in its territory, through the municipal inspectors on environment. The inspection supervision, defined in Art. 62 LoW and Art. 3 (1.1.1) LoW, is carried out by the MESP and municipal inspection on the spot. These inspectors are in charge of overlooking and controlling of all waste related issues and – if needed – fine citizens and institutions that do not act according to the respective regulations. Municipal inspection can receive assistance from "other competent authorities", stated in Art. 67 LoW, meaning primarily support by the police.

Also, the municipality's responsibilities extend to the selection of the operator model for collection, tariff setting, in addition to the regulation of the system and conditions on the method and manner of waste collection. Waste collection services may be provided by in-house contracting of public owned enterprise, contracting a private company through an open tender, PPP agreement or other modes.

Finally, the municipality shall produce an annual report on waste management and another report on the execution of the municipal plan for waste management and submit it to the Ministry.

2.3.4 Licensed operators-Kosovo Landfill Management Company (KLMC)

With the amended Law on Publicly Owned Enterprises (PoE) 2012, which establishes a new regulatory framework for central and local PoEs, KLMC is placed under the overall authority of the Government of Kosovo/Ministry of Economic Development (MED).

The KLMC is responsible for the management of the facilities and for the final disposal of waste in Kosovo, including landfills and transfer stations. Currently, there are four landfills under management of the KLMC (Prizren, Gjilan/Gnjilane, Prishtinë/Pristina, and Podujevë/Podujevo), and one transfer station (Ferizaj/Uroševac).

The KLMC has the responsibility to ensure that landfills are operated safely and efficiently, and that all environmental requirements are complied with. It is also responsible for the closure and after-care of exhausted landfills and for the construction of new waste disposal facilities. (Report from IFC World Bank, 2012)

KLMC is led by the chief executive under the supervision of the Board of Directors. The company comprises of six members of the Board of Directors appointed by the government.

The primary activities of KLMC are: Sewage and refuse disposal, sanitation and similar activities.

Secondary activities are: Recycling of non - metal waste and scrap

Other activities:
- Recycling of metal waste and scrap
- Operation of gravel and sand pits
- Demolition and wrecking of buildings; earth moving
- Other construction work involving special trades
- Wholesale of waste and scrap
- Wholesale of other machinery for use in industry, trade and navigation
- Freight transport by road
- Packaging activities
- General (overall) public service activities
- Other service activities necessary

Although the activities of KLMC are clearly stated in the IFC World Bank report from 2012, it remains absent from the Waste Law and the Government Administrative Instruction No.08/2017 on Waste Landfill Management. It also remains to a great extent deficient in the implementation of the previously listed activities.

The Government determines, by the sub-legal acts, conditions for landfill administration and licensing operator the landfills, waste acceptance procedures, method of control activities, monitoring the operational phases, closing procedures and care after the closure of landfills. (Waste Law, Article 33, Par.4)

2.3.5 Licensed Operators-Regional Waste Companies(RWC)

Regional Waste Companies are licensed operators owned by the local government, which provide waste collection and transportation services. The companies are an inherited structure, operating for ~ 50 years as regional organizations. There are seven RWC, operating in seven regions, 26 municipalities where 93 % of the population of the country live. RWC carry out the collection and transport of waste, draft the operational plan, and set the itinerary and manner of exercising the cleaning activities which are to be in compliance with the local waste management plan.

RWC have the statute of Public-owned Enterprise. Municipalities exercise their rights as shareholders of the RWC through the Municipal Shareholder Committee, which consists of: a member appointed by the Mayor, and two other members appointed by the Municipal Assembly. The Committee selects the boards of local RWC and reports to the Municipal Assembly annually on the performance of local RWC. In cases where one or more municipalities have shares in a local enterprise, each Municipal Shareholder Committee has the right to elect one director of the board. (Law on Public Owned Enterprises).

The Municipal Shareholder Committee is obliged to report annually to its Municipal Assembly on the performance of such authorities and responsibilities. (Law on PoEs, Article, 8)

2.3.6 Licensed Operators-other operators

Beside the landfill management company and Regional Waste Companies there are other operators (public and private) that are licensed for waste collection and transport, collection and treatment of different fractions of waste and others.
These operators should develop waste management plans; maintain records of their activities and report regularly (as per LoW) to the competent authorities.
Currently, based on the records from MESP, there are 76 companies with valid licenses (expiring from July 2018 onwards).

ACTIVITY FIELD	NO. OF LICENSED COMPANIES
Landfilling	1
Collection and transport of municipal waste	28
Collection, transport and treatment of municipal waste	3
Collection, transport and treatment of industrial waste	1
Treatment of medical waste	7
Collection, transport and treatment of organic waste	1
Collection, transport and treatment of organic-, plastic-, paper-, glass-, wood waste, etc.	1
Collection, transport and treatment of paper and cardboard waste	2
Collection, transport and treatment of paper, cardboard and plastic waste	1
Collection, transport and treatment of paper waste	4
Collection, transport and treatment of metallic and plastic waste	2
Waste types: accumulators, metals, vehicles, etc.	11
Collection, transport and treatment of metallic and scrap waste	9
Collection, transport and treatment of oils waste	3
Collection, transport and treatment of oils waste of tires	2
Total number of Licensed Companies (July 2018-...)	**76**

Table 1. Number of Licensed Companies and their activity field



Photo 6. Waste collection point, Prishtina/Priština

3.0 WASTE MANAGEMENT STATUS IN KOSOVO

3.1 Current situation overview

With Kosovo signing the EU Stabilization and Association Agreement (SAA) the country is dedicated to complying with EU standards in governance. This also applies to the accelerated implementation of the new Law on Waste (2012), the Strategy of Republic of Kosovo for Waste Management (SRKWM 2013-2022) and the Plan of Republic of Kosovo for Waste Management (PRKWM 2013-2017). Accordingly, the Ministry of Environment and Spatial Planning (MESP) objective is to develop the base for waste management and circular economy. However, the institutional capacities at all levels as well as infrastructure capacities are insufficient to meet EU standards (State of the Environment Report, KEPA 2015).

The current solid waste management system in Kosovo is environmentally unsustainable. MW collection, transport and disposal is not provided to all, and therefore uncollected waste is discarded or burned has a negative impacts on human health, water, air, soil and biodiversity. Similarly, hazardous waste (in MW stream) is not separately collected and treated and ends up being landfilled with MW and presents a threat to the environment. The groundwater and soil are particularly threatened in the premises of industrial sites and numerous non-compliant waste landfills. Waste separation at source is only piloted in some municipalities, and the collection of recyclables is still only done by the informal sector.

The waste sector is also a source for greenhouse gas emissions, contributing roughly 4% to the countries' emissions equivalent to 380 tons CO2 in year 2012 (State of the Environment Report, KEPA 2015).

One key-challenge is the lack of coherent planning. Consequently, the national strategy andplan are only partly reflected in municipal plans. Similarly, donor planning documents only incompletely align with the countries' policies.

The national infrastructure (landfills and transfer stations) have been built during the UNMIK administration (1999-2008). They are in most parts managed by the national owned Kosovo Landfill Management Company (KLMC) and are not in a good condition and some are reaching the end of their life.

3.1.1 Municipal waste generation

There isn't any reliable and verifiable data on the total amount of waste generate in the country. However we should rely on the data that we have from the sanitary landfills and other landfills, and data from the RWC in order to estimate a close figure.

The amount of waste disposed in the KLMC operated landfills for 2017 is 280,334.55 ton/year (see table 3. for details). On the other municipally owned landfills operated by the RWC, the amount of waste deposited is approximately 111,951.55 tons/year. This makes ~392,286.10 ton/year disposed in sanitary landfills.

If we calculate the waste that is disposed in the non-sanitary municipal landfills (24,092 ton/year) than in total 416,378.90 ton/year are collected and landfilled.

RWCs collected and landfilled 363,742.87 tons in 2017 (see table 4.) or 87 % of the total amount of waste collected.

The other percentage is collected by other public or private waste collection and transport operators.

We should not correlate these data of the coverage with collection service rate (57.7%), since in the latter, the data of the waste collection by private companies that are not contracted by the municipality are not taken into calculation, and the waste accepted in landfills comes from these companies and other waste companies that collect and process the recyclable fractions.

The total amount of waste generated can only be calculated based on an average generation by inhabitant. Considering there are roughly 1,779,521 inhabitants in the country (census 2011), and the annual amount of municipal waste per capita, which is approximately 0.9 kg/day (Report on waste and chemicals, KEPA 2014) then the total amount of waste generated is 580, 000 tons/year. From this we can calculate that approximately 72 % of waste is collected sent to landfills (68% to sanitary landfills).

3.1.2 Municipal waste collection, transfer and disposal

The waste management sector is characterized by low levels of efficiency, limited private investment and inadequate experience in the use of modern technology. With the amendment of the Law on Waste in 2012 municipalities are responsible for regulating the responsibilities and obligations to provide waste management, implementing and organizing them in their territory. The law additionally specifies that WM should be done by registered, licensed and contracted persons (institutions, public or private companies).

The dominant mode of waste collection service delivery, in the territory were over 90% of the population live, is through seven regional waste companies (RWCs). Four municipalities are served by an Austrian PPP, while three small municipalities (ethnical Kosovo-Serb dominated) in this region operate through municipal staff. Some municipalities have municipal companies or private companies providing services. Finally, four-northern ethnical Kosovo-Serbian dominated municipalities have municipal companies registered and also reporting to the Republic of Serbia. Service providers collect MW from households, commercial stores and institutes, whereas many industries and bigger retailers have direct contracts with public or private waste collection companies.

The system in place is characterized by low collection coverage (below 60%). Regular collection service is predominately available in urban areas (75%), while only 41% of the population in rural areas receives services.

The waste collection infrastructure is poor and it is characterized by an insufficient number of containers/ bins (mostly damaged), often incompatible with the transport system. Waste transport equipment is for the most part depreciated, malfunctioning and largely insufficient for full service coverage. Equipment maintenance is equally insufficient and repair shops are in poor condition. Moreover, RWCs lack financial sustainability due to low fee collection rate, assumed ~60% (withholding old debts) and there is a need for cost optimization in all companies and their units. Generally there is limited knowledge on integrated municipal waste management.

Collected waste is transferred and then disposed in seven sanitary landfills for MW, four non-sanitary landfills and several inert waste disposing sites.

Additionally some municipalities can use transfer stations, for temporary disposal of waste. There are three such stations in Kosovo (Ferizaj/Uroševac, Gjakovë/Đakovica and Drenas/Glogovac). However these transfer stations need upgrading in operation and infrastructure. In future these points can be additionally used as waste separation centers or Civic Amenity Centers.

3.1.3 Special wastes

Major problems are not only related to household waste. There is no system for collection and disposal of special wastes (as per Law on Waste), such as: used oils, batteries, accumulators, tires, electrical equipment, vehicles, agricultural waste (plants and animal, including animal by-products), medical waste, expired medicines, pesticides and similar end-of-life products. Large quantities of chemicals and industrial and mining leftovers with high content of heavy metals were inherited from the pre-war Kosovo industry of the socialist time, which were never treated. Due to old processing technologies, which failed to enable

sufficient use of raw materials, there are substantial amounts of mining waste in and next to landfills, which are causing great threats to the environment. Furthermore, industrial landfills, for different mining, metallurgical and chemical activities present big challenges.

Environmental hot-spots, which are red-signaled to human health, flora and fauna are:

- Trepca industrial complex in Mitrovicë/Mitrovica municipality. The estimated 60 million tons hazardous mining waste contains significant quantities of heavy metals.
- Kosovo Energy Company (KEK) in Obiliq/Obilić municipality. The disposed ashes and sewage-lake deriving from lignite-based power production is constantly contaminating surface and ground-water, as well as soil.
- Ferronikeli industrial complex in Gllogovc/Glogovac. The heavy-metal contaminated mining-waste is threatening water resources.
- Other wild landfills, leftover chemicals from factories in the previous time, are repacked and temporarily stored in certain spots in Kosovo which pose a permanent danger to the environment.

3.1.4 Current and planned reforms in the sector

As the current situation data reveals, waste management is still challenging in Kosovo. Unfortunately waste management was not considered a priority and this was reflected to the limited allocation of funds in all levels, contributing to the situation getting worse.

Though, there has been significant progress in recent years. With support of different donors (EU, Germany, Switzerland, Japan) most of the municipalities have installed basic governance processes, such as solid waste management unit / officer and solid waste management plans. The coverage rate and fee collection rate have increased and illegal dumps have been partly removed. Further, the capacities of RWCs have improved and in some municipalities new tariffs have been calculated and implemented. The capacity development of municipalities and RWCs was supported by their association: the Association of Kosovo Municipalities (AKM) and the association of Kosovo waste enterprises (PAMKOS), respectively. Finally, the environmental awareness of citizens, at large, has increased by separation-at-source pilot projects and clean-up projects in schools and neighborhoods.

In 2018 following reforms are planned:

- Revision of the national strategy (SRKWM) and plan (PRKWM);
- Enhanced sector steering and donor coordination by MESP and MEI;
- Introduction of extended producer responsibility and a deposit refund system for beverage containers;
- Granting of equipment, such as trucks and containers (worth 3,4 Mil €) supported by the German government for 17 municipalities and 5 RWC;
- Countrywide enhanced service coverage, fee collection, data collection and M&E, standard processes in municipalities and RWC and cost optimization for the operators;
- Countrywide, capacity building of municipal and RWC staff, as well as standard courses in universities.

For the successful implementation of the waste management measures, an indispensable condition is the public acceptance and cooperation.

So far, there have been little public relations campaigns. The lack and/or little capacity of municipal personnel and the lack of funds have hampered effective waste awareness creation. Interventions were limited to local mass-media and some meetings with inhabitants. For an integrated, modern waste management, this type of public relations is insufficient. One cause for the limited capacity is the missing waste management training and education opportunity. Moreover, local public activities have focused on the mitigation of the technical issues such as waste collection, transport and removal.

An intensive communication between the municipalities, the RWC, the enterprises of recoverable materials processing, and the citizens, the economic agents, as well as the commercial and production units – as waste producers, is required to improve the current situation in the sector.



Figure 3. Waste Management operators and infrastructure in Kosovo

3.2. National Waste Management Infrastructure

3.2.1 Waste disposal infrastructure

Waste disposal facilities are:
- Landfills- used for permanent disposal and
- Transfer stations- used for temporary disposal of waste that is then transported for final disposal or treatment.

3.2.1.1 Landfills

According to the Law on waste, each landfill should be classified into:

a. Landfill for hazardous waste,
b. Landfill for non-hazardous waste, and
c. Landfill for inert waste

Since the scope of this report is limited to municipal waste, landfills for hazardous waste will not be elaborated. Additionally, since there are no inert waste landfillsthat are up to standards than the report with focus only on the class of non-hazardous waste landfills.

b. Landfills for non-hazardous waste
These disposal facilities in Kosovo, differ in many aspects (planning, the area they serve, operation etc.), so in order to have a clearer picture, non-hazardous landfills in Kosovo are further classified into:

1. Sanitary Landfills, which are landfills that were constructed based on criteria's that define sanitary landfills, are operated by Kosovo Landfill Management Corporation (KLMC) or Regional Waste Companies (RWC)and

2. Non-Sanitary Landfills, which are landfills created and operated by municipalities and/or waste operators, however they are just selected locations that don't fulfill any criteria and were municipal waste is being disposed.

Sanitary landfills

Today, MW in Kosovo is mostly disposed of at the seven official and operational landfills, of which five landfills serve regions:

- Prishtinë/Pristina (Mirash) regional landfill (PrRL), operated by theKLMC,
- Mitrovicë/Mitrovica(Gërmova) regional landfill (MRL), operated by RWC Uniteti,
- Pejë/Peć (Sferkë) regional landfill (PeRL), operated by RWC Ambienti,
- Prizren (Landovicë) regional landfill (PRL), operated by the KLMC,
- Gjilan/Gnjilane (Velekincë) regional landfill (GjRL), operated by KLMC,

While the remaining two landfills, serve municipalities:
- Podujevë/Podujevo municipal landfill (PML), operated by the KLMC,
- Dragash/Dragaš municipal landfill (DML) operated by the RWC Ekoregjioni -Dragash/Dragaš unit;

The waste disposal infrastructure is partly deteriorated, even though it was constructed between 2003 and 2007 by the European Agency for Reconstruction.

The lack of professional operational knowledge and practices (e.g. absence of operating plan), as well as the lack of necessary equipment and infrastructure (e.g. absence of leachate /biogas treatment, environmental monitoring, etc.), have led to the deterioration of the technical conditions of the landfills. Especially, inadequate leachate treatment risks ground and surface water pollution. Several reports underline that most landfills are at the end of their storage capacity and/or present an environmental risk.

The biggest threat derives from Prishtinë/Pristina "Mirash" landfill, which is currently flooded and contaminates the groundwater (reports IFC 2013, GIZ 2016). Other KLMC operated landfills (i.e. Gjilan/Gnjilane, Prizren and Podujevë/Podujevo) need upgrading (i.e. leachate treatment) and/or expansion.The sanitary landfills in Dragash/Draga and Pejë/Peć lack modern weighbridges and are reaching the end of the storage capacity. For both landfills, feasibility studies for extension and rehabilitation/modernization exist.

The estimated emissions from poor WM were 345,000 tons of CO2, 10,842 tons of methane, about 2,300 tons of PM10 and 0.12 kg of dioxins in 2010 (World Bank, Kosovo - Country Environmental Analysis, 2013). Although the situation has changed for good, since 2013, in regards to



Photo 7. Regional landfill in Velekinca, Gjilan/Gnjilane



amount of collected waste, the figures remain, since the illegal dumping is a continuing problem.

Additionally, due to the lack of treatment and/or disposal of specific waste fractions, such as: Construction and Demolition Waste, medical waste, animal carcass, bulky waste etc. end up disposed in these landfills (with temporary treatment) or are dumped arbitrarily wherever possible.

One main challenge for all landfill operators is the lack of financial sustainability. The current gate-fee (tipping fee), if charged at all, is financially not viable. Also, the accumulated debt of RWC towards KLMC presents a financial and political burden.

Table 2. Overview of MW Landfills

Prishtinë/Pristina Landfill (Mirash) Regional Landfill
Year of Construction: 2004-2006 (EC funded)
Started operation: 2006
Lifespan planned: 15 years (2020 closed)
Lifespan based on KLMC: up to 2026
Size: 40 ha
Area with Baseliner: 6.8 ha
Baseliner Type: Geomembrane (HDPE. 2.5mm), clay liner
Total Capacity: 3,500,000 m3

**existing: E.Rathje study/2016, AGROVET/2016*
**upcoming: KfW study*



Figure 4. Aerial view of Prishtina/ Pristina Landfill (Google maps, 2017)

This landfill serves to the municipalitiy of: Prishtinë/Pristina, Obiliq/Obilić, Lipjan/Lipljan, Fushë Kosovë/Kosovo Polje, Gračanica/Graçanicë and Drenas/Glogovac.

There are multiple operational and environmental problems associated with the landfill. The most serious problem is the flooding of the landfill with a mixture of leachate, rainwater and groundwater. The leachate recirculation system and the surface drainage system is not functioning. Other problems include: the self-starting fires on the sides and fumes polluting the air, garbage flying away (lack of daily cover) and a heavy odour that is constantly emitted (lack of a degassing system). Also a lack of the waste segregation is an issue, medical waste can be identified. From an environmental impact point of view there is a major risk of a serious pollution of the whole area including pollution of the groundwater. (source: Hydrogeochemical analyses of the ground water in the Mirash landfill area and problem analysis, E.Rathje, 2016)

Mitrovicë/Mitrovica (Germova) Regional Landfill

Year of Construction: 1995 / 1985 (Danida funded) Year of restoration: 2002 r estoration (Danida funded)
Started operation:
Lifespan:
Size: 7 ha
Area with Baseliner: 4 ha
Baseliner Type: Geomembrane (HDPE)
Total Capacity: 2,000,000 m3

**existing: Municipality study*



Figure 5.Aerial view of Mitrovica Landfill (Google maps, 2017)

This landfill serves to the municipalitiy of: Mitrovicë/Mitrovica, Vushtrri/Vučitrn, and Skenderaj/Srbica.

The landfill has operational and enviromental problems. The disposed waste is not compacted. The leachate and storm water treatment is lacking and there is no landfill gas management. Since the water pumps were not working regularly, the polluted waters leaked in the surrounding areas. In order to improve the landfill operating conditions, some investments were made by DANIDA in 2002. (source: Feasibility Study for an Integrated Landfill Management System in Gërmova in the Mitrovicë / Mitrovica Municipality)

Pejë/Peć (Sferkë) Regiona landfill

Pejë/Peć (Sferkë) Regiona landfill
Year of Construction: 2001 (COPI funded)
Started operation:
Lifespan:
Size: 3.6 ha
Area with Baseliner: 3 ha
Baseliner Type: Geomembrane (HDPE)
Total Capacity: 1.500 000 m3

**existing: ASA Study, 2014*
**upcoming: IPA 2018 study*



Figure 6.Aerial view of Peja/Pec Landfill (Google maps, 2017)

This landfill serves to the municipalities: Pejë/Peć, Deçan/ Dečane, Klinë/Klina and Junik.

