Republika e Kosovës
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Municipality of
Gračanica/Graçanicë

# LOCAL WASTE MANAGEMENT PLAN 2016-2021

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October, 2016

# *Acknowledgments*

This plan was prepared by the working group of the municipality of Gracanica, in close cooperation with the coordination group and with the support of professional consultants and project DEMOS officers.

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| | |
|---|---|
| **LWMP** | Local Waste Management Plan |
| **RWDC** | Regional waste disposal company |
| **RAE** | Roma, Ashkali and Egyptian community |
| **WM** | Waste management |
| **PC** | Public Company |
| **MA** | Municipal Assembly |
| **SEA** | Strategic Environmental Assessment |
| **SAK** | Statistical Agency of Kosovo |
| **PE** | Public Enterprise |
| **WMS** | Waste Management Sector |

# Table of content


**1. Brief history of the municipality ..... 9**

1.1. Current situation ..... 9

1.2. Roles and responsibilities in waste management ..... 13

1.3. Waste management ..... 14

1.4. The challenges of waste management which are not under the direct jurisdiction of the municipality ..... 15

1.5. Planned projects for period 2017-2021 ..... 19

1.6. National legal framework and policies ..... 23

**2. Waste management planning ..... 25**

2.1. Scope of the plan ..... 25

2.2. General objectives of the LWMP ..... 25

2.3. Plan implementation phases 2016-2021 ..... 27

2.4. Establishment of the waste management sector ..... 27

2.5. Service zones ..... 28

2.6. Improving the waste collection system ..... 29

**3. Financial plan 2016-2021 ..... 31**

3.1. Key assumptions in financial planning ..... 32

3.2. Investments for plan period 2017-2021 ..... 32

3.3. Sources of funding for planned investments for plan period 2017-2021 ..... 38

3.4. The mechanism of collection ..... 40

3.5. Planned revenues from fee collection ..... 40

**4. Strategical Environmental Assessment ..... 41**

**5. Raising public awareness ..... 45**

5.1. Public Awareness and Information Strategy ..... 45

**6. The Action plan ..... 48**

6.1. Clarifying the responsibilities of citizens, businesses and local government ..... 48

6.2. Review of the Implementation Plan 2016-2021 ..... 50

**7. Monitoring and review ..... 52**

7.1. Defining performance indicators and sources of verification ..... 54

**Annex I ..... 55**

**Annex II ..... 58**

# List of tables


Table 1: Population distribution table based on distance and location .....9
Table 2: The list of illegal dumps with their locations and types of waste disposed .....11
Table 3: Planned investments in the future.....20
Table 4: Planned revenues and expenses at the annual level .....20
Table 5. Zones of waste collection based on the number of residents, businesses and institutions .....29
Table 6: General municipal information on WM sector .....31
Table 7: Planned investments for period 2017-2021 for main categories .....33
Table 8: Planned investments for periods 2017/2019 and 2020/2021 for main categories of investments .....34
Table 9: Sources of funding for the main categories of investments - percentage of funding for the investments .....38
Table 10: Financial flow of investments for plan period 2017-2021 for three categories of sources of funding .....38
Table 11: Financial flow of investments for plan period 2017-2021, sources of funding, Municipality/Donations .....39
Table 12: Number of residents and households (Urban and Periphery).....55
Table 13: Table of distribution of the population based on distance and location.....55
Table 14: Table of distribution of households based on the distance and location.....56
Table 15: Table of distribution of locations based on distance- number of locations.....56
Table 16: Table of distribution of areas in km2 based on the distance .....56
Table 17: Zoning of the territory with the aim of providing waste collection services .....56
Table 18: General characteristics of Zone 1 .....57
Table 19: General characteristics of Zone 2 .....57
Table 20: General characteristics of Zone 3 .....57