The current state and management is not satisfying. The landfill operational procedures are very basic, without proper water management, treatment of (mixed) municipal solid waste, proper compacting, planning or reducing of active (open) area or prevention against fire. The type and amount of chemicals being disposed of is also not known. Furthermore, due to a leachate recirculating pump station being out of service, leachate and contaminated rain water leaks uncontrolledly from the landfill area, from the drains and overflows, thereby heavily polluting surface water. The landfill has already reached the end of the storage capacity so there is an urgent need for intervention. (source: Pre-Feasibility study for the implementation of an integrated waste management system including collection, transport, treatment and landfilling in the Peja region, ASA, 2014)

Prizren (Landovicë) Regional Landfill

Year of Construction: 2003 (EC funded)
Started operation: 2004
Lifespan planned: 15 years (2020 closed)
Lifespan based on KLMC: up to 2025
Size: 25 ha
Area with Baseliner: 8 ha
Baseliner Type: Geomembrane (HDPE), clay liner
Total Capacity: 2,500,000 m3

**existing: no study*
**Upcoming KfW study*



Figure 7.Aerial view of Prizren Landfill (Google maps, 2017)

This landfill serves to the municipalities of: Prizren, Rahovec/Orahovac, Malishevë/Mališevo, Suharekë/Suva Reka, Dragash/Dragaš, Mamushë/Mamuša and Gjakovë/Djakovica.

In this landfill the water pumping system is out of order and the water from the landfill and surface water may get mixed, causing an environmental threat. The waste compression is not carried out in line with standards. (KEPA, 2008)

Gjilan/Gnjilane (Velekincë) Regional Landfill

Year of Construction: 2005 / 2006
Size: 12+12 ha
Lifespan planned: 15 years (2020 closed)
Lifespan based on KLMC: up to 2024
Area with Baseliner: 5 ha
Baseliner Type: Geomembrane (HDPE), clay liner
Total Capacity: 1.222.222 m3 +

**existing: no study*
**Upcoming KfW study*



Figure 8. Aerial view of Gjilan/ Gnjilane Landfill (Google maps, 2017)

This landfill serves to the municipalities of: Gjilan/Gnjilane, Kamenicë/Kamenica, Viti/Vitina, Novo Brdo/Novobërdë, Kaçanik/Kačanik, Shtime/Shtimlje, Ferizaj/Uroševac, Han i Elezit/Elez Han, Kllokot/Klokot, Partesh/Parteš, Ranillug/ Ranilug and Shtërpc/Štrpce .

The state of this landfill is not satisfying. The pumping system is out of order and consequently surface water and landfill waste water get mixed. (KEPA, 2008)

Podujevë/Podujevo Municipal Landfill

Year of Construction:2004 (EC funded)
Started operation: 2005
Lifespan planned: 20 years (2025 closed)
Lifespan based on KLMC: more than 2040
Size: 5 ha (9ha)
Area with Baseliner: 2.8 ha
Baseliner Type:
Total Capacity: 1,000,000 m3

**existing: no study*



Figure 9. Aerial view of Podujevë/ Podujevo Landfill (Google maps, 2017)

This landfill serves Podujevë/Podujevo municipality.

Due to the mixture of surface water with landfill waste water the state of the landfill is environmentally unfavorable. Regular waste compacting is not perfomed. (KEPA, 2008)

Dragash/Dragaš Municipal Landfill

Year of Construction: 2004
Started operating :
Lifespan: 15 years
Size: 2 ha
Area with Baseliner: 5 ha
Baseliner Type: Geomembrane (HDPE), clay liner
Total Capacity: 50,000 m3

** Existing: World Bank study 2015*



Figure 10. Aerial view of Dragash/ Dragas Landfill (Google maps, 2017)

This landfill serves Dragash/Dragaš municipality.

An estimated half of its area is not covered with insulation layer, and there is not any waste water monitoring and treatment. There are no system in place for atmospheric water collection or any other flood protection system. No gas management system is installed in the landfill. A drainage collection system is connected to the basin. The cleaned water are re-circulated through a pump. However since the water pump is old, it fails to funsction a lot of times, resulting in wastewater reservoir overfilling. (World Bank study 2015)



Photo 8. Transfer Station, Ferizaj/Uroševac



We should note that landfills are not exclusively serving one region. Because of operational or other reasons, landfills are closed and the companies that need to dispose collected waste, go for the neares option, landfill, i.e. RWC Pastrimi occasionally disposes collected waste in Mitrovicë/Mitrovica(Gërmova) regional landfill (MRL), RWC Pastertia disposes it's waste in Gjilan/Gnjilane (Velekincë) regional landfill,Ferizaj/Uroševac transfer station or Prishtinë/Pristina (Mirash) regional landfill.

Beside Regional Waste Companies, private companies that collect waste, other private companies that collected recyclables, or waste generators, use these landfills for disposing the collected/generate waste..

The amount of waste disposed in the KLMC operated landfills for the year 2017 is 280,334.55 ton/year (see table 3. for details). On the other sanitary landfills, the amount of waste deposited in 2017, is approximately 111,951.55 tons/year.

This makes 392,286.10 ton/year (2017) disposed in sanitary landfills.

There is available data on the amount of waste collected by RWC for the year 2016 and 2017 (see table 4). If we compare 2017 data, than from the total amount of waste collected and landfilled in sanitary and non-sanitary landfilled (416,378.90 tons/year), and the amount of waste collected and disposed by RWC (363,742.87 ton/year), we see that RWC collect and dispose mos of the waste (87%).

Landfill / Transfer Station	Waste disposed (ton/year)
	2017
Prishtinë/Pristina Landfill (Mirash) Regional Landfill[1]	116,355.77
Gjilan/Gnjilane (Velekincë) Regional Landfill [1]	40,788.79
Podujevë/Podujevo Municipal Landfill[1]	11,083.00
Prizren (Landovicë) Regional Landfill[1]	90,858.81
Transfer Station in Ferizaj/Urosevac	21,248.18
sub-total in KLMC managed landfills:	**280,334.55**
Mitrovicë/Mitrovica (Germova) Regional Landfill[1]	64,663.05
Pejë/Peć (Sferkë) Regiona landfill[1]	41,758.00
Dragash/Dragaš Municipal Landfill[1]	5,530.50
sub-total in RWC managed landfills:	**111,951.55**
total amount of waste disposed in Sanitary Landfills:	**392,286.10**
Istog/Istok (Tuçep) Municipal Landfill [1]	6,168.00
Zvecan/Zveçan[2]Municipal Landfill [2]	3,600.00
Zubin-Potokut (Lluçkarekë) Municipal Landfill [2]	11,318.00
Leposavic/Leposavic Municipal Landfill[2]	3,006.80
total amount of waste disposed in non-Sanitary Landfills:	**24,092.80**
total amount of waste disposed :	**416,378.90**

[1] Annual report of companies to KEPA
[2] Data collection from operators (GIZ)

Table 3. The amount of landfilled waste in Kosovo

Nr.	Regional Waste Companies	Region served	Amount of waste colleced by RWC in 2016 (ton/year)	Amount of waste colleced by RWC in 2017(ton/year)
1	RWC Pastrimi	PRISHTINË/PRISTINA REGION	107,033.00	110,370.00
2	KRM"Uniteti"	MITROVICË/MITROVICA REGION	40,341.99	64,663.05
3	RWC Ambienti	PEJA/PEČ REGION	44,534.00	47,926.00
4	RWC Ekoregjioni'	PRIZREN REGION	67,175.5	73,678.00
5	RWC Pastertia	FERIZAJ/UROŠEVAC REGION	24,328.064	24,928.670
6	RWC Ekohigjiena	GJILAN/GNJILANE REGION	30,097.63	30,851.150
7	RWC Çabrati	GJAKOVA/ ĐAKOVICA REGION	15,861.00	11,326.00
		total:	329,371.184	363,742.87

Table 4. The amunt of waste collected and disposed by RWC [PAMKOS report, 2016]

Non -sanitary landfills

The landfills, classified as non-sanitary are:

- Istog/Istok (Tučep) landfill,
- Zubin Potok (Lučka Reka) landfill,
- Leposavić/Leposaviq landfill,
- Zvečan/Zveqan (Pirit) landfill.

These landfills have occurredas a consequence of municipalities disposing waste to a selected site without following any standards.

The Istog/Istok (Tuçep) landfill was intended to be used as a transfer station (engineering project was not developed) from which the waste would be transported to the Pejë/Peć regional landfill. However, due to the problems in the machinery, the distance (42km) to Sferkë and higher transport costs, the unit in Istog/Istoc ended up disposing the waste at the location. The landfill has no insulation layer, and there are no lagoons for the disposal of waste water from the landfill. Moreover, the only treatment at the landfill is the leveling of waste from time to time with bulldozers. The landfill is owned by the municipality of Istog/Istok, while it is managed by the RWC Ambienti unit in Istog/Istok. The amount of waste that is collected and then disposed in the landfill in 2017 is 6168 tons/year (RWC Ambienti report to KEPA).

The current state of waste in the North of Kosovo is alarming as none of the 4 municipalities has a sanitary landfill for municipal waste. The municipality of Zubin Potok and Mitrovicë/Mitrovica North dispose their waste at a dumpsite at Lučka Reka in the municipality of Zubin Potok. Leposavić/Leposaviq uses a dumpsite close to the KFOR camp and Zvečan/Zveqan disposes the collected waste close to mining waste named "Pirit", a location between Zvečan/Zveqan and village Žitkovac.

The Zubin Potok landfill receives 120-200 tons of waste per month from Zubin Potok only, and not taking into consideration waste from North Mitrovica/Mitrovicë Municipality. The landfill has a bulldozer/compactor on site; however, it lacks leachate treatment and gas pipeline. Zubin Potok landfill is not within adequate operational standards and is considered as an illegal landfill. Annual quantities of collected waste are approximately 13,200 tons at North-Mitrovica/Mitrovicë, 1,920 tons at Zubin Potok, 11,000 tons at Zvečan/Zveqan and more than 3,750 tons at Leposaviq/Leposavić.

Currently EU is constructing a landfill at Zvecan (Savina Stena).

c. Landfills for inert waste

Several municipalities have dedicated the use of a public plot for inert waste disposing. However, they are not constructed

based on standards. One example is the municipal inert waste landfill in Prizren (Zhur).

3.2.1.2 Transfer Stations (TS)

There are three transfer stations in Kosovo:
- Ferizaj/Uroševac transfer station, operated by KLMC
- Gllogoc/Glogovac transfer station, operated by RWC and
- Gjakovë/Đakovica transfer station, managment not clear.

Municipalities eligible to use the transfer station in Ferizaj/Uroševac are: Ferizaj/Uroševac, Shtime/Stimlje, Kaçanik/Kačanik and Hani I Elezit/Elez Han. Beside RWC, private companies can also dispose their waste in the transfer station.

Gllogoc/Glogovac transfer station, serves the municipality of Gllogoc/Glogovac. The waste temporary disposed is then transported to Pristine/Pristina (Mirash) regional landfill.

The Gjakovë/Đakovica transfer station serves the municipality of Gjakovë/Đakovica only, and the waste is supposed to be transported to Prizren regional landfill.
This TS was used for temporary disposing of waste.

3.2.2 Waste sorting and treatment infrastructure (non-hazardous waste)

Currently, in Kosovo there is no national waste sorting or treatment plant.

A feasibility study exists at the Veterinary Agency of Kosovo for an incinerator for animal waste, part of a TwiningProject. Status of the project is unknown.

In the local level, there are some project are drafted ready to be implemented, such as: C&D waste treatment plant within Mitrovicë/Mitrovica (Germova) regional landfill (MRL), the transformation of Gllogoc/Glogovac TS into a civic amenity centre (CAC) for bulky waste and the construction of a CAC and C&D waste landfilll for Prishtinë/Pristina municipality etc.. Additionally, Prishtinë/Pristina municipality is developing the project for an organic waste treatment plant for Germia Park that might in the future treat also organics waste from green markets.

3.3 Municipal Solid Waste Management status

3.3.1 Waste service coverage

Municipal waste collection, transport and final disposal to a sanitary landfill is one of the basic services that a municipality provides for all those working and living within its territory.

The map below provides an overview on waste service coverage rate per cadastral zone by the end of 2016 (Figure 6). Annex 1, lists the waste service coverage rate for all municipalities in Kosovo and the average rate per region can be found in the table below.

The overall service coverage by the end 2016 of Kosovo stands at 57.8%. The region with the highest coverage rate is the Prizren region (78.9%), and the the highest coverage of the rural area is in the Prizren region as well (71.4%). The region with the lowest coverage rate is the Gjakovë/Đakovica region (37.6%), and the same Gjakovë/Đakovica region has also the lowest coverage of the rural area (16.5%) (see annex 2 for details).

The following definition of the collection coverage has been used forcalculation:

$$SH_m = \frac{N_{k.sh.}}{N_{t.k.}} \quad x100\ (\%)$$

*SH_m – Coverage rate
*$N_{k.sh.}$ – Number of clients (households, businesses and institutions) served (invoiced) on December 2016
*$N_{p.k.}$ – Total Number of clients (households, businesses and institutions)

Clients served were defined as the clients invoiced in December 2016, and the data was gathered from the operators in the municipality (RWC, MC or municipalities), while the total number of clients per settlement derived from the municipal data for households (either from an updated client database or from census 2011) plus the institutions and business clients from the municipal data source. For information on exemptions please see annex1.

In general there are data inaccuracies, and assumptions that were made in order to formulate a measurable indicator for coverage with waste collection services. One assumption is that every client served also receives an invoice and that all clients are invoiced each month, which is not the case for numerous reasons. Some of the reasons identified are listed as follows:

- the operators database of serviced clients is not updated, and as example, even though all households are served in a settlement (verifiable with the amount of waste collected) only a percentage is actually invoiced;
- in some municipalities private companies licensed for waste collection are operating however since the municipality didn't undergo procedures as requiredby law, public procurement and then contract the operator, the data (invoicing) deriving from these companies were not taken into calculation;
- some RWC or their units made a management decision on finances, not to invoice households belonging to a community who refused to pay in the past or those that are part of the social security program, because the RWC unit is liable for VAT payment towards the Tax Administration according to the invoices issued and not to the payments received;
- some RWC or their units have taken the decision to bill all local institutions with one invoice;
- some RWC or their units have taken the decision to bill temporary clients (i.e. diaspora) only once, for the months when they reside in the municipality, and therefore the data from December are missing some of the invoices from this category;

Additionally there are data inaccuracies with the number of total clients within a territory given by the municipality, concerning mainly data on households and businesses, such as:

- many municipalities were not able to distinguish the data on active businesses, from their database, so the number of businesses can represent all registered businesses within the territory;
- some municipalities have updated the client list, filtering through property tax data, however still showing big gap in data in comparison to the census of 2011 data;
- many municipalities have submitted data from the census-2011, so the data are timely not time representative;

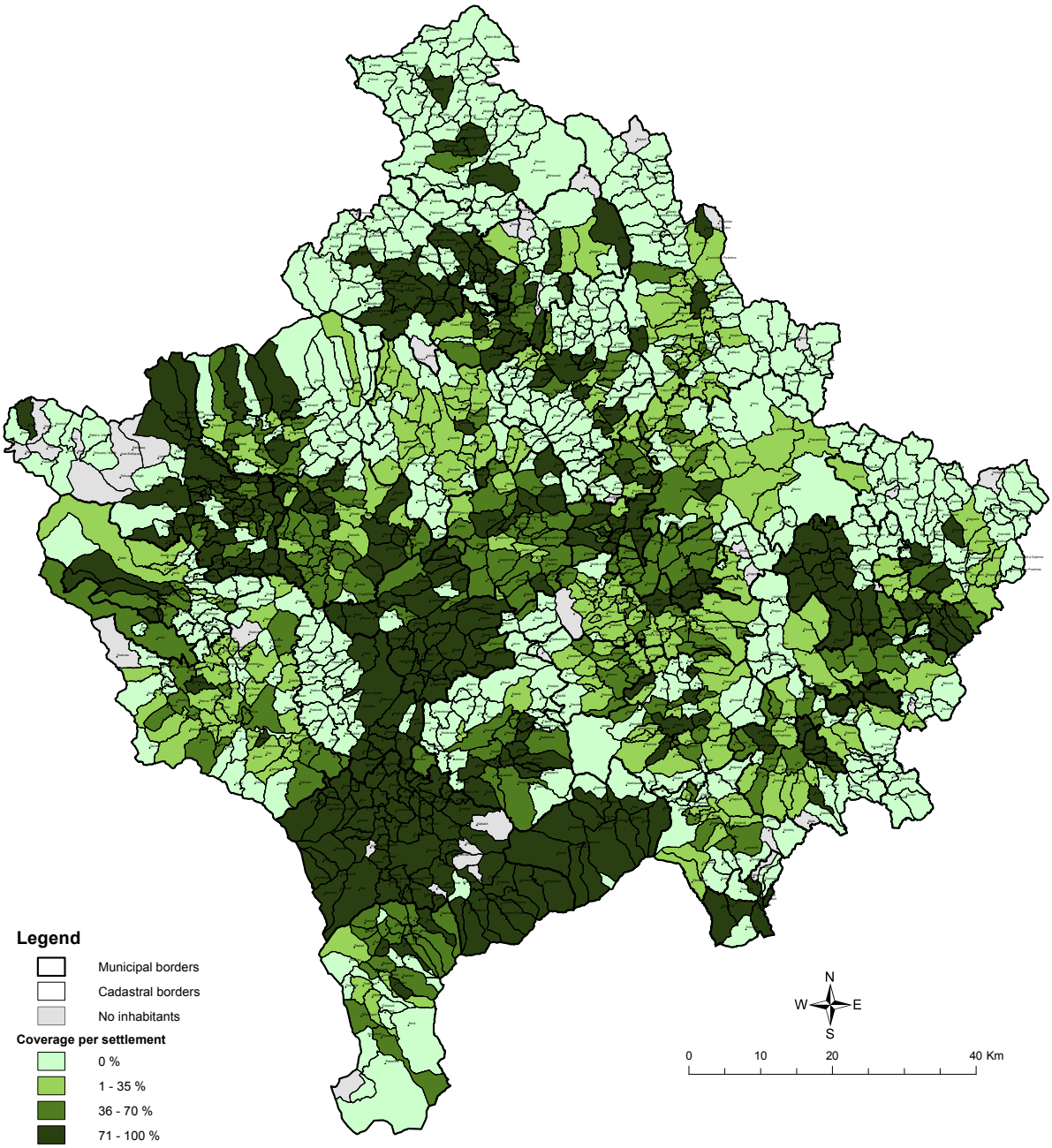


Figure 11. Waste collection coverage in Kosovo

This information shows that the actual service provision in the country is higher than 57.8%.

One additional assumption, but which doesn't affect the overall municipal coverage rate is that the potential clients and invoiced clients are within the same cadastral zone, and in most of the cases this holds true. However there are examples, when the invoicing of clients is based in a different territorial division of the respective operator and does not match the official cadastral division of settlements.