# List of figures


Figure 1: Graphic representation of the distance based population .....9
Figure 2: Map of municipality of Gračanica/Graçanicë is divided into 3 zones for waste collection services .....28
Figure 3: Graphic display of zones based on the number of residents, businesses and institutions.....29
Photo 1: View of the Kishnica mine tailings.....15
Photo 2: View from the kishnica mine tailings .....16
Photo 3: Views from the Kishnica mine tailings by Google Earth .....17
Photo 4. Gračanka River .....18
Photo 5. Gračanka River .....18
Photo 6: An example of placed bins for waste separation .....22
Chart 1: Graphical representation of the populati on based on the distance .....55

# *Introduction*

Municipal solid waste is a frequent topic of complaints addressed by Kosovo citizens and the solution of this issue remains a priority for Kosovo's municipalities. Much of the waste is thrown uncontrollably. In addition, the amount of waste is increasing and municipalities are under great pressure to provide quality services to citizens. Delays in undertaking appropriate measures make it possible for these problems to grow even further, endangering public health.

Local Waste Management Plan (LWMP) for the municipality of Gračanica/Graçanicë is a strategic document. This strategy is one of the basic documents providing conditions for rational and sustainable waste management, and is supported by implementation plans for management of specific waste streams. LWMP is a document that sets out the objectives and proposes the policies, programs and infrastructure needed for waste management in line with national priorities. This is the first waste management plan for Municipality of Gračanica/Graçanicë

**Waste Management Strategy in Local Waste Management Plan sets:**

- the basic guidance of waste management for the period 2016 - 2021, and in accordance with the policy of the European Union in this field, as well as strategic commitments
- directs the activities of legislative harmonization in the process of approximation to the European law
- sets short-term and long-term waste management objectives
- determines measures and activities for achieving set objectives.

Waste management plan covers the territory of the municipality of Gračanica/Graçanicë and addresses only non-hazardous municipal waste, and contains waste recycling as a component. This plan is fully in accordance with the Law on Waste No. 04 / Z-060, and includes collaboration with other authorities responsible for economy, finance, environmental protection, urban planning, as well as representatives of companies or businesses, associations, professional institutions, non-governmental organizations and others, including consumer organizations.

Local plan includes: type, quantity and origin of all types of waste in the municipality, the expected types, quantities and origin of waste to be used or disposed on the territory covered by the plan, objectives to be achieved in terms of re-use and recycling of waste in the areas covered by the plan, program for raising public awareness on waste management, location of waste collection facility, treatment and disposal of waste, including data on urban and technical conditions, measures for the rehabilitation of unregulated landfills, control and monitoring of the planned activities and measures, cost estimates of the planned activities, deadlines for implementation of planned measures and activities, as well as significant targets and measures for efficient waste management.

According to the Law on Waste No. 04 / L-060, the municipality is responsible for preparing the Local Waste Management Plan and within the local legal framework, the municipality has approved: Local Action Plan for Environmental Protection, municipal Regulation on Waste Management and municipal Regulation on Environmental Protection.

Based on the last census in 2011, municipality of Gračanica/Graçanicë has a total population of 10,600 residents. Referring to the territory and number of residents, especially if we take into account the fact that more than 50 percent of the population did not participate in the census, municipality of Gračanica/Graçanicë is a municipality which has a significant population density per square kilometer. The amount of waste collected is around 250 tons per month.

Waste Management Plan for 2016-2021 will be implemented in two stages: the creation of a sound waste management system (2016-2018 / Phase 1) and the creation of a new system for the collection and management of transfer stations (2018-2021 / Phase 2).

**Waste Management Plan 2016-2021 foresees:**

- Coverage of the territory of municipality of Gračanica/Graçanicë by providing waste collection services to 100%, increasing the degree of fee collection to 90%, reducing the level of illegal disposal to 10%, decreasing the final disposal degree to 85%, increasing recycling to 23%.
- Establishment of waste management sector within the Department of Public Services,
- Zoning of the territory of municipality of Gračanica/Graçanicë; zoning of the territory is based on the following criteria: proportional distribution of directions and lines of work in waste management by zones, distribution based on the number of residents, distribution based on the number of households, the distribution based on the number of facilities.
- Financial investments to be based on short-term needs, as well as capital investments to meet the objectives set by the Municipality of Gračanica/Graçanicë
- Key assumptions for necessary capital investments reach the amount of € 1,081,550.
- Pilot projects, such as:
  - minimizing waste through composting,
  - minimizing the amount of waste through waste separation in schools,
  - minimizing waste through recycling plastic bags, by way of proper management of the transfer station.