General data					Coverage			Fee collection	Illegal dumpsites	
	Municipalities / RWC Region / REGION	Area (km2)	Number of inhabitans (2011)[1]	Number of households (2011)[1]	Total clients (2016)[2]	Total clients served (12/2016)[2]	Coverage [3]	Fee collection rate[3]	Number of illegal dumsites[4] (2017)	Number of illegal dumsites[5] /km2
R1	PRISHTINË/ PRISTINA REGION	2081	470,583	85,104	145,602	78,586	54.0%	85.9%	360	0.17
R2	MITROVICË/MITROVICA REGION	2051	232,333	42,645	54,762	30,601	55.9%	69.8%	163	0.08
R3	PEJA/PEČ REGION	1366	174,235	30,266	36,172	26,154	72.3%	67.9%	49	0.04
R4	PRIZREN REGION	2015	387,828	60,651	65,184	51,430	78.9%	78.5%	498	0.25
R5	FERIZAJ/UROŠEVAC REGION	1021	185,695	31,001	37,088	19,343	52.2%	85.7%	179	0.18
R6	GJILAN/GNJILANE REGION	1413	188,188	34,387	41,232	21,348	51.8%	89.1%	228	0.16
R7	GJAKOVA/ ĐAKOVICA REGION	959	140,659	22,960	39,912	15,001	37.6%	88.4%	95	0.10
KOSOVË/KOSOVO		**10906**	**1,779,521**	**307,014**	**419,952**	**242,463**	**57.7%**	**77.9%**	**1572**	**0.14**

Table 5. National data overview of key Waste Management indicators

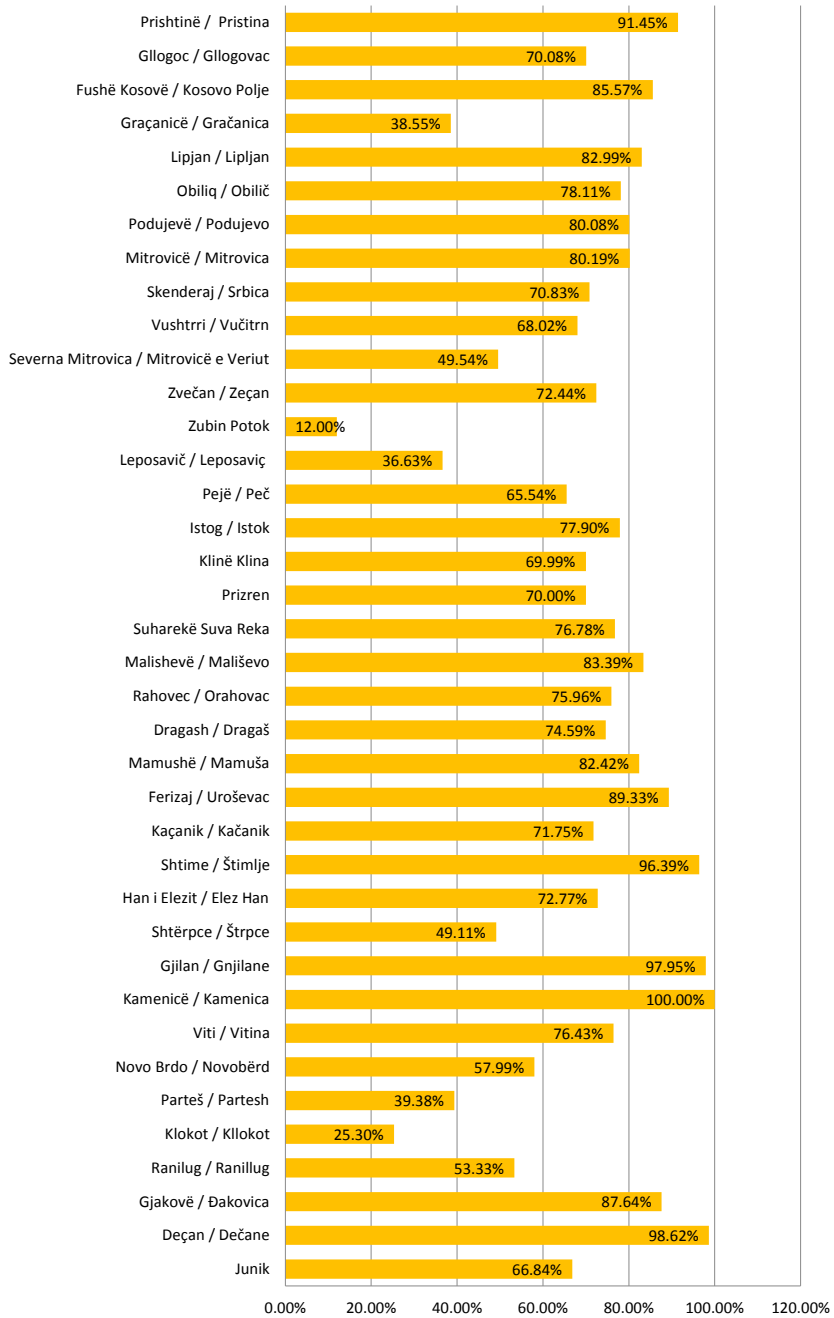


Figure 12. Fee collection per municipality

3.3.2 Fee collection

A key driver of a waste management system is its financial sustainability. Revenue generation and cost orientation lead up to a clear performance orientation of the whole service. Kosovo municipalities, respectively RWCs have been struggling with financial sustainability for more than a decade now.

The current fee collection rate in Kosovo is not sufficient enough to ensure a financial sustainability of the waste management system. The rate level is a clear indicator of clients' willingness to pay fees for waste collection services and/or the ability of municipalities to modernize and enforce fee payment. It also provides an excellent opportunity for municipalities to reflect on the quality of waste collection services and therefore increase revenue collection efforts.

The map on the side provides an overview of the fee collection rate per municipality for the year of 2016 (see Figure). Fee collection data was provided by the RWC or municipalities on other cases. Most of the data were provided as separated data per households, businesses and institutions, amount of invoices billed and amount of fees collected from billed invoices.

Based on the acquired data and calculation method applied, the fee collection rate in Kosovë/Kosovo is 77.9 % (see annex 1.). Gjilan/Gnjilane region has the highest fee collection rate (89.1%), whereas Pejë/Peć region has the lowest one (67.9%).

Data for waste fee collection were calculated using the following formula:

$$SH_a = \frac{sh_{f.l.v}}{sh_{f.a.}} \quad x100\ (\%)$$

*SH_m – Fee collection rate
*$sh_{f.l.v}$ – The amount of invoices issued per year 2016
*$sh_{f.a}$ – The amount of fees collected in the responsible year (2016)

The actual fee collection is lower than the one deriving from the formula. However, none of the operators can distinguish the fees collected from the invoiced volume of the respectiveyear from the fees collected from invoiced volume of the previous years (old debts).

It is assumed that the actual fee collection is 15-20% lower than the one deriving from the formula.

Therefore, the actual fee collection rate in the country can be approximately 60%.

For municipalities to ensure financial sustainability of the waste management system, they have to proactively engage in setting up an efficient fee collection system.

In the last couple of years, some municipalities have taken up reforms and actions in order to increase the fee collection rate.

Municipalities of Prizren, Prishtinë/Pristina and Mitrovicë/Mitrovica, took over the fee collection form the RWCs. In these cases, tariffs fees became a 'municipal tax', allowing for easier enforcement namely through service conditioning.

Client list revision from three municipalities (notably Prishtinë/Pristina, Mitrovicë/Mitrovica and Gjiakova) have revealed that only between 60% - 80% of served clients actually are invoiced, providing a significant possibility to increase revenues for RWC and municipalities. Hence, client data lists should be updated and harmonized (if possibly digitally) with the property registry, cadaster, electricity or water company, and regularly updated.

Private bailiff, is another enforcement mechanism for fee collection that has proven effective in Gjilan/Gnjilane municipality.

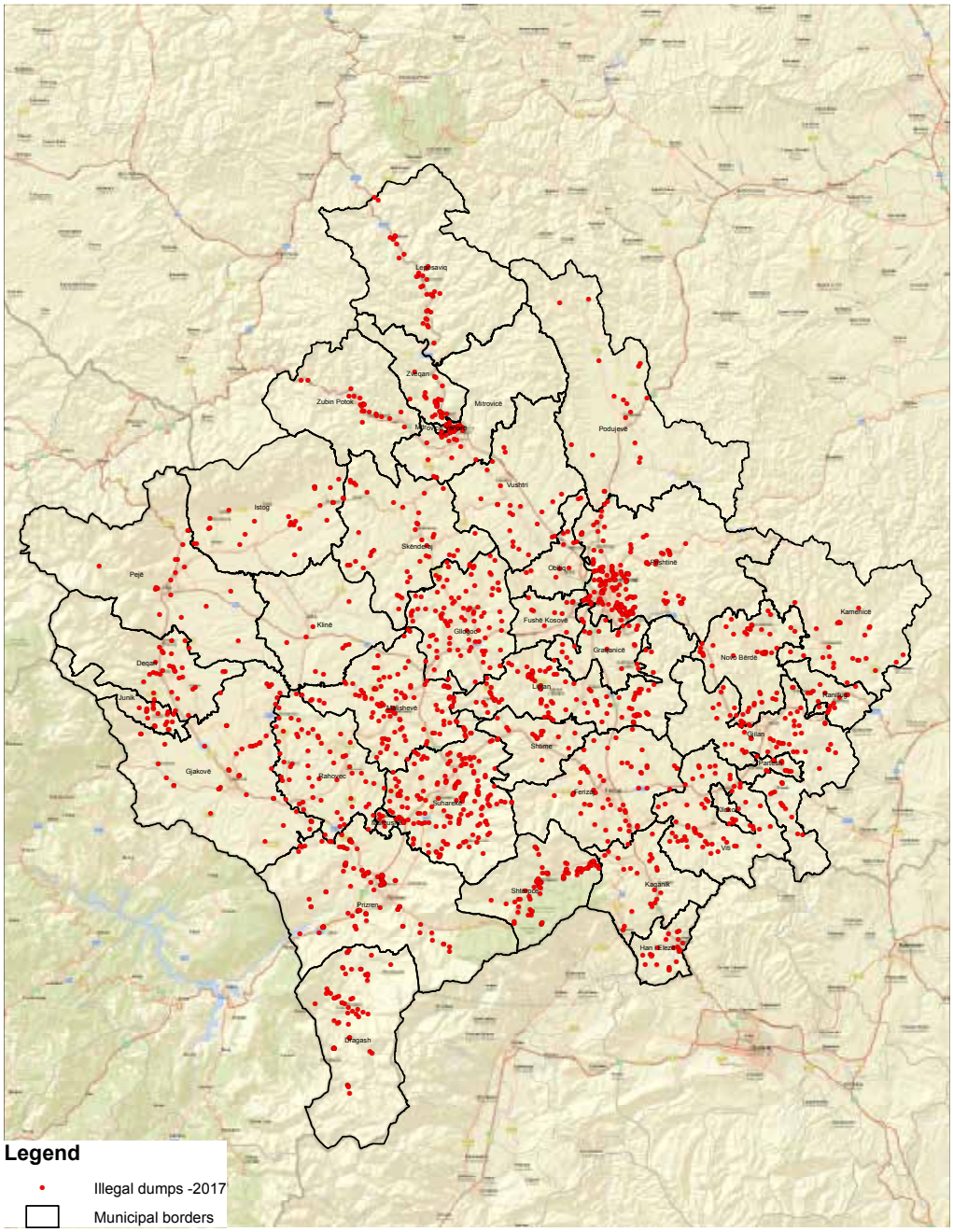


Figure 13. Illegal dumpsites - 2017 data

3.3.3 Illegal dumpsites

Illegal dumping is a common problem in Kosovo, affecting all municipalities. A recent assessment conducted in 2017 identified 1,572 illegal dumpsites in 38 municipalities. The illegal dumpsites identified were classified according to size and type of waste, such as: big, medium and small dumpsites based on the amount of waste dumped and based on the area they occupy. As per type of waste, illegal dumpsites were classified as: (a) household waste; (b) construction and demolition waste; (c) hazardous waste; (d) bulky waste; and (e) other waste.

The assessment was carried out during the month of May and June, 2017 by the Kosovo Environmental Protection Agency in cooperation with municipal officers/ inspectors and RWC officers, supported by GIZ. Two smart-phone applications were used to collect data: Venzeo and MyCarTracks. The Venzeo app allows photographing, geo-referencing and classification according to size (i.e. small, medium and big) and type (i.e. household waste, construction and demolition waste, hazardous waste, bulky waste and other wastes). Whereas, the app MyCarTracks allows tracking vehicle movement while collecting data on illegal dumpsites. All collected data were further processed using Geographical Information System (GIS) software, and maps of illegal dumpsite spatial distribution were generated.

Of the 1,572 illegal dumpsites identified, 45% are big dumpsites, 36% are small, and 19% are small dumpsites.

As per type of waste, 44% are comprised of household waste, 47% are construction and demolition waste, 2% are hazardous waste, 5% are bulky waste, and 2% of other waste fractions. According to the collected data Pejë/Peć region has the lowest number of illegal dumpsites (49), whereas Prizren region has the highest number of illegal dumpsites in Kosovo (498).

There is no clear pattern of illegal dumping identified throughout the assessment. Illegal dumpsites are predominantly found all over municipal areas, in urban and rural settlements.

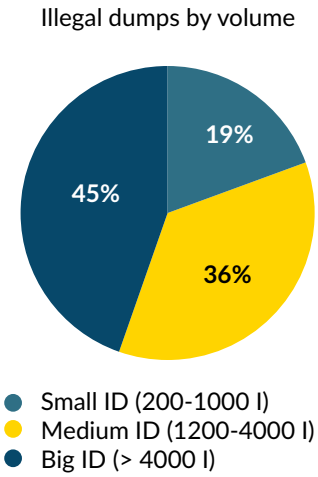


Figure 14. Percentage of Illegal dumpsites by volume

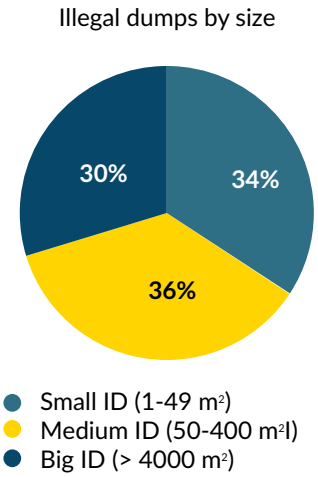


Figure 15. Percentage of Illegal dumpsites by wsaste size

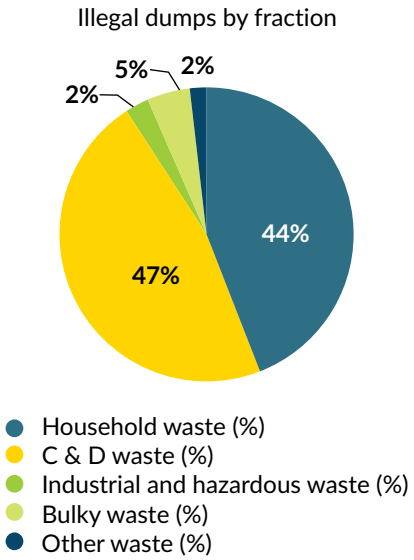


Figure 16. Percentage of Illegal dumpsites by waste type



Photo 9. Illegal dump, Prishtina/Priština



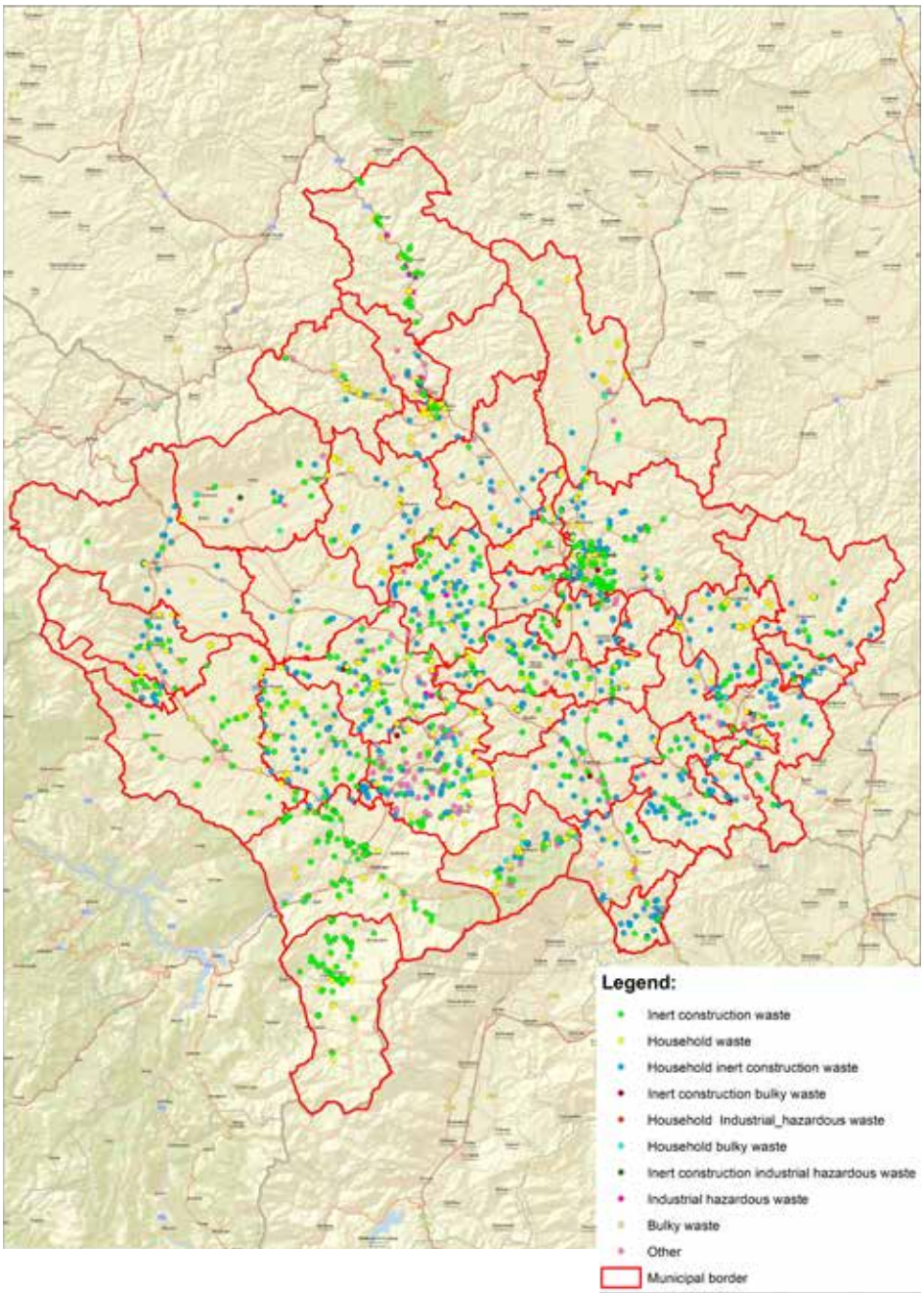


Figure 17. Illegal dumpsites by type of waste- 2017 data

The following are some of the assumptions leading towards the phenomenon of illegal dumping:

- Low quality of services provided by RWCs, meaning low service frequency and coverage, especially in rural areas,
- Lack of enforcement mechanisms by local authorities to fine illegal dumping acts,
- Lack of citizen awareness on environmental impact caused by illegal dumping,
- Lack of inert waste landfills.

The assessment also revealed that construction and demolition illegal dumpsites are most common dumps all over Kosovo.

High housing needs in Kosovo resulting from destructions of the last war and population increase is considered as one of the key reasons why these dumps are so spread out.

3.3.4 Recycling

There is a clear indication that the government of Kosovo is aware of the economic benefits and savings potentials for the state budget that are to be gained through the development of the recycling sector.

However, so far investments in the recycling industry from the private or public sector mostly remain as planned but not implemented and operational.

Informal sector is very active in collecting recyclable fractions. Though this activity is securing their livelihoods, it presents major health risks for the community and children especially. The collected recyclables are then moved up the value chain to the businesses (~70 licensed) that process these materials, and also export them. There are some examples (composting of organic waste, reuse of tires, reuse and storage of diesel and petrol products etc) of the listed businesses, that actually reuse or recycle the collected waste.

Based on the 2016 data from the Statistical Agency of Kosovo, 53,218 tons of waste was processed by the private businesses and 10,674 tons of waste was exported, for the recycling industry in other countries.

62,461 tons are collected by the companies, which represent ~15 % of the total amount of waste collected (~416,378.9 tons-year 2017) and the amount of waste that is exported in comparison to the total amount of collected waste is only 2.6%.

Type of Waste	The amount of material received (total) (ton)	The amount of material produced (total) (ton)	Of which processed (ton)	Of which exported (ton)
Metals	41,756	33,207	40,232	4,046
Plastic	10,163	12,091	11,686	498
Paper	5,322	5,312	3,860	6,128
Others	5,220	5,220	5,220	199
total	62,461	55,830	60,998	10,871

Table 6. Recyclable waste quantities, processed by companies in Kosovo



Photo 10. RWC "Pastrimi" Autopark, Prishtina/Priština

4.0 REGIONAL DEVELOPMENT STATUS AND PLANNED INVESTMENTS

In this chapter the current data on waste management are presented 'per region' and additionally an overview of development plans in the national and local level is shown.

The rationale behind the regional presentation of data lays on the fact that it is an actual practice in Kosovo and more importantly it is in line with EU polices.

At present, according to the legislative framework in Kosovo, there are only two administrative levels, the local level (municipality) and the central level (the state). However, we should note that regional planning, regional statistical data collection is a practice of the central level, dating back to the former Yugoslavian time up until now.

Today there are 7 regional statistical offices, regional hospitals, and regional institutes for cultural heritage protection, and the ones relevant to the waste management sector are the regional waste companies and regional landfills.

This territorial organization is in line with the European Cohesion Policy, which is the EU's main investment policy, targeting all regions and cities in the European Union in order to support job creation, business competitiveness, economic growth, sustainable development, and improve citizens' quality of life. At the beginning of the 1970s, Eurostat set up the NUTS (Nomenclature of territorial units for statistics) classification as a single, coherent system for dividing up the EU's territory in order to produce regional statistics, perform socio-economic analyses of the regions and frame the EU regional policies in order to allocate structural funds in a rational and coherent way in order to reduce the economic, social and territorial disparities.

In Kosovo Nuts 3 is applicable, according to Principle 1, were population thresholds are 150 000 – 800 000. The seven regions that we find in different documents in Kosovo (AI 16/2016 On Vehicle Registration, Strategy of Republic of Kosovo for Waste Management 213, Waste Management Master Plan2016) are similar or as illustrated in the map (Figure 11).



Figure 18.Regional Division

The regional overview, provided in the following chapter, of the waste management data, is very useful in:

- data analysis of the waste collection coverage rate, fee collection rate, illegal dumpsites, waste production data, waste disposed in landfill data,
- drafting of policies in the national level that would target regional weaknesses and make use regional potentials,
- allocating government funds in a coherent way to ensure balanced development (regional construction waste – treatment centres, regional waste separation facilities, composting plants etc)

The organization of the RWC is based on the above described regional divisions, with two exemptions: Novoberd/Novo Brdo is not part of the region of Prishtina/Priština but Gjilan/ Gnjilane, and Rahovec/ Orahovac is not part of the region of Gjakova/Djakovica but Prizren.

In this document this division will be considered, because it is more relevant to the subject of waste management.

Infrastructure investments plans overview

The data on the current state of waste management is presented in this chapter per region. Additionally, it is important to have an overview of the developments planned in the national and local level. For this we took into consideration the Plan of Republic of Kosovo for Waste Management (PRKWM) and existing Municipal Plans for Waste Management (MPWM) and presented the data in three categories: 1. Waste disposal facilities, 2. Waste collection, transport and treatment equipment and 3. Waste separation and treatment facilities.

We have placedour focus in the investments planned for waste management infrastructure and equipment, because considering the current state and in order to provide basic services up to standards and to every citizen, likewise to prepare the grounds for integrated solid waste management, there is a need for investing in infrastructure and equipment.

1. Waste disposal facilities
As it is shown in the table below, according to the PRKWM, the investments planned for waste disposal facilities are7.25 mil. €. Here we should explain that besides investments on landfills (construction, rehabilitation or expansion) four transfer stations, functioning as a sorting station as well, are planned in Istog/Istok, Kline/Klina, Skenderaj/Srbica. and Novoberd/ Novo Brdo in the value of 2.0 mil. €, and for the purpose of having a regional view on investments, this sum is split equally (500 000 €) between these municipalities.

According to the MPWMs, approximately 0.56 mil. € are planned for waste disposal facilities.

2. Waste collection, transport and treatment equipment
No investments (per region) are planned for waste collection, transport and treatment equipment with the PRKWM, and 7.29 mil€ in the MPWM.

Not all municipalities have clear calculated estimated costs for the following equipment: containers for residual waste, home composting bins, containers for recyclable waste and trucks. In some cases the presented values may include also the costs of an awareness campaign or other costs that were not possible to be subtracted. The figures need to be checked for accuracy and relevance from the municipalitiesand should be taken only for orientation.

3. Waste separation and treatment facilities
According to the PRKWM six C & D waste- treatment facilities are planned for six regional centres (Prishtinë/ Pristina, Mitrovicë/Mitrovica, Pejë/Peć, Prizren, Ferizaj/ Uroševac and Gjakovë/Đakovica) are planned, with estimated investment value 4.5 mil. € and for the purpose of having a regional view on investments, this sum is split equally (750 000 €) between these regions.

1.2 mil. € investments are planned with MPWMs. In this category like previously mentioned, the costs presented should be checked for accuracy and relevance by the municipality and should be taken only for orientation. Additionally, facilities that bear the same or similar function were expressed differently in the plans. For the purpose of comparing the values and having a comprehensive overview we should explain that in the C & D waste facility (site) in many MPWM are specified as construction waste centers. We decided to present them in the category of “Waste separation and treatment facilities” and not in the 1. Waste disposal facilities, since the explanation on their function is mostly missing, and sometimes it is described that reusing and treatment of C & D waste is foreseen.

Further in this regard, the “Civic amenity center” includes all investments planned for facilities presented in the MPWM as: recycling yards, bulky waste centers, Recycling yard with drop of system etc.

Investments planned for infrastructure and equipment	1. Waste disposal facilities		2. Waste collection, transport and treatment equipment		3.Waste separation and treatment facilities	
According to National or Local WMP	**NWMP**	**MWMP**	**NWMP**	**MWMP**	**NWMP**	**MWMP**
PRISHTINË/PRISTINA REGION	1,500,000.0	57,500.0		1,603,669.0	750,000.0	570,000.0
MITROVICË/MITROVICA REGION	500,000.0			1,147,409.0	750,000.0	70,000.0
PEJA/PEČ REGION	4,500,000.0	500,000.0		1,175,900.0	750,000.0	250,000.0
PRIZREN REGION	250,000.0			142,000.0	750,000.0	
FERIZAJ/UROŠEVAC REGION				1,266,800.0	750,000.0	280,000.0
GJILAN/GNJILANE REGION	500,000.0			692,650.0		20,000.0
GJAKOVA/ ĐAKOVICA REGION				1,271,450.0	750,000.0	27,500.0
Total	**7,250,000.0**	**557,500.0**	**0.0**	**7,299,878.0**	**4,500,000.0**	**1,217,500.0**

Table 7. Overview of investments planned in the local and central level for Waste Management infrastructure

Other investments according to the PRKWM
The PRKWM planned investments for waste collection and transport equipment, such as: 6.5 mil € for the purchase of equipment's and vehicles for collection and transfer of municipal waste in Prizrenand Prishtinë/Priština and 1.18 mil € for the purchase of various containers for municipal waste, but since the figures are not divided per region or municipality, they couldn't be presented as planned investments.

Additional planned investments in PRKWM that are not specific to region or municipality are:

3.5 mil € for the construction of plant for treatment of waste from animal slaughtering and meat processing, 5.0 mil € for cleaning of illegal dumpsites, and additionallyawareness raising activities, capacity building activities, developing studies, plans, feasibility studies, etc.

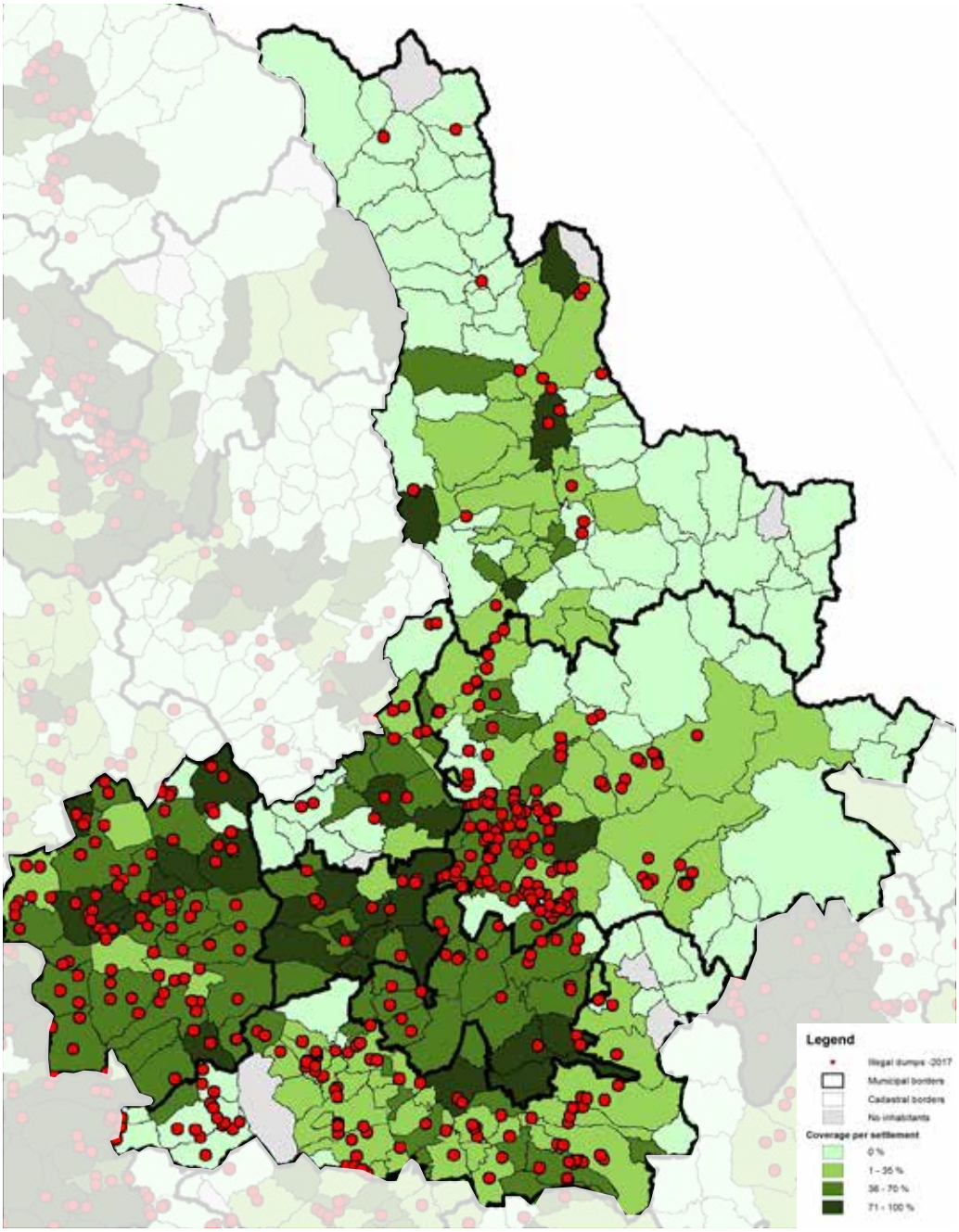


Figure 19. Waste collection coverage and illegal dumpsites in Prishtine/Pristina region

4.1 Prishtina/Priština region

REGIONAL DATA		
Area		2081 km2
Inhabitants		470 583
WASTE MANAGMENT DATA		
	Waste collection-operator	**Waste disposed**
Prishtinë/Priština	RWC Pastrimi	Pr. RL
Podujevë/Podujevo	RWC Pastrimi, PC	Po. L
Obiliq/Obilić	RWC Pastrimi	Pr. RL
Fushë Kosovë/Kosovo Polje	RWC Pastrimi	Pr. RL
Gllogoc/Glogovac	RWC Pastrimi	TS then Pr. RL
Lipjan/Lipljan	RWC Pastrimi	Pr. RL
Gračanica/Graçanicë	RWC Pastrimi, PC	Pr. RL
Coverage (2016)		54%
Fee collection (2016)		85.90%
Illegal dumpsites (2017)		360

*RWC-Regional Waste Company
*PC-Private Company
*Pr. RL-Prishtinë/Priština Regional Landfill
*Po. L-Podujevë/ Podujevo Lanfill

Table 8. Regional WM Data – Prishtinë/Priština Region

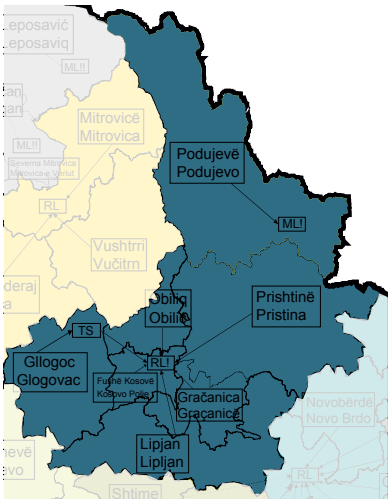


Figure 20. Prishtinë/Pristina Region

Waste management status

Prishtinë/Pristinaregion is comprised of 7 municipalities: Prishtinë/Pristina, Podujevë/Podujevo, Obiliq/Obilić, Fushë Kosovë/Kosovo Polje, Gllogoc/Glogovac, Lipjan/Lipljan and Gračanica/Graçanicë.It has an area of 2081 km2, and based on the 2011 census, it has 470 583 inhabitants.

Prishtina region is served by the RWC "Pastrimi", based in Prishtinë/Pristina, with 6 units in the other municipalities.

Podujevë/Podujevo, disposes the municipal waste in the sanitary municipal landfill in Dumnicë.Gllogoc/Glogovac has a transfer station, used to temporary dispose it's municipal waste that is thereaftertransferred to thePrishtinë/ Pristinaregional (Mirash) landfill as do all the other municipalities in the region.

The coverage with waste collection services inPrishtinë/ Pristinaregion is around 54%.Fushë Kosovë/Kosovo Poljehas the best coverage rate 87.3 %(8426 cleints served), and if we consider that in Podujevë/Podujevo a private company provides services in 46 from 74 settlements, then Lipjan has the lowest coverage rate in the region 37.2 % (3943 clients served).

Fee collection rate is relatively high 85.9%, the highest in Prishtinë/Pristina municipality 91.5 % and the lowest in Gračanica/Graçanicë 38.6 %.

360 illegal dumpsites were identified in the 2017 survey. Prishtina and Lipjan are the most polluted municipalities in the region with ~ 0.30 illegal dumps per km2.

Infrastructure investments plans

1. Waste disposal facilities
According to the PRKWM, investments in the total value of 1.5 mil. € are planned, for improvement of the Mirash regional landfill and with the MPWM of Gllogoc/Glogovac, they planned to connect the transfer station to the public infrastructure (water supply, sewerage and electricity network) and to include other functions, such as separation of different fractions, with investment value of 57 500 €.

2. Waste collection, transport and treatment equipment
According to the MPWM of all seven municipalities, the planned costs for this category amount to 1.6 mil €, of which 1.1mil € are planned for containers (0.9 mil. € containers for residual waste) and 0.48mil. € for trucks.

No planned cost for trucks could be found in the PRKWM of Prishtinë/Pristina and Fushë Kosovë/Kosovo Polje, and planning for home composting bins and containers for recyclable waste is not found in some municipalities (for details see table in annex 2.)

3. Waste separation and treatment facilities
Investment are planned for only three municipalities in this category.

In the PRKWM, the C & D waste- treatment facility is planned in Prishtinë/Pristina (and 5 other centres) is planned.

In the MPWM of Prishtinë/Pristina, they planned for investing in the civic amenity centre with the value of 70 000€. And in the MPWM of Gracanica a waste separation facility for the municipality is planned with the investment value of 500 000 €.

The total amount of investments planned for all three categories in the region ofPrishtinë/Pristinain the PRKWM is 2.25 mil€ and in the MPWMs is 2.23 mil.€.

Infrastructure investments plans	NWMP	MWMPs
1. Waste disposal facilities		
1.1 Prishtinë/Pristina regional landfill	1,500,000.0	
1.3 Gllogoc/Glogovac transfer station		57,500.0
total 1:	**1,500,000.0**	**57,500.0**
2. Waste collection, transport and treatment equipment		
2.1 Containers		1,121,669.0
2.2 Trucks		482,000.0
total 2:		**1,603,669.0**
3. Waste separation and treatment facilities		
3.1 C & D waste- treatment facility in Prishtinë/Pristina	750,000.0	
3.2 Civic amenity centerin Prishtinë/Pristina		70,000.0
3.3 Waste separation facility in Gračanica/Graçanicë		500,000.0
total 3:	**750,000.0**	**570,000.0**
total (1+2+3):	**2,250,000.0**	**2,231,169.0**

Table 9. The infrastructure investments plans – Prishtinë/Pristina Region

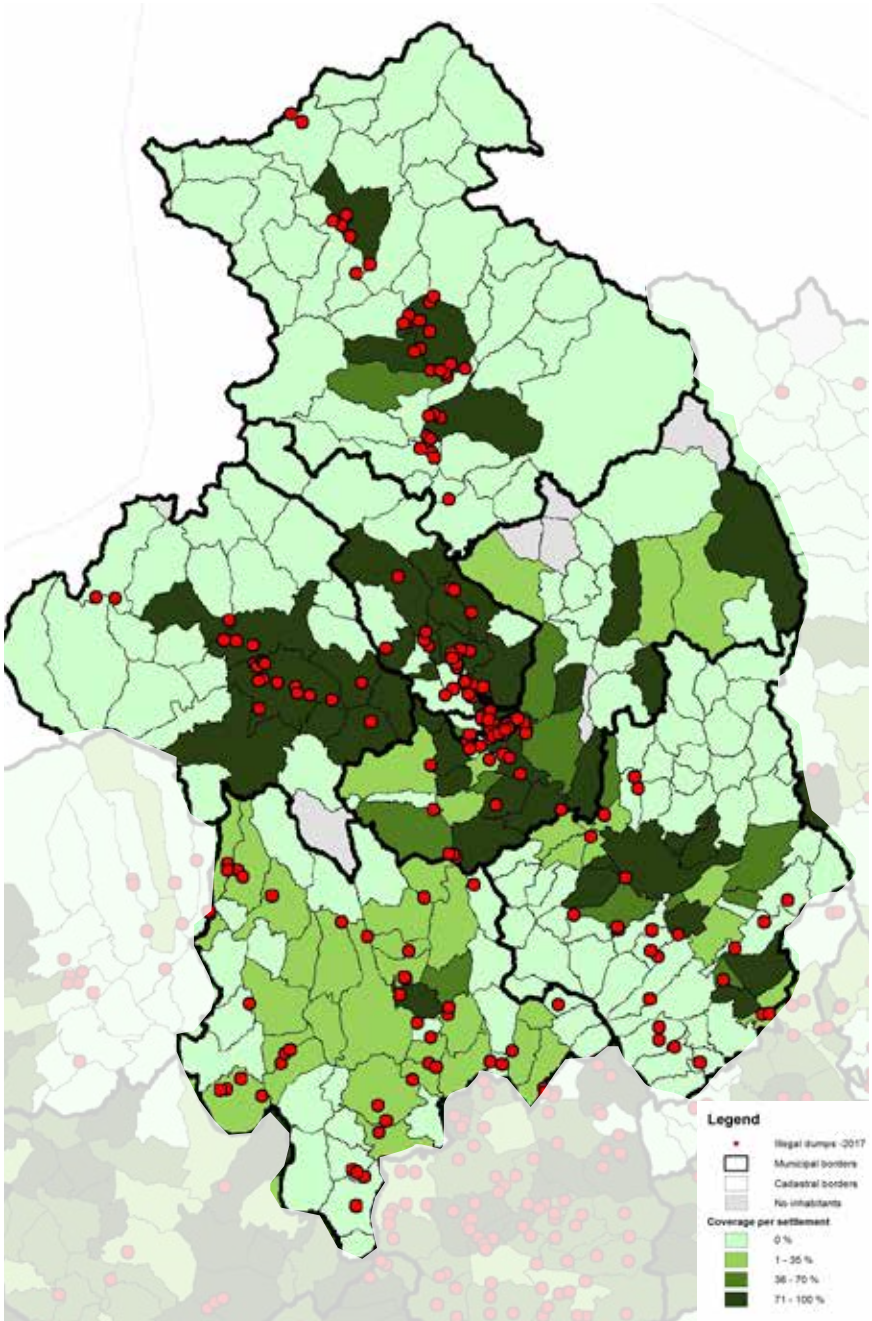


Figure 21. Waste collection coverage and illegal dumpsites in Mitrovica region

4.2 Mitrovicë/Mitrovica region

REGIONAL DATA		
Area		2051 km2
Inhabitants		232 253
WASTE MANAGMENT DATA	**Waste collection-operator**	**Waste disposed**
Mitrovicë/Mitrovica	RWC Uniteti	M. RL
Vushtrri/Vučitrn	RWC Uniteti	M. RL
Skenderaj/Srbica	RWC Uniteti	M. RL
North Mitrovica/Mitrovicë e veriut	MPE Standard	ZP. ILL
Zubin Potok	MPC Standard	ZP. ILL
Zvečan/Zveqan	MPC Standard	Z. ILL
Leposavić/Leposaviq	MPC Standard	L. ILL
Coverage (2016)		55.9% (50.5% RWC)
Fee collection (2016)		69.8% (75.2% RWC)
Illegal dumpsites (2017)		163 (54 RWC)

*RWC-Regional Waste Company
*MPC Standard-Municipal Public Company
*M. RL- Mitrovicë/Mitrovica Regional Landfill
*ZP. ILL- Zubin Potok Illegal Lanfdfill
*Z. L- Zvečan/Zveqan Illegal Lanfdfill
*L. L- Leposavić/Leposaviq Illegal Lanfdfill

Table 10. Regional WM Data - Mitrovica Region



Figure 22. Mitrovica Region

Waste management status

Mitrovica region is comprised of 7 municipalities: Mitrovicë/Mitrovica, Vushtrri/Vučitrn,Skenderaj/Srbica, North Mitrovica/Mitrovicë e veriut, Zublin Potok, Zvečan/Zveqan and Leposavić/Leposaviq . It has an area of 2051 km2, and based on the 2011 census and other sources, it has 232 333 inhabitants.

The RWC "Uniteti", is based in Mitrovicë/Mitrovica and has units in Vushtrri and Skenderaj. The northern municipalities are served by municipal public companies (MPC) registered and reporting to the Republic of Serbia.

Uniteti municipalities dispose their waste in the Mitrovicë/Mitrovica (Landovica) regional landfill.

The municipality of Zubin Potok and Mitrovicë/Mitrovica North dispose it's waste at a dumpsite at Lučka Reka in the municipality of Zubin Potok. Leposavić/Leposaviq use a dumpsite close to the KFOR camp and Zvečan/Zveqan disposes the collected waste close to mining waste named "Pirit", a location between Zvečan/Zveqan and village Žitkovac.

Mitrovica/Mitrovicëregion coverage with waste collection services is 55.9 %. The highest coverage rate is in Mitrovica/Mitrovicë north 100% (4145 clients served) and Mitrovicë/Mitrovica 64.5% (9814 clients served) , and the lowest rate is in the municipality of Skenderaj/Srbica 25.2% (2199 clients).

Fee collection rate is 69.8%, the highest being in Mitrovicë/Mitrovica 80.2% and lowest in Zubin Potok 12%. However, we should mention that the fee collection from household and businesses in Leposavić/Leposaviq is really low, but the value of 36.6% reflects the high fee collection from KFOR.

The illegal dumpsite survey of spring 2017 identified 163in the region, and only 54 in the territory served by RWC Uniteti, andconsidering the 0.08 illegal dumps per km2, the pollution to the environment is lower compared to otherregions. The highest number of illegal dumps was found in Zvečan/Zveqan (34) and Leposavić/Leposaviq(34).

See annex 1. for detailed information on each municipality.

Infrastructure investments plans

1. Waste disposal facilities
In the PRKWM, a transfer stationand sorting station is planned forSkenderaj/Srbica, with an approximate value of 500 000 €.