**The direct beneficiaries of the implementation of the Local Waste Management Plan are:**

- Citizens, who will live in a cleaner, healthier and safer environment;
- Businesses, that will have increased economic activities, as a result of increasing the number of tourists attracted by a clean and well-managed town;
- Recycling businesses, which will have access to large quantities of usable materials;
- Municipal staff, that will benefit from the vision, clearly set goals and objectives, and an action plan that will manage them in the next 5 years, in order to improve waste management services;
- Municipal authorities, which will benefit from the improvement of reputation, as a result of a growing population satisfied with the waste management services.Introduction

# 1. BRIEF HISTORY OF THE MUNICIPALITY

The municipality of Gračanica/Graçanicë was formed under the Law on Administrative Municipal Boundaries of 20 February 2008. After the elections on 15 November 2009, the municipality of Gračanica/Graçanicë was officially established on 29/12/2009, when an inaugural session of the Municipal Assembly of Gračanica/Graçanicë was held. Municipality of Gračanica/Graçanicë covers the central part of Kosovo, bordering in the north with the municipality of Priština/Prishtinë, in the south with the municipality of Lipljan/Lipjan and the west with the municipality of Kosovo Polje/Fushë Kosovë. The territory of Gračanica/Graçanicë municipality covers an area of 131.25 km$^2$.

In accordance with the administrative borders of the municipality, it consists of the following cadastral zones: Badovac/Badoc, Batuse/Batushë, Čaglavica/Çagllavicë, Dobrotin/Dobratin, Gračanica/Graçanicë, Donja Gušterica/Gushtericë e Ulët, Gornja Gušterica/Gushtericë e Epërme, Laplje Selo/Llapllasellë, Lepina/Lepi, Livađe/Livagjë, Preoce/Preoc, Skulanevo/Skullan, Sušica/Sushicë, Suvi Do/Suhadoll and Radevo/Radevë and Ugljare/Uglar.

## 1.1. Current situation

### Population structure

Based on the latest census of 2011, the Municipality of Gracanica has a total of 10,600 inhabitants. This number does not represent the real number of the general population in this municipality, considering that more than 50% of residents have boycotted this census1. The population structure in the municipality is multiethnic and with: 85,7% Serbs, 3,7% Albanians, 10,6% RAE and others. The municipality of Gracanica has 5,730 taxpayers, out of which 630 are businesses and 5,100 households. From the table below, we see that population density is more pronounced in the center, ie in the most urbanized part of the municipality.

*Table 1: Population distribution table based on distance and location*

| Distances | 0-3 km | 3-6 km | 6-9 km | 9-12 km | 12-40 km | Total | In % |
|---|---|---|---|---|---|---|---|
| Urban | 2,686 | 623 | - | - | - | 3,309 | 31.0% |
| Suburbs | 723 | 1,362 | 1,468 | - | 793 | 4,346 | 40.7% |
| Rural | - | 278 | - | 1,850 | - | 2,128 | 19.9% |
| Rurale-Distance | - | 892 | - | - | - | 892 | 8.4% |
| Total | 3,409 | 3,155 | 1,468 | 1,850 | 793 | 10,675 | 100.0% |
| In % | 31.9% | 29.6% | 13.8% | 17.3% | 7.4% | 100.0% | |