The same facility is planned with the MPWM of Skenderaj/Srbica, a transfer station, with a considerably lowerinvestment value (50 000 €).

The PRKWM also planned a study and research of the situation for the Mitrovicë/Mitrovica (Landovica) regional landfill.

Northern municipalities lack MPWM, therefore no investment plans can be shown for their territory in all categories.

2. Waste collection, transport and treatment equipment
In the PRKWM, nothing was planned in this category.
According to the existing MPWM of 3 municipalities, the planned costs for this category amount to 1.14 mil €.

3. Waste separation and treatment facilities
In the PRKWM, a C & D waste- treatment facility in Mitrovica is planned with the approximate value 750 000€.

Additionally, three facilities are planned, and the total value of investments is 70 000€.

A Civic amenity centre was planned in the Vushtrri/VučitrnMPWM with a cost estimate 15 000€, and the same facility is planned in Skenderaj/Srbica (15 000€). Also a C & D waste facility (site) was planned in Skenderaj/Srbica, with the investment value of 40 000 €.

Northern municipalities lack MPWM, therefore no investment plans can be shown for their territory in all categories.

The total value of the planned investments for the region, in the PRKWM is 1.25 mil. €, and according to the local MPWM it is 1.26mil €.

Infrastructure investments plans	NWMP	MWMPs
1. Waste disposal facilities		
1.1 Transfer station and sorting station in Skenderaj/Srbica	500,000.00	50,000.0
total 1:	**500,000.00**	**50,000.00**
2. Waste collection, transport and treatment equipment		
2.1 Containers		447,409.0
2.2 Trucks		700,000.0
total 2:		**1,147,409.0**
3. Waste separation and treatment facilities		
3.1 C & D waste- treatment facility in Mitrovicë/Mitrovica	750,000.0	
3.2 Civic amenity center in Vushtrri/Vučitrn		15,000.0
3.3 Civic amenity centerin Skenderaj/Srbica		15,000.0
3.4 C & D waste facility (site) in Skenderaj/Srbica		40,000.0
total 3:	**750,000.0**	**70,000.0**
total (1+2+3):	**1,250,000.0**	**1,267,409.0**

Table 11. The infrastructure investments plans – Mitrovica Region

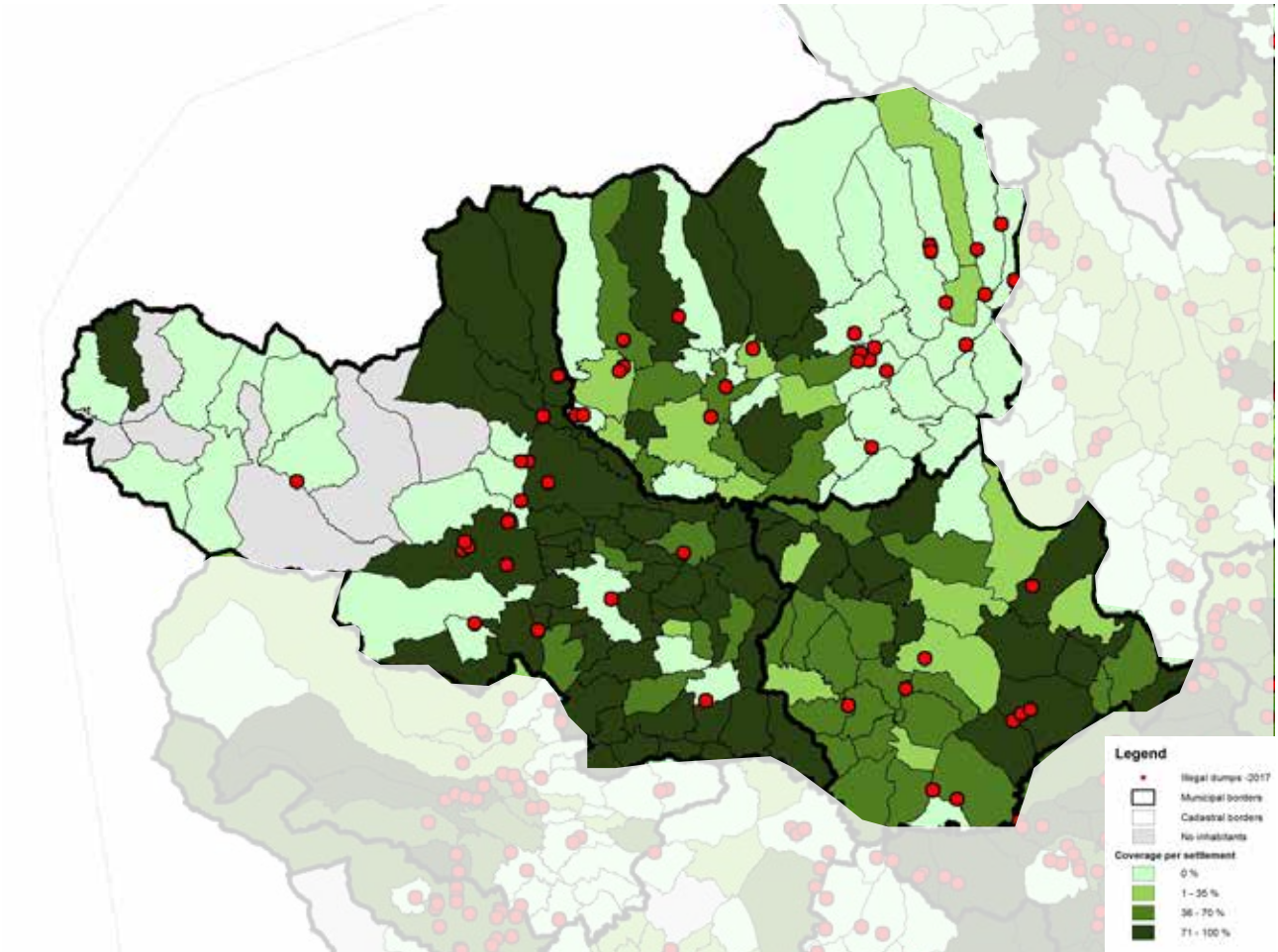


Figure 23. Waste collection coverage and illegal dumpsites in Pejë/Peć region

4.3 Peja/Peć region

REGIONAL DATA		
Area		1 366 km2
Inhabitants		174 235
WASTE MANAGMENT DATA		
	Waste collection-operator	**Waste disposed**
Pejë/Peć	RWC Ambienti	P. RL
Klinë/Klina	RWC Ambienti	P. RL
Istog/Istok	RWC Ambienti	I. IL
Coverage (2016)		72.3%
Fee collection (2016)		67.9%
Illegal dumpsites (2017)		49

*RWC-Regional Waste Company
*P. RL- Pejë/Peć Regional Landfill
*I. IL- Istog / Istok Illegal Lanfdfill

Table 12. Regional WM Data - Pejë/Peć Region

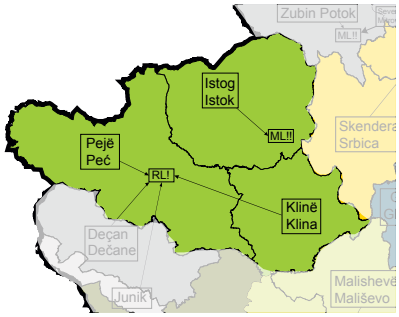


Figure 24. Pejë/Peć Region

Waste management status

Pejë/Peć region is comprised of 3 municipalities: Pejë/Peć , Klinë/Klina and Istog/Istok. It has an area of 1366 km2, and based on the 2011 census it has 174 235 inhabitants.

Pejë/Peć region is served by the RWC "Ambienti", based in Pejë/Peć, with units in Istog/Istok and Klinë/Klina. The waste collected from the municipalities of Pejë/Peć and Klinë/Klina is disposed in Pejë/Peć (Sferkë) regionallandfill and Istog/Istok disposes it's waste in the illegal landfill in Tuçep/Tučep (settlement in the municipality of Istog/Istok).

Pejë/Peć region has relatively good coverage with waste collection services (72.3%). Peja/Peć has the highest coverage rate in the region (85.1% and 17 483 clients served) and Istog/Istok has the lowest rate of coverage with waste collection services (44.3 % and 3432 clients served).

Fee collection rate is 67.9%, highest being in Istog (77.9%) mainly because the large share of fees collected comes from the public institutions like the national prison located in Dubravë/Dubravo. The lowest fee collection is in Pejë/Peć, 65.5%

Only 49 dumpsites were identified in the region, and the indicator showing the number of illegal dumpsites per km2 is 0.04 in this region, which is the lowest in the country.

Infrastructure investments plans

1. Waste disposal facilities
According to the PRKWM, construction of the Peja/ Pećregional waste landfill is planned, with investment costs 3.5m€.

Two transfer stations with adjoining function as a sorting stations are planned in the region (Istog/Istok and Klinë/ Klina) with thePRKWM, and the investment costs of 1.0m €. In the MPWM of the two municipalities, it was recommended that, because the two municipalities are close in order to minimize investment and operational costs, a joint transfer station should be built, that will serve the two municipalities with the investment costs of 0.5 mil.€. There is a proposal for a location in the north of Klinë/Klina municipality.

2. Waste collection, transport and treatment equipment
According to the MPWM of all three municipalities, the planned costs for this category amount to 1.17 mil € of which 0.5 mil€ for containers for residual waste and 0.4 mil € for trucks.

3. Waste separation and treatment facilities
Different investment is planned for the three municipalities in this category. In the PRKWM, the C&D waste- treatment facility in Pejë/Peć is planned (3.5mil€), and in the MPWM of Klinë/Klina and Istog/Istok C & D waste facilites (sites) and civic amenity centresare planned. For detailed information on municipal planning see the table in annex 2.

The total value of planned investments for the region, in the PRKWM is 5, 25 mil. €, and according to the local MPWM it is 1.9 mil€.

Infrastructure investments plans	NWMP	MWMPs
1. Waste disposal facilities		
1.1 Pejë/Peć regional landfill	3,500,000.00	
1.2 Transfer station for Klinë/Klina and Istog/Istok	1,000,000.00	500,000.00
total 1:	**4,500,000.00**	**500,000.00**
2. Waste collection, transport and treatment equipment		
2.1 Containers		754,900.0
2.2 Trucks		421,000.0
total 2:	**0.0**	**1,175,900.0**
3. Waste separation and treatment facilities		
3.1 C & D waste- treatment facility, in Pejë/Peć	750,000.0	
3.2 C & D waste facility (site) in Klinë/Klina and Istog/Istok		145,000.0
3.3 Civic amenity center, in Klinë/Klina and Istog/Istok		105,000.0
total 3:	**750,000.0**	**250,000.0**
total (1+2+3):	**5,250,000.0**	**1,925,900.0**

Table 13. The infrastructure investment plans – Pejë/Peć Region

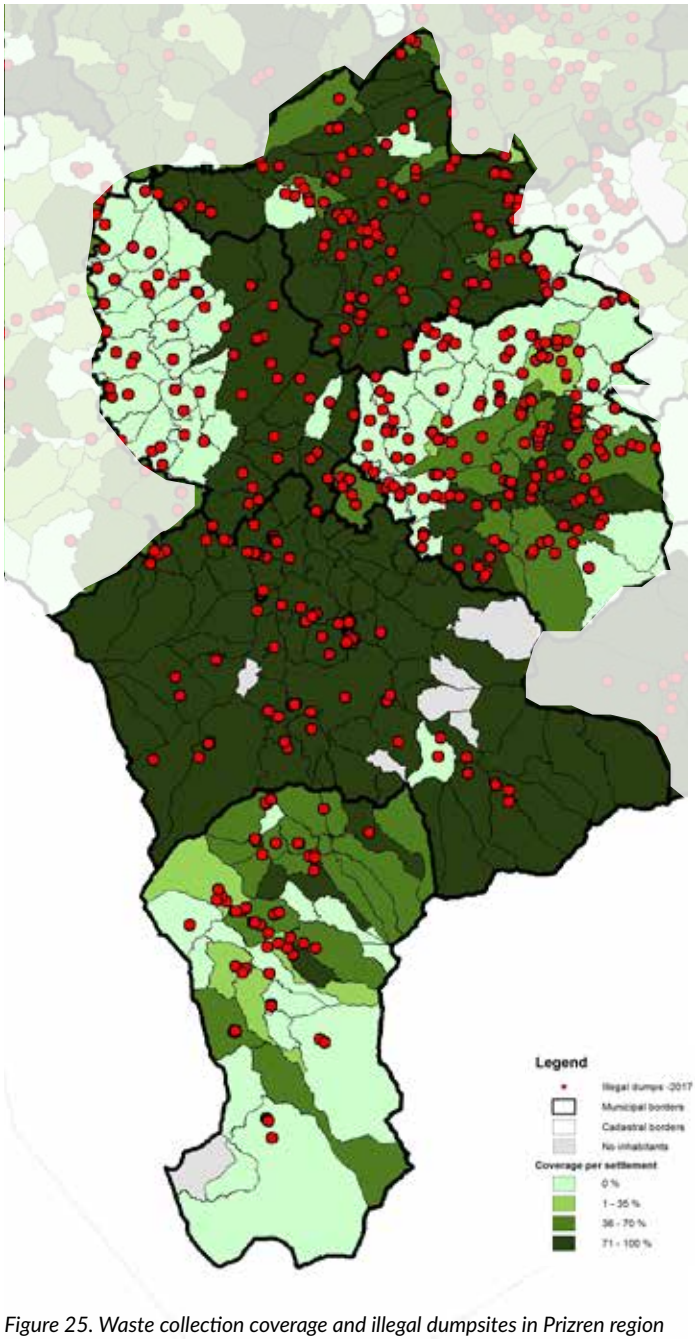


Figure 25. Waste collection coverage and illegal dumpsites in Prizren region

4.4 Prizren region

REGIONAL DATA		
Area		2015 km2
Inhabitants		387 828
WASTE MANAGMENT DATA		
	Waste collection- operator	**Waste disposed**
Prizren	RWC Ekoregjioni, 3 PC	P. RL
Rahovec/Orahovac	RWC Ekoregjioni, PC	P. RL
Malishevë/Mališevo	RWC Ekoregjioni	P. RL
Suharekë/Suva Reka	RWC Ekoregjioni, PC	P. RL
Dragash/Dragaš	RWC Ekoregjioni	P. RL and D.ML
Mamushë/Mamuša	PC	P. RL
Coverage (2016)		78.9 % (79.2% RWC)
Fee collection (2016)		78.5% (78.4% RWC)
Illegal dumpsites (2017)		498 (491 RWC)

*RWC-Regional Waste Company
*MPC Standard-Municipal Public Company
*M. RL- Prizren Regional Landfill
*D.ML- Dragash/Dragaš Municipal Landfill

Table 14. Regional WM Data - Prizren Region

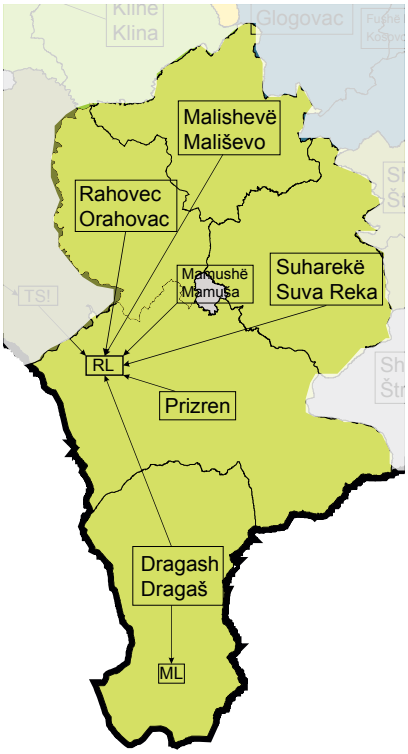


Figure 26. Prizren Region

Waste management status

Prizren region is comprised of 6 municipalities: Prizren, Rahovec/Orahovac, Malishevë/Mališevo, Suharekë/Suva Reka, Dragash/Dragaš and Mamushë/Mamuša. It has an area of 2015 km2, and based on the 2011 census, it has 387 828inhabitants. Apart from the municipality of Mamushë/Mamuša, the rest of the region is served by the RWC "Ekoregjioni", based in Prizren, with units in the other municipalities. Additionally, there are private companies (PC) serving in the municipality of Prizren, Rahovec/Orahovac, Suharekë/Suva Reka and Mamushë/Mamuša. However, only in Prizren the private companies operate based on a contractual agreement with the municipality.

Since 2014, the municipality of Prizren established a waste tax, and took over fee collection. In other municipalities the RWC(the respective unit), or the private company in Mamushë/Mamuša, along with the service provision they are also in charge for billing and collecting the waste fee.

All the municipalities dispose their waste in the Prizren (Landovica) regional landfill, with the exception of Dragash/Dragaš, which partially disposes the collected waste in the municipal landfill based in their own municipal territory.

Prizren region has relatively good waste collection service coverage with (78.9%) and because there is service provision from private companies in two municipalities that are not taken into consideration for the previously explained reasons, then the real coverage with service is presumed higher. Prizren and Malishevë/Mališevo have the highest coverage rate. Though, we should mention that the information for Prizren municipality was not provided segregated for eachcadastral zone.

Fee collection rate is 78.5%, highest being in Malishevë/Mališevo 83.4 % and lowest in Prizren (70%).

Despite good coverage and fee collection rate, in the survey conducted in spring 2017, for the identification of the illegal dumpsites, many illegal dumpsites were identified in the region, in total 498 dumpsites, with biggest pollution rate found in Suharekë/Suva Reka (0.47 illegal dumps/km2).

The indicator showing the number of illegal dumps per km2, is the highest in the country (0.25).

Infrastructure investments plans

1. Waste disposal facilities
In the PRKWM, the Dragash/Dragaš (Sharr / Šar) municipal landfillthat serves Dragash/Dragaš municipality is planned to be expanded. The total value for this intervention is estimated in the value of 250 000€.
There is no measure planned in the local MPWMs, with regards to waste disposal.

2. Waste collection, transport and treatment equipment
The investment planned for collection, transport and treatment equipment, represent the needs of only three municipalities, since in the MPWM of Prizren the investment values were not identified and Malishevë/Mališevo, Dragash/Dragaš and Mamushë/Mamuša don't have MPWM.
The planned costs for this category amount to 142 000 €.Nevertheless, the investment values are considerably low, compared to other municipalities, 67 000 € for containers for residual waste and only 25 000 € for trucks.

3. Waste separation and treatment facilities
The PRKWM has foreseen a a C & D waste- treatment facilityin the municipality of Prizren and its value is estimated 750 000 €, whereas the MPWMs don't have anything planned in this regard.

Infrastructure investments plans	NWMP	MWMPs
1. Waste disposal facilities		
1.1 Dragash/Dragaš(Sharr) municipal landfill	250,000.00	
total 1:	**250,000.00**	
2. Waste collection, transport and treatment equipment		
2.1 Containers		117,000.0
2.2 Trucks		25,000.0
total 2:		**142,000.0**
3. Waste separation and treatment facilities		
3.1 C & D waste- treatment facility, in Prizren	750,000.0	
total 3:	**750,000.0**	
total (1+2+3):	**1,000,000.0**	**142,000.0**

Table 15. Infrastructure investment plans - Prizren Region

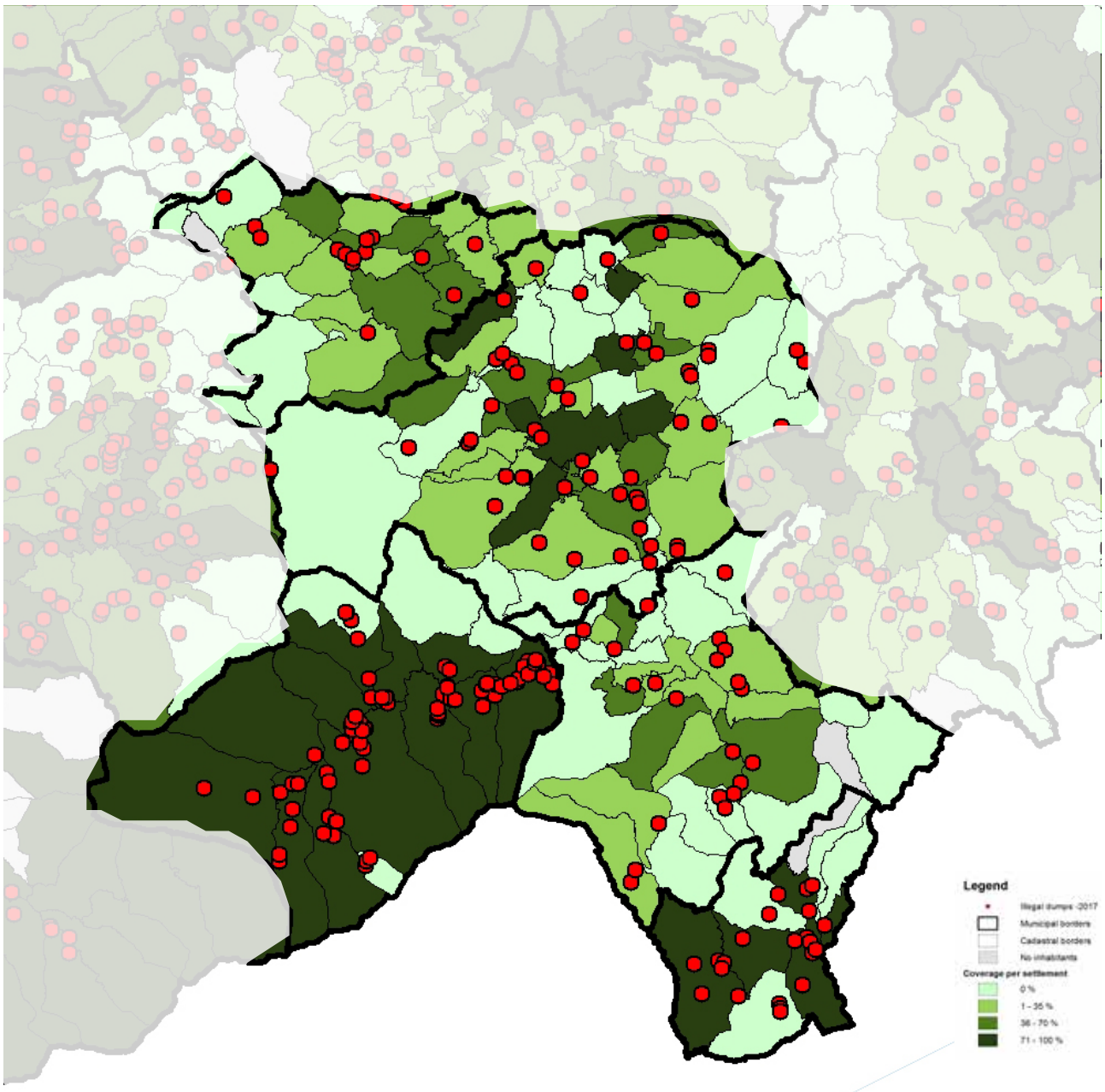


Figure 27. Waste collection and illegal dumpsites in Ferizaj/Uroševac region

4.5 Ferizaj/Uroševac region

REGIONAL DATA		
Area		1 021 km2
Inhabitants		185 695
WASTE MANAGMENT DATA		
	Waste collection-operator	**Waste disposed**
Ferizaj/Uroševac	RWC Pastërtia, 2PC	Gj. RL, TS
Shtime/Štimlje	RWC Pastërtia	Gj. RL, TS
Kaçanik/Kačanik	RWC Pastërtia, PC	Gj. RL
Shtërpc/Štrpce	MPC	Gj. RL &P RL
Han i Elezit/Elez Han	MPC	Gj. RL
Coverage (2016)		52.2 % (49.2% RWC)
Fee collection (2016)		85.7% (87.6% RWC)
Illegal dumpsites (2017)		179 (83 RWC)

*RWC-Regional Waste Company
*MPC -Municipal Public Company
*Gj. RL- Gjilan / Gnjilane Regional Landfill
*TS -Transfer Station

Table 16. Regional WM Data - Ferizaj/Uroševac Region



Figure 28. Ferizaj/Uroševac Region

Waste management status

Ferizaj/Uroševac region is comprised of 5 municipalities: Ferizaj/Uroševac, Shtime/Štimlje, Kaçanik/Kačanik, Shtërpc/ Štrpce and Han i Elezit/Elez Han. It has an area of 1 021km2, and based on the 2011 census, it has 185 695 inhabitants.

The region of Ferizaj/Uroševac is served by the RWC "Pastërtia" apart from Shtërpc/Štrpce and Han i Elezit/ Elez Han that are served by their own Municipal Public Companies.

Additionally, there are private companies (PC) providing services in the region, in the municipality of Ferizaj/Uroševac and Kaçanik/Kačanik. The waste is mainly disposed in the transfer station located in Ferizaj/Uroševac, or in the Gjilan (Velekincë)regional landfill. Han i Elezit/Elez Han disposes its waste directly in the Gjilan (Velekincë)regional landfill, and Shtërpc/Štrpce disposes in Gjilan (Velekincë)regional landfill and occasionally in Prishtinë/Pristina landfill.

The collection waste service coverage rate, in the Ferizaj/ Uroševac region is 52.2% , highest being in Shtërpc/Štrpce and Han i Elezit/Elez Han and lowest in Shtime/Štimlje, Kaçanik/Kačanik. See table in annex 1. for detailed data per municipality.

Fee collection rate is 85.7%, highest in Shtime/Štimlje 96.4% and lowest in Shtime/Štimlje (49.1%). In the illegal dumpsite survey of spring 2017, 179 illegal dumpsites were identified in the region, of which 83 in the territory served by the RWC. The region has 0.18 illegal dumps/ km2.

Infrastructure investments plans

1. Waste disposal facilities
There are no investments planned in the PRKWM or MPWM that are related to waste disposal.

2. Waste collection, transport and treatment equipment
Shtërpc/Štrpce is currently drafting the MPWM, so the figures present the values relevant to the other four municipalities in the region. According to the existing MPWM the planned costs for this category amount to 1.26 mil. €, of which the investments planned are for containers for residual waste (0.73 mil. €) and trucks (for 0.42mil€).

3. Waste separation and treatment facilities
In the PRKWM, aC & D waste- treatment facility in Ferizaj/ Uroševac is planned with the total value 750 000€.

According to the MPWM's, C & D waste facility (site) is planned in Ferizaj/Uroševac, with the value of 150 000€, and additionally a civic amenity center is planned in Ferizaj/ Uroševac with the value 40 000€.

According to Shtime/Štimlje's MPWM, aC & D waste facility (site) and a civic amenity center is plannedas one facility, andthe estimated value of the investment is 90 000 €.

Other municipalities didn't plan for waste separation and treatment facilities.

The total value of planned investments for the region, in the PRKWM is 750 000 €, and according to the local MPWM it is 1.54 mil. €.

Infrastructure investments plans	NWMP	MWMPs
1. Waste collection, transport and treatment equipment		
1.1 Containers		846,800.0
1.2 Trucks		420,000.0
total 1:	**0.0**	**1,266,800.0**
2. Waste separation and treatment facilities		
2.1 C & D waste- treatment facility, in Ferizaj/Uroševac	750,000.0	
2.2 C & D waste facility (site) in Ferizaj/Uroševac		150,000.0
2.3 Civic amenity center in in Ferizaj/Uroševac		40,000.0
2.4 Civic amenity center and C & D waste facility (site) in Shtime/Štimlje		90,000.0
total 1:	**750,000.0**	**280,000.0**
total (1+2):	**750,000.0**	**1,546,800.0**

Table 17. Infrastructure investment plans - Ferizaj/Uroševac Region

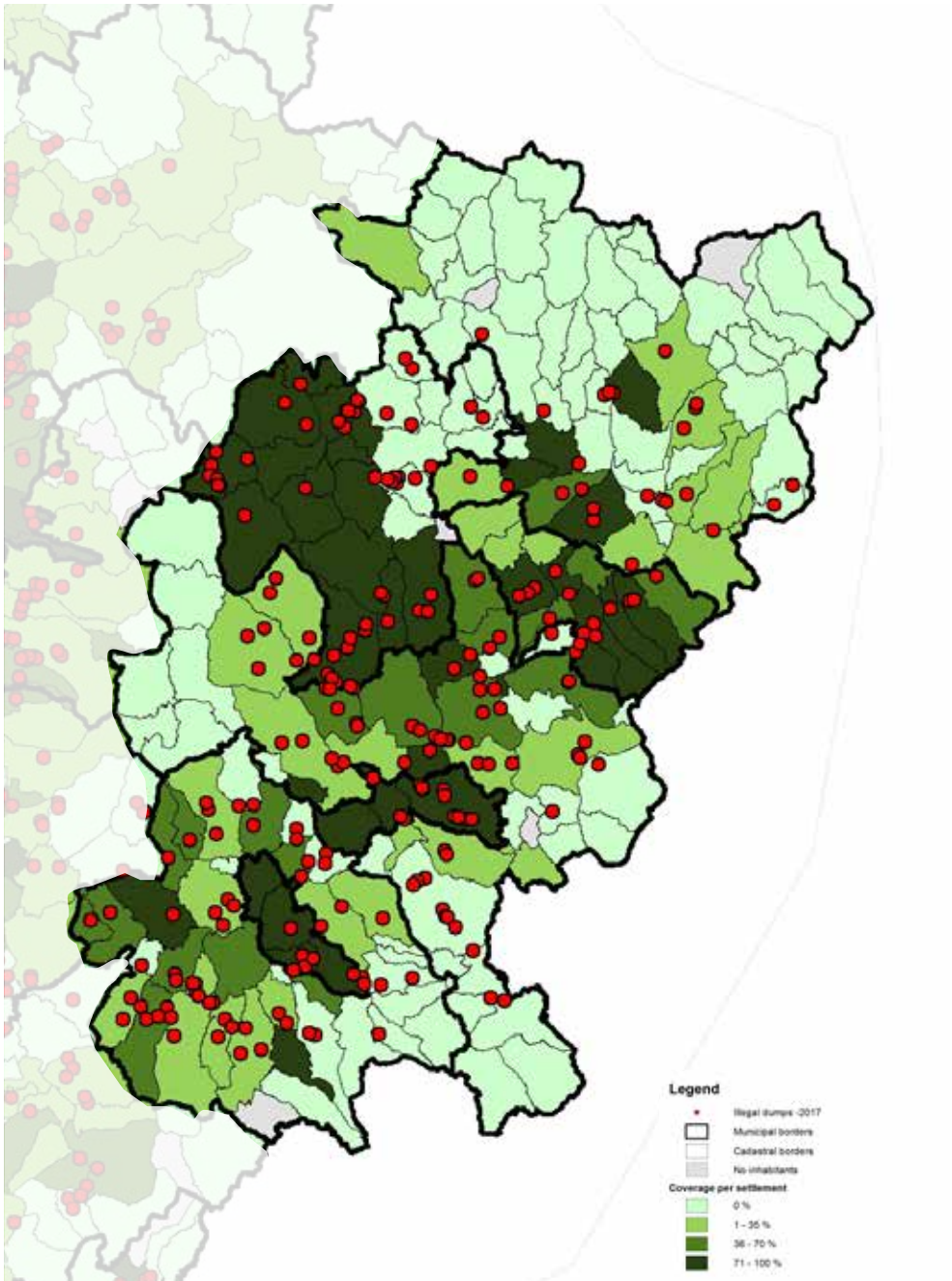


Figure 29. Waste collection and illegal dumpsites in Gjilan/Gnjilane region

4.6 Gjilan/Gnjilane region

REGIONAL DATA		
Area		1 413km2
Inhabitants		188 188
WASTE MANAGMENT DATA		
	Waste collection-operator	**Waste disposed**
Gjilan/Gnjilane	RWC Eko Higjiena (PPP)	Gj. RL
Kamenicë/Kamenica	RWC Eko Higjiena (PPP)	Gj. RL
Viti/Vitina	RWC Eko Higjiena (PPP)	Gj. RL
Novobërdë/Novo Brdo	RWC Eko Higjiena (PPP)	Gj. RL
Ranillug/Ranilug	Municipality	Gj. RL
Partesh/Parteš	Municipality	Gj. RL
Kllokot/Klokot	Municipality	Gj. RL
Coverage (2016)		51.9 % (49.2% RWC)
Fee collection (2016)		89.1 % (94.1% RWC)
Illegal dumpsites (2017)		228 (201 RWC)

*RWC-Regional Waste Company
*Gj. RL- Gjilan / Gnjilane Regional Landfill

Table 18. Regional WM Data - Gjilan/Gnjilane Region

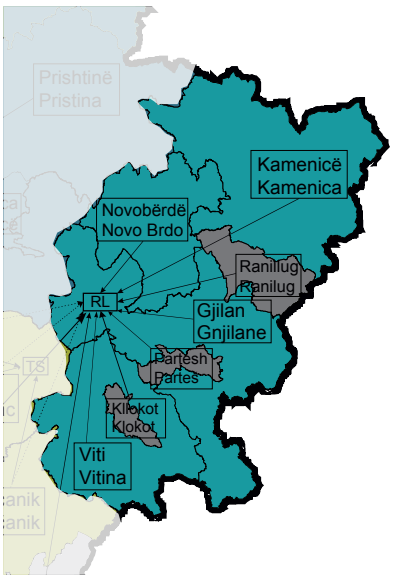


Figure 30. Gjilan/Gnjilane Region

Waste management status

Gjilan/Gnjilane region is comprised of 7 municipalities: Gjilan/Gnjilane, Kamenicë/Kamenica, Viti/Vitina, Novobërdë/Novo Brdo, Ranillug/Ranilug, Partesh/Parteš and Kllokot/Klokot.

It has an area of 1413 km2, and based on the 2011 census it has 188 188 inhabitants.

The operator for the area, the public-private company "Ekohigjiena" is based in Gjilan/Gnjilane and has units in Kamenicë/Kamenica, Viti/Vitina and Novobërdë/Novo Brdo.

All the municipalities dispose their waste in the Gjilan/Gnjilane (Velekincë/Velekinc) regional landfill.

The coverage rate with waste collection services in the region is 51.9 %, and 49.3% in the territory served by the RWC . Novobërdë/Novo Brdo has the highest coverage rate (100%) and Viti/Vitina has the lowest coverage rate (35.2%) in the region.

The fee collection rate is 89.1%, highest being in Kamenicë/Kamenica (100%) and lowest inKllokot/Klokot (25.3%).

In the illegal dumpsite survey of spring 2017, 228 illegal dumpsites were identified in the region, and when compared to the other regions, it is one the highly polluted regions (0.16 illegal dumps / km2), while the most polluted is the municipality ofPartesh/Parteš (0.28 i.d/km2) and less polluted is Kamenicë/Kamenica (0.06 i.d/km2).

Infrastructure investments plans

1. Waste disposal facilities
The PRKWM, didn't plan any investment in regard to the Gjilan /Gnjilane regional landfill. However, a transfer station combined with a sorting station is planned for Novobërdë/Novo Brdo, and three other municipalities in the total value of 2 mil. €, which makes approximately 0.5mil € for Novobërdë/Novo Brdo.

2. Waste collection, transport and treatment equipment
According to the existing MPWM of four municipalities, planned costs for this category amount to 692 650 € mil €. Planned investments were lacking for home composting bins, containers for recyclable waste and trucks for some of the municipalities.

3. Waste separation and treatment facilities
In all four MPWM the only investment planned is the C& D waste facility (site) in Kllokot/Klokot with the approximate value 20 000€.

The total value of the planned investments for the region, according to thePRKWM, 500 000 € and according to the local MPWM it is 712 650 mil €.

Infrastructure investments plans	NWMP	MWMPs
1. Waste disposal facilities		
1.1 Transfer station and sorting station in Novobërdë/Novo Brdo	500,000.0	
total 1:	**500,000.0**	
2. Waste collection, transport and treatment equipment		
2.1 Containers		274,650.0
2.2 Trucks		418,000.0
total 2:		**692,650.0**
3. Waste separation and treatment facilities		
2.1 C & D waste facility (site) in Kllokot/Klokot		20,000.0
total 3:		**20,000.0**
total (1+2+3):	**500,000.0**	**712,650.0**

Table 19. Infrastructure investment plans - Gjilan/Gnjilane Region

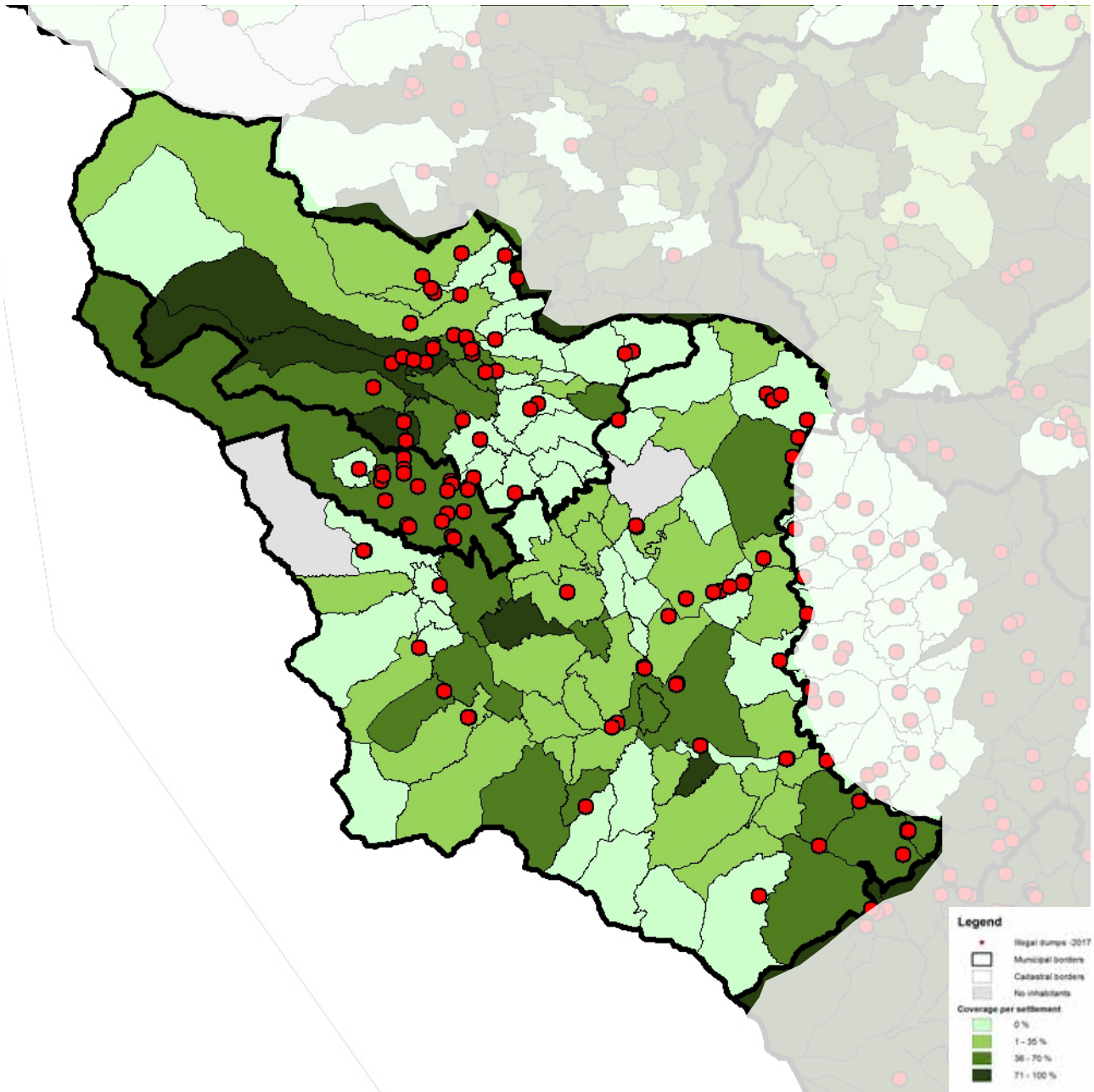


Figure 31. Waste collection and illegal dumpsites in Gjakovë/Đakovica region

4.7 Gjakova/Đakovica region

REGIONAL DATA		
Area		959 km2
Inhabitants		140 659
WASTE MANAGMENT DATA		
	Waste collection-operator	**Waste disposed**
Gjakovë/Đakovica	RWC Çabrati	TS, P. RL
Junik	PC	Pe. RL
Deçan/Dečane	MPC and PC	Pe. RL
Coverage (2016)		37.60%
Fee collection (2016)		88.40%
Illegal dumpsites (2017)		95

*RWC-Regional Waste Company
*PC-Private Company
*MPC-Municipal Public Company
*P. RL- Prizren Regional Landfill
*Pe. RL-Peja-Pec Regional Landfill
*TS- Transfer Station

Table 20. Regional WM Data - Gjakovë/Đakovica Region



Figure 32. Gjakovë/Đakovica Region

Waste management status

Gjakovë/Đakovica region is comprised of three municipalities: Gjakovë/Đakovica, Junik and Deçan/Dečane. It has an area of 959 km2, and based on the 2011 census, it has 140 659 inhabitants.

RWC "Çabrati" operates only in the municipal territory of Gjakovë/Đakovica. The municipality of Junik is served by a private company, whereas in Deçan/Dečane the service providers are the municipal public company and a private company.

Municipalities of Deçan/Dečane and Junik dispose their waste in Pejë/Peć landfill, and Gjakovë/Đakovica temporary disposes the collected waste in their own transfer station, which thereafter is transported to the Prizren landfill.

Gjakovë/Đakovica region coverage with waste collection services is 37.6%, which is the lowest coverage rate in the country. The lowest coverage is in Deçan/Dečane and the highest is in Junik (57.6%).

The fee collection rate is 88.4%, which is considerably high compared to other regions, and the highest fee collection rate is in Deçan/Dečane and lowest in Junik (66.8%).

In the illegal dumpsite survey of spring 2017, 95 illegal dumpsites were identified in the entire region, which makes 0.14 illegal dumps per km2. The most polluted municipality is Junik (0.28 i.d./km2) and the least polluted municipality in the region is Gjakovë/Đakovica(0.07 i.d / km2).