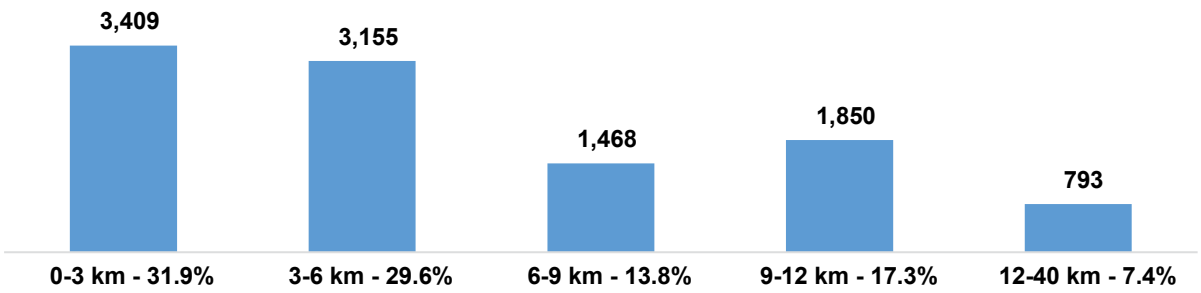



*Figure 1: Graphic representation of the distance based population*

1 According to officials of the Municipality of Gracanica

## Coverage with waste management services

Waste collection sevices are offered by RWC “Pastrimi” and other operators (who are not equipped with a license and work permit by Kosovo authorities). Services are currently used by 3500 households (using the services of regional company “Pastrimi”) that are provided with 2000 bins (120 L) and 300 containers. Collection is done twice a week with two trucks that operate on a route of 216 km.

Coverage with services of waste collection is around 70%. The percentage of coverage of liabilities from services provided currently amounts to around 20% (in terms of collection by the registered company “Pastrimi”[2]).

## Amount and types of waste

The amount of waste collected on the territory of our municipality on a monthly basis amounts to a total of 250 ton[3] of solid waste, which includes all types of waste

- organic, plastic, cardboard etc - accurate data on the quantity on the basis of the customer, whether it comes to households, institutions or private businesses, currently do not exist;
- Animal Waste - Animal waste is not collected and there is no location intended for disposal.
- Construction waste - Construction waste generated in construction, excavation and soil digging works, as well as road works is disposed of on several locations that are not approved landfills, and the municipality occasionally uses material that can be used, and the remaining part is flattened and arranged.
- Electronic waste - Waste disposal generated form old electronic devices and household appliances are not collected and there is no location intended for disposal.
- Hazardous waste – no service is given
- Medical waste - Medical waste generated by two regional hospitals and three health centers with infirmaries and 9 private health institutions, at this time, is being stored in warehouses, which are almost full, and because in Kosovo there is no center for the disposal or recycling of waste, it is expected that the Ministry will come up with a solution regarding this problem because the treatment of medical waste is under their jurisdiction.
- Hazardous waste/industrial waste - Regarding other hazardous waste, such as industrial ones, as there is no industrial activity in this municipality, there is currently no such waste generation. On the other hand, it should be noted that the Kishnica landfill, created recently, though not active, continues to be an environmental problem

2 Based on data provided by RWC Pastrimi
3 Based on data provided by RWC Pastrimi

Due to limited waste collection service Municipality of Gračanica/Graçanicë, often faces a considerable number of illegal dumping sites. In 2016 there were 17 such sites identified, while size, location and type of the wastes found on these sites are presented in the table below.

*Table 2: The list of illegal dumps with their locations and types of waste disposed*