Infrastructure investments plans

1. Waste disposal facilities
There are no investments planned in the PRKWM or MPWM that are related to waste disposal.

2. Waste collection and transport
According to the existing MPWM of the two municipalities Gjakovë/Đakovica and Junik, (Deçan/Dečane doesn't have a MPWM), the planned costs for this category amount to 1.27 mil. € , of which the large part is planned for containers for recyclable waste (0.85 mil. €) in Gjakovë/Đakovica municipality.

3. Waste separation and treatment facilities
In the PRKWM, aC & D waste- treatment facility is planned in Gjakovë/Đakovica with the approximate value 750 000€. According to the MPWM'sa C & D waste facility (site)is planned in Junik with the value 27 500 €.

The total value of planned investments for the region, in the PRKWM is 750 000 €, and according to the local MPWM it is 1.29 mil. €.

Infrastructure investments plans	NWMP	MWMPs
1. Waste collection, transport and treatment equipment		
1.1 Containers		1,046,450.0
1.2 Trucks		225,000.0
total 1:		**1,271,450.0**
2. Waste separation and treatment facilities		
2.1 C & D waste- treatment facility, in Gjakovë/Đakovica	750,000.0	
2.2 C & D waste facility (site), in Junik		27,500.0
total 1:	**750,000.0**	**27,500.0**
total (1+2):	**750,000.0**	**1,298,950.0**

Table 21. Infrastructure investment plans - Gjakovë/Đakovica Region



Photo 11. Transfer station, Gjakovë/Djakovica

5.0 FINIDINGS

National waste generation profile
- Approximately 580,000 tonnes (0.9 kg/day, per capita) of waste per year are generated in Kosovo;

Landfill disposal
- Of 580,000 tons, approximately 420,000 tones(~72%) of waste is collected by public and private operators and is disposed in sanitary or non-sanitary landfills;
- Peja/Peč regional landfill and Dragash/Dragaš municipal landfill lack physical landfill capacity;
- Four municipal, non-sanitary landfills (Istog/Istog, Zubin Potok Leposavić/Leposaviq and Zvečan/Zveqan), need immediate action for planned closure and environmental monitoring.

Waste collection and transfer
- Less than 60% of the population receives regular service by legal operators;
- More than 50% of the population lives in rural area and about 40% of the waste they generate is collected and properly disposed of waste in landfills;
- There are challenges, financial and operational in providing waste collection services to remote villages
- Fee collection remains low (~60%) and hinders the financial sustainability of the waste collection system;

Separation at source and recycling
- 62,461 tons of recyclable waste (15% of the total amount of waste collected) is collected by waste processing companies in Kosovo;
- Of 420,000 tons of collected waste, only 2.7% is processed and then exported for the recycling industry in other (neighboring) countries;
- Waste recycling industry in Kosovo is yet to be developed.

Special waste fractions
- Organic waste represents the largest fraction, but there is only a small number of efforts to engage in recycling activities;
- C & D accounts as one of the largest waste fraction that does not have a collection and disposal system in place. In most cases this type of waste is mixed with municipal waste streams or is illegally dumped. Of 1572 illegal dumps identified in 2017, 46% are C & D waste dumps, posing a serious threat to the environment. Animal, hazardous and bulky waste fractions do not have a separate collection and disposal system in place.

Environmental awareness
- More than 1,500 illegal dumps have been identified in the country. Illegal dumping remains a problem and their sustainable elimination is still challenging;
- Lack of information and facilities currently present barriers to recycle and reuse waste.

Policy making and planning
- Legislative framework for waste management covers all waste fractions, but the implementation at the municipal level is lacking;
- National and municipal planning documents are not harmonized;
- A portion of Municipal Waste Management Plans lack clear financial planning, while other dependent on donor or Government funds to implement priorities arising from the plans;



Photo 12. Illegal dump, Istog/Istok

Monitoring and reporting

- Reporting on waste management activities is only partially realized by licensed operators and waste owners;
- Municipalities do notreport to KEPA on an annual basis as required by law;
- There is a lack of standardized reporting from all actors.

Data systems

- There is a lack of reliable and verifiable data on municipal waste management;
- The national waste management database does not yet provide comprehensive data on the sector ;
- The lack of reliable and comprehensive national data hampers effective policy making and monitoring of their implementation;



Photo 13. Transfer station, Gllogoc/Glogovac

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ANNEX

Annex 1.

			General data				
	Municipalities / RWC Region / REGION	Census	Area (km2)	%i n total area	Number of inhabitans (2011)[1]	Number of households (2011)[1]	
1	Prishtinë/Pristina [6]	201,126	523	4.80	198,897	40,528	
2	Gllogoc/Glogovac	58,531	276	2.53	58,531	8,786	
3	Fushë Kosovë/Kosovo Polje	34,827	84	0.77	34,827	6,580	
4	Gračanica/Graçanicë[7]	10,675	122	1.12	10,675	2,421	
5	Lipjan/Lipljan	57,605	338	3.10	57,605	9,497	
6	Obiliq/Obilić	21,549	105	0.96	21,549	3,852	
7	Podujevë/Podujevo[7]	88,499	633	5.80	88,499	13,440	
	RWC Pastrimi	**271,686**	**2081**	**19.08**	**470,583**	**85,104**	
R1	**PRISHTINË/PRISTINA REGION**		**2081**	**19.08**	**470,583**	**85,104**	
8	Mitrovicë/Mitrovica	71,909	331	3.03	71,909	13,173	
9	Skenderaj/Srbica	50,858	374	3.43	50,858	7,682	
10	Vushtrri/Vučitrn	69,870	345	3.16	69,870	11,866	
	RWC Uniteti	**192,637**	**1050**	**9.62**	**192,637**	**32,721**	
11	North Mitrovica/Mitrovicë *	108,610	5	0.05	12,223	3,056	
12	Zvečan/Zveqan * [12]	71,909	123	1.13	7,358	1,840	
13	Zubin Potok* [8] [11] [12]	201,126	334	3.06	6,554	1,639	
14	Leposavić/Leposaviq * [8] [13]	58,531	539	4.94	13,561	3,390	
R2	**MITROVICË/MITROVICA REGION**		**2051**	**18.81**	**232,333**	**42,645**	

	Coverage with waste collection services			Fee collection				
	Total clients (2016)[2]	Total clients served (12/2016)[2]	Coverage [3]	Amount invoiced[2] (2016) (€)	Amount of invoices collected[2] (2016) (€)	Fee collection rate[3]	Number of illegal dumsites[4] (2017)	Number of illegal dumsites[5] / km2
	89,026	50,166	56.3%	3,622,163	3,312,592	91.5%	155	0.30
	11,118	6,058	54.5%	282,801	198,183	70.1%	57	0.21
	9,652	8,426	87.3%	479,190	410,035	85.6%	10	0.12
	5,115	2,651	51.8%	238,770	92,051	38.6%	16	0.13
	10,597	3,943	37.2%	234,861	194,909	83.0%	97	0.29
	4,556	1,933	42.4%	182,582	142,607	78.1%	11	0.10
	15,538	5,409	34.8%	333,687	267,221	80.1%	14	0.02
	145,602	**78,586**	**54.0%**	**5,374,054**	**4,617,598**	**85.9%**	360	0.17
	145,602	**78,586**	**54.0%**	**5,374,054**	**4,617,598**	**85.9%**	**360**	**0.17**
	15,209	9,814	64.5%	659,577	528,890	80.2%	13	0.04
	8,709	2,199	25.2%	155,652	110,245	70.8%	18	0.05
	14,036	7,142	50.9%	359,245	244,355	68.0%	23	0.07
	37,954	**19,155**	**50.5%**	**1,174,474**	**883,490**	**75.2%**	54	0.05
	4,145	4,145	100.0%	755,000	374,000	49.5%	20	3.66
	2,895	1,810	62.5%	5,636,508	4,082,972	72.4%	34	0.28
	4,950	2,955	59.7%			12.0%	21	0.06
	4,818	2,536	52.6%	183,876	67,345	36.6%	34	0.06
	54,762	**30,601**	**55.9%**	**7,749,858**	**5,407,807**	69.8%	**163**	**0.08**

			General data				
	Municipalities / RWC Region / REGION	Census	Area (km2)	%i n total area	Number of inhabitans (2011)[1]	Number of households (2011)[1]	
15	Pejë/Peć	96,450	603	5.53	96,450	17,682	
16	Istog/Istok	39,289	454	4.16	39,289	6,741	
17	Klinë/Klina	44,310	309	2.83	38,496	5,843	
	RWC Ambienti	**83,599**	**1366**	**12.53**	**174,235**	**30,266**	
R3	**PEJA/PEČ REGION**		**1366**	**12.53**	**174,235**	**30,266**	
18	Prizren[11]	58,531	627	5.75	177,781	29,625	
19	Suharekë/Suva Reka [7]	21,549	361	3.31	59,722	9,145	
20	Malishevë/Mališevo	34,827	306	2.81	54,613	6,879	
21	Rahovec/Orahovac [7]	34,827	276	2.53	56,208	8,221	
22	Dragash/Dragaš [9]	44,310	434	3.98	33,997	6,215	
	RWC Ekoregjioni	**113,964**	**2004**	**18.37**	**382,321**	**60,085**	
23	Mamushë/Mamuša	94,792	11	0.10	5,507	566	
R4	**PRIZREN REGION**		**2015**	**18.48**	**387,828**	**60,651**	
24	Ferizaj/Uroševac [7]	108,610	345	3.16	108,610	18,359	
25	Kaçanik/Kačanik [7]	33,409	211	1.93	33,409	5,547	
26	Shtime/Štimlje	27,288	134	1.23	27,324	4,158	
	RWC Pastertia	**169,307**	**690**	**6.33**	**169,343**	**28,064**	
27	Han i Elezit/Elez Han [10]	94,792	83	0.76	9,403	1,452	
28	Shtërpc/Štrpce	57,605	248	2.27	6,949	1,485	
R5	**FERIZAJ/UROŠEVAC REGION**		**1021**	**9.36**	**185,695**	**31,001**	
29	Gjilan/Gnjilane	96,450	392	3.59	90,178	17,115	
30	Kamenicë/Kamenica	33,409	417	3.82	36,085	6,419	
31	Viti/Vitina	88,499	270	2.48	46,987	7,520	
32	Novobërdë/Novo Brdo	33,409	204	1.87	6,729	1,449	
	RWC Ekohigjiena	**155,317**	**1283**	**11.76**	**179,979**	**32,503**	
33	Partesh/Parteš [8]	27,288	29	0.27	1,787	418	
34	Kllokot/Klokot [8]	27,288	23	0.21	2,556	510	
35	Ranillug/Ranilug [8]	10,675	78	0.72	3,866	956	
R6	**GJILAN/GNJILANE REGION**		**1413**	**12.96**	**188,188**	**34,387**	

Coverage with waste collection services				Fee collection			Number of illegal dumsites[4] (2017)	Number of illegal dumsites[5] / km2
	Total clients (2016)[2]	Total clients served (12/2016)[2]	Coverage [3]	Amount invoiced[2] (2016) (€)	Amount of invoices collected[2] (2016) (€)	Fee collection rate[3]		
	20,555	17,483	85.1%	1,249,871	819,130	65.5%	19	0.03
	7,747	3,432	44.3%	221,848	172,809	77.9%	21	0.05
	7,870	5,239	66.6%	314,505	220,123	70.0%	9	0.03
	36,172	**26,154**	**72.3%**	1,786,224	1,212,062	67.9%	49	0.04
	36,172	**26,154**	**72.3%**	1,786,224	1,212,062	67.9%	**49**	**0.04**
	29,867	29,867	100.0%			70.0%	98	0.16
	11,010	4,828	43.9%	370,067	284,144	76.8%	170	0.47
	7,235	6,804	94.0%	488,286	407,205	83.4%	102	0.33
	10,313	6,224	60.4%	406,660	308,906	76.0%	59	0.21
	6,121	3,414	55.8%	209,867	156,548	74.6%	62	0.14
	64,546	**51,137**	**79.2%**	1,474,880	1,156,802	78.4%	491	0.25
	638	293	45.9%	18,194	14,996	82.4%	7	0.64
	65,184	**51,430**	**78.9%**	1,493,074	1,171,798	78.5%	**498**	**0.25**
	21,739	12,611	58.0%	905,996	809,352	89.3%	51	0.15
	8,226	2,445	29.7%	189,834	136,212	71.8%	18	0.09
	4,925	2,098	42.6%	169,919	163,791	96.4%	14	0.10
	34,890	**17,154**	**49.2%**	1,265,749	1,109,355	87.6%	83	0.12
	350	350	100.0%	2,618	1,905	72.8%	21	0.25
	1,848	1,839	99.5%	67,584	33,192	49.1%	75	0.30
	37,088	**19,343**	**52.2%**	1,335,951	1,144,452	85.7%	**179**	**0.18**
	21,185	11,236	53.0%	849,078	831,676	98.0%	68	0.17
	6,069	2,758	45.4%	188,681	197,080	100.0%	25	0.06
	9,646	3,397	35.2%	284,555	217,491	76.4%	60	0.22
	1,349	1,349	100.0%	6,538	3,791	58.0%	48	0.24
	38,249	**18,740**	**49.0%**	1,328,852	1,250,039	94.1%	201	0.16
	985	954	96.9%	36,418	14,340	39.4%	8	0.28
	838	838	100.0%	49,800	12,600	25.3%	4	0.17
	1,160	816	70.3%	43,900	23,413	53.3%	15	0.19
	41,232	**21,348**	**51.8%**	1,458,970	1,300,391	89.1%	**228**	**0.16**

			General data				
	Municipalities / RWC Region / REGION	**Census**	**Area (km2)**	**%i n total area**	**Number of inhabitans (2011)[1]**	**Number of households (2011)[1]**	
36	Gjakovë/Đakovica	94,792	587	5.38	94,556	16,303	
	RWC Çabrati	**94,792**	**587**	**5.38**	**94,556**	**16,303**	
37	Deçan/Dečane	39,289	294	2.70	40,019	5,887	
38	Junik	108,610	78	0.72	6,084	770	
R7	**GJAKOVA/ ĐAKOVICA REGION**		**959**	**8.79**	**140,659**	**22,960**	
KOSOVË/KOSOVO		**812,021**	**10906**	**100.00**	**1,779,521**	**307,014**	

Table 22. Annex 1- Municipal SWM data, per municipality

[1]source: national census 2011 (Statistical agency of Kosovo)
[1]*source: estimation of the population in Kosovo in the year 2015 (Statistical agency of Kosovo) , and the number of households is calculated divided by 4 members
[2]source: data collection from municipalities and PoE's 2016 (GIZ)
[3]calculated value, as per data declared by municipalities and PoE's
[3]fee collection rate is capped at 100% in Kamenicë/Kamenica
[4]source: data gathered from site survey (2017)
[5]calculated value, as per 2017, site survey data (no. illegal dumps / km^2)
[6]the updated client list (from tax registry), still to be cleared, disturbed the statistic, therefore lowered the overall coverage rate
[7]the municipality is served by private waste collection operaters, but since theay are not contracted via procurment procedures, the clients served by these operators do not reflect in the table
[8]municipality didn't send segrageted data per kadastral zone
[9]the municiplaity didn't provide data on total clinets, so the calculation on coverage is based in the data from the PoE
[10]the municipality doesn't have 2016 data (private company was operating), so the data presented, are janary 2017 data
[11]municipality didn't send data for calculation, only communicted the precentage of the coverage and fee collection rate
[12]municipality didn't send segregated data per cadastral zone
[13]the fee collection is increased becouse of high amount of fees payed by KFOR. It is very low, from other clients.

	Coverage with waste collection services			Fee collection			Number of illegal dumsites[4] (2017)	Number of illegal dumsites[5] / km2
	Total clients (2016)[2]	Total clients served (12/2016)[2]	Coverage [3]	Amount invoiced[2] (2016) (€)	Amount of invoices collected[2] (2016) (€)	Fee collection rate[3]		
	30,779	12,699	41.3%	784,689	687,698	87.6%	42	0.07
	30,779	**12,699**	**41.3%**	784,689	687,698	87.6%	42	0.07
	8,265	1,802	21.8%	109,702	108,185	98.6%	31	0.11
	868	500	57.6%	24,588	16,434	66.8%	22	0.28
	39,912	**15,001**	**37.6%**	918,979	812,317	88.4%	**95**	**0.10**
	419,952	**242,463**	**57.7%**	**20,117,110**	**15,666,425**	**77.9%**	**1572**	**0.14**

Annex 2.

		General data				
	Municipalities / RWC Region / REGION	**Number of households (2011)[1]**	**Total clients (2016)[2]**	**Total clients/ urban (2016)[2]**	**Total clients/ rural (2016)[2]**	
1	Prishtinë/Pristina [6]	40,528	89,026	72,603	16,423	
2	Gllogoc/Glogovac	8,786	11,118	2,008	9,110	
3	Fushë Kosovë/Kosovo Polje	6,580	9,652	5,355	4,297	
4	Gračanica/Graçanicë[7]	2,421	5,115	1,205	3,910	
5	Lipjan/Lipljan	9,497	10,597	1,817	8,780	
6	Obiliq/Obilić	3,852	4,556	1,518	3,038	
7	Podujevë/Podujevo[7]	13,440	15,538	5,591	9,947	
	RWC Pastrimi	**85,104**	**145,602**	**90,097**	**55,505**	
R1	**PRISHTINË/PRISTINA REGION**	**85,104**	**145,602**	**90,097**	**55,505**	
8	Mitrovicë/Mitrovica	13,173	15,209	8,379	6,830	
9	Skenderaj/Srbica	7,682	8,709	1,797	6,912	
10	Vushtrri/Vučitrn	11,866	14,036	6,614	7,422	
	RWC Uniteti	**32,721**	**37,954**	**16,790**	**21,164**	
11	North Mitrovica/Mitrovicë*	3,056	4,145	4,145	0	
12	Zvečan/Zveqan * [12]	1,840	2,895	951	1,944	
13	Zubin Potok* [8] [11] [12]	1,639	4,950	1,634	3,316	
14	Leposavić/Leposaviq* [8] [13]	3,390	4,818	1,408	3,410	
R2	**MITROVICË/MITROVICA REGION**	**42,645**	**54,762**	**24,928**	**29,834**	
15	Pejë/Peć	17,682	20,555	12,406	8,149	
16	Istog/Istok	6,741	7,747	1,256	6,491	
17	Klinë/Klina	5,843	7,870	2,059	5,811	
	RWC Ambienti	**30,266**	**36,172**	**15,721**	**20,451**	
R3	**PEJA/PEČ REGION**	**30,266**	**36,172**	**15,721**	**20,451**	

Coverage with waste collection services						
	Total clients served (12/2016)[2]	Total clients served - urban (12/2016)[2]	Total clients served-rural (12/2016)[2]	Coverage of urban area	Coverage of rural area	Coverage [3]
	50,166	45,831	4,335	63.1%	26.4%	56.3%
	6,058	1,105	4,953	55.0%	54.4%	54.5%
	8,426	5,355	3,071	100.0%	71.5%	87.3%
	2,651	479	2,172	39.8%	55.5%	51.8%
	3,943	1,817	2,126	100.0%	24.2%	37.2%
	1,933	1,082	851	71.3%	28.0%	42.4%
	5,409	3,954	1,455	70.7%	14.6%	34.8%
	78,586	**59,623**	**18,963**	**66.2%**	**34.2%**	**54.0%**
	78,586	**59,623**	**18,963**	**66.2%**	**34.2%**	**54.0%**
	9,814	6,830	2,984	81.5%	43.7%	64.5%
	2,199	1,534	665	85.4%	9.6%	25.2%
	7,142	4,771	2,371	72.1%	31.9%	50.9%
	19,155	**13,135**	**6,020**	**78.2%**	**28.4%**	**50.5%**
	4,145	4,145	0	100.0%	0.0%	100.0%
	1,810	951	859	100.0%	44.2%	62.5%
	2,955	1,634	1,321	100.0%	39.8%	59.7%
	2,536	1,263	1,273	89.7%	37.3%	52.6%
	30,601	**21,128**	**9,473**	**84.8%**	**31.8%**	**55.9%**
	17,483	11,090	6,393	89.4%	78.5%	85.1%
	3,432	951	2,481	75.7%	38.2%	44.3%
	5,239	1,911	3,328	92.8%	57.3%	66.6%
	26,154	**13,952**	**12,202**	**88.7%**	**59.7%**	**72.3%**
	26,154	**13,952**	**12,202**	**88.7%**	**59.7%**	**72.3%**

		General data				
	Municipalities / RWC Region / REGION	**Number of households (2011)[1]**	**Total clients (2016)[2]**	**Total clients/ urban (2016)[2]**	**Total clients/ rural (2016)[2]**	
18	Prizren[11]	29,625	29,867	14,300	15,567	
19	Suharekë/Suva Reka[7]	9,145	11,010	2,942	8,068	
20	Malishevë/Mališevo	6,879	7,235	1,021	6,214	
21	Rahovec/Orahovac[7]	8,221	10,313	3,421	6,892	
22	Dragash/Dragaš[9]	6,215	6,121	956	5,165	
	RWC Ekoregjioni	**60,085**	**64,546**	**22,640**	**41,906**	
23	Mamushë/Mamuša	566	638	638	0	
R4	**PRIZREN REGION**	**60,651**	**65,184**	**23,278**	**41,906**	
24	Ferizaj/Uroševac[7]	18,359	21,739	10,353	11,386	
25	Kaçanik/Kačanik[7]	5,547	8,226	2,935	5,291	
26	Shtime/Štimlje	4,158	4,925	1,805	3,120	
	RWC Pastertia	**28,064**	**34,890**	**15,093**	**19,797**	
27	Han i Elezit/Elez Han[10]	1,452	350	204	146	
28	Shtërpc/Štrpce	1,485	1,848	609	1,239	
R5	**FERIZAJ/UROŠEVAC REGION**	**31,001**	**37,088**	**15,906**	**21,182**	
29	Gjilan/Gnjilane	17,115	21,185	13,900	7,285	
30	Kamenicë/Kamenica	6,419	6,069	1,771	4,298	
31	Viti/Vitina	7,520	9,646	1,721	7,925	
32	Novobërdë/Novo Brdo	1,449	1,349	34	1,315	
	RWC Ekohigjiena	**32,503**	**38,249**	**17,426**	**20,823**	
33	Partesh/Parteš[8]	418	985	985	0	
34	Kllokot/Klokot[8]	510	838	838	0	
35	Ranillug/Ranilug[8]	956	1,160	211	949	
R6	**GJILAN/GNJILANE REGION**	**34,387**	**41,232**	**19,460**	**21,772**	

Coverage with waste collection services						
	Total clients served (12/2016)[2]	Total clients served - urban (12/2016)[2]	Total clients served-rural (12/2016)[2]	Coverage of urban area	Coverage of rural area	Coverage [3]
	29,867	14,300	15,567	100.0%	100.0%	100.0%
	4,828	1,951	2,877	66.3%	35.7%	43.9%
	6,804	1,021	5,783	100.0%	93.1%	94.0%
	6,224	3,421	2,803	100.0%	40.7%	60.4%
	3,414	513	2,901	53.7%	56.2%	55.8%
	51,137	**21,206**	**29,931**	**93.7%**	**71.4%**	**79.2%**
	293	293	0	45.9%	0.0%	45.9%
	51,430	**21,499**	**29,931**	**92.4%**	**71.4%**	**78.9%**
	12,611	10,157	2,454	98.1%	21.6%	58.0%
	2,445	1,559	886	53.1%	16.7%	29.7%
	2,098	1,165	933	64.5%	29.9%	42.6%
	17,154	**12,881**	**4,273**	**85.3%**	**21.6%**	**49.2%**
	350	204	146	100.0%	100.0%	100.0%
	1,839	603	1,236	99.0%	99.8%	99.5%
	19,343	**13,688**	**5,655**	**86.1%**	**26.7%**	**52.2%**
	11,236	8,882	2,354	63.9%	32.3%	53.0%
	2,758	1,771	987	100.0%	23.0%	45.4%
	3,397	954	2,443	55.4%	30.8%	35.2%
	1,349	34	1,315	100.0%	100.0%	100.0%
	18,740	**11,641**	**7,099**	**66.8%**	**34.1%**	**49.0%**
	954	954	0	96.9%	0.0%	96.9%
	838	838	0	100.0%	0.0%	100.0%
	816	189	627	89.6%	66.1%	70.3%
	21,348	**13,622**	**7,726**	**70.0%**	**35.5%**	**51.8%**

		General data				
	Municipalities / RWC Region / REGION	Number of households (2011)[1]	Total clients (2016)[2]	Total clients/ urban (2016)[2]	Total clients/ rural (2016)[2]	
36	Gjakovë/Đakovica	16,303	30,779	16,953	13,826	
	RWC Çabrati	**16,303**	**30,779**	**16,953**	**13,826**	
37	Deçan/Dečane	5,887	8,265	777	7,488	
38	Junik	770	868	868	0	
R7	**GJAKOVA/ ĐAKOVICA REGION**	**22,960**	**39,912**	**18,598**	**21,314**	
KOSOVË/KOSOVO		**307,014**	**419,952**	**207,988**	**211,964**	

Table 23. Annex 2- Coverage with waste collection service in urban and rural area, per municipality

[1]source: national census 2011 (Statistical agency of Kosovo)
[1]*source: estimation of the population in Kosovo in the year 2015 (Statistical agency of Kosovo) , and the number of households is calculated divided by 4 members
[2]source: data collection from municipalities and PoE's 2016 (GIZ)
[3]calculated value, as per data declared by municipalities and PoE's
[3]fee collection rate is capped at 100% in Kamenicë/Kamenica
[4]source: data gathered from site survey (2017)
[5]calculated value, as per 2017, site survey data (no. illegal dumps / km^2)
[6]the updated client list (from tax registry), still to be cleared, disturbed the statistic, therefore lowered the overall coverage rate
[7]the municipality is served by private waste collection operaters, but since theay are not contracted via procurment procedures, the clients served by these operators do not reflect in the table
[8]municipality didn't send segrageted data per kadastral zone
[9]the municiplaity didn't provide data on total clinets, so the calculation on coverage is based in the data from the PoE
[10]the municipality doesn't have 2016 data (private company was operating), so the data presented, are janary 2017 data
[11]municipality didn't send data for calculation, only communicted the precentage of the coverage and fee collection rate
[12]municipality didn't send segregated data per cadastral zone
[13]the fee collection is increased becouse of high amount of fees payed by KFOR. It is very low, from other clients.

Coverage with waste collection services						
	Total clients served (12/2016)[2]	Total clients served - urban (12/2016)[2]	Total clients served-rural (12/2016)[2]	Coverage of urban area	Coverage of rural area	Coverage [3]
	12,699	10,211	2,488	60.2%	18.0%	41.3%
	12,699	**10,211**	**2,488**	**60.2%**	**18.0%**	**41.3%**
	1,802	777	1,025	100.0%	13.7%	21.8%
	500	500	0	57.6%	0.0%	57.6%
	15,001	**11,488**	**3,513**	**61.8%**	**16.5%**	**37.6%**
	242,463	**155,000**	**87,463**	**74.5%**	**41.3%**	**57.7%**

Annex 3.

			Waste disposal facilities (A)				Waste collection,	
			NSWP[1]		MSWP[2]			
	Municipalities / RWC Region / REGION	Census	Landfill[3]	Transfer station[4]	Transfer station[5]		Containers for residual waste [6]	Home composting bins[7]
1	Prishtinë/Pristina	201,126					70,000.0	
2	Gllogoc/Glogovac	58,531			57,500.0		100,490.0	
3	Fushë Kosovë/Kosovo Polje	34,827					3,500.0	1,800.0
4	Gračanica/Graçanicë	10,675					69,600.0	
5	Lipjan/Lipljan	57,605					107,260.0	3,000.0
6	Obiliq/Obilić	21,549					11,500.0	2,760.0
7	Podujevë/Podujevo	88,499					538,200.0	1,800.0
	RWC Pastrimi	**271,686**	**0.0**	**0.0**	**57,500.0**		**900,550.0**	**9,360.0**
R1	**PRISHTINË/PRISTINA REGION**		**1,500,000.0**	**0.0**	**57,500.0**		**900,550.0**	**9,360.0**
8	Mitrovicë/Mitrovica	71,909					100,300.0	15,000.0
9	Skenderaj/Srbica	50,858		500,000.0	50,000.0		153,284.0	6,000.0
10	Vushtrri/Vučitrn	69,870					164,381.0	1,380.0
	RWC Uniteti	**192,637**	**0.0**	**500,000.0**	**50,000.0**		**417,965.0**	**22,380.0**
11	North Mitrovica/Mitrovicë	108,610						
12	Zvečan/Zveqan	71,909						
13	Zubin Potok	201,126						
14	Leposavić/Leposaviq	58,531						
R2	**MITROVICË/MITROVICA REGION**		**0.0**	**500,000.0**	**50,000.0**		**417,965.0**	**22,380.0**
15	Pejë/Peć	96,450					105,000.0	
16	Istog/Istok	39,289		500,000.0	500,000.0		256,400.0	24,500.0
17	Klinë/Klina	44,310		500,000.0			157,000.0	24,500.0
	RWC Ambienti	**83,599**	**3,500,000.0**	**1,000,000.0**	**500,000.0**		**518,400.0**	**49,000.0**
R3	**PEJA/PEČ REGION**		**3,500,000.0**	**1,000,000.0**	**500,000.0**		**518,400.0**	**49,000.0**

transport and treatment equipment (B)			Waste separation and treatment facilities (.C)					Total (B+C) per municipality / region
MSWMP[2]			NSWP[1]	MSWP[2]				
Containers for recyclable waste [8]	Trucks[9]	Total B	C & D waste-treatment facility[10]	C & D waste facility (site) [11]	Civic amenity centre[11]	Waste separation facility	Total C	
		70,000.0	750,000.0		70,000.0		**820,000.0**	**890,000.0**
	120,000.0	**220,490.0**						**220,490.0**
78,900.0		**84,200.0**						**84,200.0**
85,000.0	202,000.0	**356,600.0**				500,000.0	**500,000.0**	**856,600.0**
16,200.0	40,000.0	**166,460.0**						**166,460.0**
16,659.0	80,000.0	**110,919.0**						**110,919.0**
15,000.0	40,000.0	**595,000.0**						**595,000.0**
211,759.0	**482,000.0**	**1,603,669.0**	**750,000.0**	**0.0**	**70,000.0**	**500,000.0**	**1,320,000.0**	**2,923,669.0**
211,759.0	**482,000.0**	**1,603,669.0**	**750,000.0**	**0.0**	**70,000.0**	**500,000.0**	**1,320,000.0**	**2,923,669.0**
2,000.0	260,000.0	**377,300.0**	750,000.0				**750,000.0**	**1,127,300.0**
1,200.0	280,000.0	**440,484.0**		40,000.0	15,000.0		**55,000.0**	**495,484.0**
3,864.0	160,000.0	**329,625.0**			15,000.0		**15,000.0**	**344,625.0**
7,064.0	**700,000.0**	**1,147,409.0**	**750,000.0**	**40,000.0**	**30,000.0**	**0.0**	**820,000.0**	**1,967,409.0**
		0.0					**0.0**	**0.0**
		0.0					**0.0**	**0.0**
		0.0					**0.0**	**0.0**
		0.0					**0.0**	**0.0**
7,064.0	700,000.0	**1,147,409.0**	**750,000.0**	**0.0**	**30,000.0**	0.0	**820,000.0**	**1,967,409.0**
140,000.0	121,000.0	**366,000.0**	750,000.0				**750,000.0**	**1,116,000.0**
25,100.0	150,000.0	456,000.0		95,000.0	30,000.0		**125,000.0**	**581,000.0**
22,400.0	150,000.0	353,900.0		50,000.0	75,000.0		**125,000.0**	**478,900.0**
187,500.0	**421,000.0**	**1,175,900.0**	**750,000.0**	**145,000.0**	**105,000.0**	**0.0**	**1,000,000.0**	**2,175,900.0**
187,500.0	**421,000.0**	**1,175,900.0**	**750,000.0**	**145,000.0**	**105,000.0**	**0.0**	**1,000,000.0**	**2,175,900.0**

			Waste disposal facilities (A)				Waste collection,		
			NSWP[1]		MSWP[2]				
	Municipalities / RWC Region / REGION	Census	Landfill[3]	Transfer station[4]	Transfer station[5]		Containers for residual waste [6]	Home composting bins[7]	
18	Prizren	58,531							
19	Suharekë/Suva Reka	21,549					32,000.0		
20	Malishevë/Mališevo	34,827							
21	Rahovec/Orahovac	34,827					35,000.0		
22	Dragash/Dragaš	44,310							
	RWC Ekoregjioni	**113,964**	**0.0**	**0.0**	**0.0**		**67,000.0**	**0.0**	
23	Mamushë/Mamuša	94,792							
R4	**PRIZREN REGION**		**250,000.0**	**0.0**	**0.0**		**67,000.0**	**0.0**	
24	Ferizaj/Uroševac	108,610					432,000.0	38,500.0	
25	Kaçanik/Kačanik	33,409					90,000.0		
26	Shtime/Štimlje	27,288					201,200.0	11,200.0	
	RWC Pastertia	**169,307**	**0.0**	**0.0**	**0.0**		**723,200.0**	**49,700.0**	
27	Han i Elezit/Elez Han	94,792					8,400.0		
28	Shtërpc/Štrpce	57,605							
R5	**FERIZAJ/UROŠEVAC REGION**		**0.0**	**0.0**	**0.0**		**731,600.0**	**49,700.0**	
29	Gjilan/Gnjilane	96,450					79,845.0		
30	Kamenicë/Kamenica	33,409							
31	Viti/Vitina	88,499					70,000.0		
32	Novobërdë/Novo Brdo	33,409		500,000.0					
	RWC Ekohigjiena	**155,317**	**0.0**	**500,000.0**	**0.0**		**149,845.0**	**0.0**	
33	Partesh/Parteš	27,288							
34	Kllokot/Klokot	27,288					10,360.0		
35	Ranillug/Ranilug	10,675					10,000.0		
R6	**GJILAN/GNJILANE REGION**		**0.0**	**500,000.0**	**0.0**		**170,205.0**	**0.0**	

transport and treatment equipment (B)			Waste separation and treatment facilities (.C)					Total (B+C) per municipality / region
MSWMP[2]			NSWP[1]	MSWP[2]				
	Containers for recyclable waste [8]	Trucks[9]	Total B	C & D waste-treatment facility[10]	C & D waste facility (site) [11]	Civic amenity centre[11]	Waste separation facility	Total C	
			0.0	750,000.0				**750,000.0**	**750,000.0**
		25,000.0	**57,000.0**						**57,000.0**
			0.0						**0.0**
	50,000.0		**85,000.0**						**85,000.0**
			0.0						**0.0**
	50,000.0	**25,000.0**	**142,000.0**	**750,000.0**	**0.0**	**0.0**	**0.0**	**750,000.0**	**892,000.0**
			0.0						
	50,000.0	**25,000.0**	**142,000.0**	**750,000.0**	**0.0**	**0.0**	**0.0**	**750,000.0**	**892,000.0**
	47,700.0	270,000.0	**788,200.0**	750,000.0	150,000.0	40,000.0		**940,000.0**	**1,728,200.0**
		50,000.0	**140,000.0**					**0.0**	**140,000.0**
	17,800.0	70,000.0	**300,200.0**		90,000.0			**90,000.0**	**390,200.0**
	65,500.0	**390,000.0**	**1,228,400.0**	**750,000.0**	**280,000.0**			**1,030,000.0**	**2,258,400.0**
		30,000.0	**38,400.0**						**38,400.0**
	65,500.0	**420,000.0**	**1,266,800.0**	750,000.0	280,000.0		0.0	**1,030,000.0**	**2,296,800.0**
	64,445.0		**144,290.0**					**0.0**	**144,290.0**
			0.0					**0.0**	**0.0**
			70,000.0					**0.0**	**70,000.0**
			0.0					**0.0**	**0.0**
	64,445.0	**0.0**	**214,290.0**	0.0	0.0	0.0	0.0	**0.0**	**214,290.0**
								0.0	
		328,000.0	**338,360.0**		20,000.0			**20,000.0**	
	40,000.0	90,000.0	**140,000.0**					**0.0**	
	104,445.0	**418,000.0**	**692,650.0**	**0.0**	**20,000.0**	**0.0**	**0.0**	**20,000.0**	**214,290.0**

			Waste disposal facilities (A)				Waste collection,		
			NSWP[1]		MSWP[2]				
	Municipalities / RWC Region / REGION	Census	Landfill[3]	Transfer station[4]	Transfer station[5]		Containers for residual waste [6]	Home composting bins[7]	
36	Gjakovë/Đakovica	94,792					195,600.0		
	RWC Çabrati	**94,792**	**0.0**	**0.0**	**0.0**		**195,600.0**	**0.0**	
37	Deçan/Dečane	39,289							
38	Junik	108,610						750.0	
R7	**GJAKOVA/ ĐAKOVICA REGION**		**0.0**	**0.0**	**0.0**		**195,600.0**	**750.0**	
KOSOVË/KOSOVO		**812,021**	**5,250,000.0**	**2,000,000.0**	**607,500.0**	**0.0**	**3,001,320.0**	**131,190.0**	

Table 24. Annex 3- Investments planed, per municipality

[1]the data presented are taken from the National Solid Wast Management Plan (2013-2022)
[2]the data presented are taken from Municipal Waste Managent Plans of the munucipalities (if present)
[3]in Pristina region, the improvement if technical situation in the regional landfill is planned
[3]in Peja region, the construction of the regional landfill is planned
[3]in Prizren region, the expansion of the space in Dragash landfill is planned
[4] transfer station and sorting station are planned in Istog, Kline, Skenderaj and Novoberd
[5]in Drenas, the transfer station is planned to be connected to the public infrastructure (water and electricty) and other to include other functions (separation od different fractions)
[5]in Kina, a joint transfer station for Kline and Istog, is planned
[6]in Gracanica, the figure presents the sum of "New equipment or refurbishing old equipment" investments of 11760 in 5 phases (58800€) and other investments of 2700€ in 4 phases (10800€)
[7]in Skenderja, the value is calucated for the number of bins specified 100*60=6000
[8]in Gracanica, the figure presents the sum of all activities for implementing a separate collection of waste
[8]in Klina, Istog, Ferizaj and Shtime, green islands are included
[8]in Drenas, Lipjan, Obliq, Fushe Kosove and Podujevë, drop off points are included
[9]in Gracanica, the figure presents the sum "New equipment or refurbishing old equipment" - 2, 8 ton truck and "Investments for implementing wate collection services of the MC" -two other trucks(108000€)
[9]in Vushtrri , the sum presents 2 trucks of 9 tons and one truck for collecting the recyclabes
[9]in Kllokot, the value presents the total planned costs for the municipaity of Kllokot and Viti
[6-9]in the Rahovec, figures should be checked for relevance, as it was not specified, weather the sum includes investing in bins as well
[10]Construction of facilities and equipments for treatment of construction waste (6 centres in 6 regions) are planned with costs 4.5 mil euro, so approximatly ~750000 is cacluated for these regions.
[11]in Kline, the figures for the construction waste centre and recycling yard are taken from the Action Plan, in order to present separate figures

transport and treatment equipment (B)				Waste separation and treatment facilities (.C)					Total (B+C) per municipality / region
MSWMP[2]				NSWP[1]	MSWP[2]				
	Containers for recyclable waste [8]	Trucks[9]	Total B	C & D waste-treatment facility[10]	C & D waste facility (site) [11]	Civic amenity centre[11]	Waste separation facility	Total C	
	850,000.0	225,000.0	**1,270,600.0**	750,000.0				**750,000.0**	**2,020,600.0**
	850,000.0	**225,000.0**	**1,270,600.0**	**750,000.0**	**0.0**	**0.0**		**750,000.0**	**2,020,600.0**
			0.0					**0.0**	**0.0**
	100.0		**850.0**		27,500.0			**27,500.0**	**28,350.0**
	850,100.0	**225,000.0**	**1,271,450.0**	**750,000.0**	**27,500.0**	**0.0**	**0.0**	**777,500.0**	**2,048,950.0**
	1,476,368.0	**2,691,000.0**	**7,299,878.0**	**4,500,000.0**	**472,500.0**	**205,000.0**	**500,000.0**	**5,717,500.0**	**12,519,018.0**

Annex 4.

	Municipalities	MWMP is drafted/validity	WM municipal regulation / year
1	Prishtinë/Pristina	2016-2020	2016
2	Gllogoc/Glogovac	2015-2020	2012
3	Fushë Kosovë/Kosovo Polje	2017-2021	2016
4	Gračanica/Graçanicë	2016-2021	X
5	Lipjan/Lipljan	2016-2020	2016
6	Obiliq/Obilić	2016-2020	2014
7	Podujevë/Podujevo	2017-2022	2015
8	Mitrovicë/Mitrovica	2016-2020	2016
9	Skenderaj/Srbica	2016-2020	2015
10	Vushtrri/Vučitrn	2016-2020	2015
11	North Mitrovica/Mitrovicë	X	X
12	Zvečan/Zveqan	X	X
13	Zubin Potok	X	X
14	Leposavić/Leposaviq	X	X
15	Pejë/Peć	2016-2020	2016
16	Istog/Istok	2016-2021	2011&2016
17	Klinë/Klina	2017-2021	2017
18	Prizren	2014-2018	20_
19	Suharekë/Suva Reka	2016-2021	X
20	Malishevë/Mališevo	X	2015
21	Rahovec/Orahovac	2016-2021	X
22	Dragash/Dragaš	X	X
23	Mamushë/Mamuša	X	X
24	Ferizaj/Uroševac	2017-2021	X
25	Kaçanik/Kačanik	2016-2021	2017
26	Shtime/Štimlje	2016-2021	X
27	Han i Elezit/Elez Han	2016-2020	2015
28	Shtërpc/Štrpce	drafting ongoing	drafting ongoing

29	Gjilan/Gnjilane	2015-2020	X
30	Kamenicë/Kamenica	X	X
31	Viti/Vitina	2012-2015	X
32	Novobërdë/Novo Brdo	X	X
33	Partesh/Parteš	X	X
34	Kllokot/Klokot	2017-2022	X
35	Ranillug/Ranilug	2016-2021	2011
36	Gjakovë/Đakovica	2015-2020	20__
37	Deçan/Dečane	X	2011
38	Junik	2014-2019	2013

Table 25. Annex 4- The drafting of the MWMP and regulation status, per municipality

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