| No. | Landfill | Size | |
|---|---|---|---|
| 1 | Gračanica/Graçanicë - Padalište | Large | Mostly municipal (household) waste, construction waste |
| 2 | Near the lake - road to Stari Badovaca | Large | Mostly municipal (household) waste, construction waste and large quantities of soil waste |
| 3 | Laplje Selo/Llapllasellë, the road behind the school, near the Faculty of Agriculture | Large | Mostly construction waste and municipal (household) waste |
| 4 | Laplje Selo/Llapllasellë, the road towards Gušterica/Gushtericë, on the right side of the road | Large | Mostly construction waste and municipal (household) waste |
| 5 | Lepina, near the bridge on the river Sitnica | Small | Mostly municipal (household) waste |
| 6 | Kišnica/Kishnicë, on the left side of the entrance to the location from the direction of Gračanica/Graçanicë | Large | Mostly construction waste and municipal (household) waste |
| 7 | Preoce/Preoc, the road behind the school, on the right | Large | Mostly construction waste and municipal (household) waste |
| 8 | Badovac/Badoc, near the Roma cemetery | Small | Mostly municipal (household) waste |
| 9 | Sušica/Sushicë, detour between Sušica and Badovac/Badoc | Small | Mostly municipal (household) waste and construction waste |
| 10 | Sušica/Sushicë, beside the road near the church | Small | Mostly organic waste, there is a threat for this pile of waste to clog up the local stream and thus further endanger the environment |
| 11 | Laplje Selo/Llapllasellë, near the stadium FC Polet | Small | Mostly municipal (household) waste and construction waste |
| 12 | Gračanica/Graçanicë, stream, at the demarcation line with Ajvalija | Small | Mostly municipal (household) waste and construction waste |
| 13 | Landfill on the road between Gračanica/Graçanicë and Laplje Selo/Llapllasellë, on the right side | Small | Mostly municipal (household) waste and construction waste |
| 14 | The landfill at the entrance of Suvi Do/ Suhadoll, from the direction of Skulanevo/Skullan | Small | Mostly construction waste |
| 15 | Gračanica, behind the motel "Europe" and on the tailings pond | Large | Mostly municipal (household) and organic waste |
| 16 | Čaglavica/Çagllavicë, behind the Media center, the old road to Ajvalija | Large | Mostly municipal (household), construction and organic waste, and a large amount of soil |
| 17 | Landfill on the road between Gračanica/Graçanicë and Badovac/Badoc, next to the railroad | Small | Mostly municipal and smaller quantities of construction waste |

## The existing system of waste management

In the municipality of Gračanica/Graçanicë, this type of service currently is provided by a regional company “Pastrimi” from Priština/Prishtinë, in cooperation with the municipality of Gračanica/Graçanicë. Waste collection services are also provided by operators (which do not have a license and work permit for operation by Kosovo authorities) and the biggest problem is that the final destination of the wastes collected by these operators is not known. The primary activity of the public operator is collection and transportation of municipal waste and secondary services, such as: management and maintenance of public spaces, street cleaning, snow removal and maintenance of public green spaces and cemeteries. .

The company serves three categories of users, i.e. households, businesses and institutions. Households are divided according to how they receive the service, to households receiving services from door to door and users provided with containers. The businesses are divided into small and medium businesses that receive the service without contracts and large businesses, with special service contracts. One part of small and medium businesses receives services from door to door, and the remaining part is provided with special containers. Businesses with agreements are provided with special containers. Institutions are the third category of users and other than some small NGO and lawyer’s offices or similar, they usually have special contracts and are provided with special containers. Waste collection is usually carried out in the period from 08:00 to 14:30. In special cases, the transport takes place after this schedule, but not later than 18:00.

In municipality of Gračanica/Graçanicë RWC “Pastrimi” provides services with two trucks of the regional company “Pastrimi”, which has 9 employees, 2 drivers and 1 coordinator, municipality on the other hand posseses a truck that is out of order due to technical problems.

Payment is made in accordance with a memorandum binded by a regulation, and the billing is performed by two collectors. Note that in municipal territory there are private operators whose capacity and equipment is unknown.

General operating expenses amount to 11,500 € per month (memorandum), and the needs, i.e. requirements, are great. In order to improve the service, because due to the lack of equipment in the municipality of Gračanica/Graçanicë, a large number of illegal landfills have been created, it is necessary to invest in additional equipment. Because of this problem, 17 illegal dumps are removed annually in the municipality, which creates additional costs for the municipality. To solve the problem of illegal dumps, it is necessary to invest in two more trucks, about 2,100 bins, 200 containers, as well as additional work force. Costs of managing “illegal” operators are currently not under control of municipalitiy.

Separation and recycling of waste is currently not performed, but it is the goal of municipality to start these activities. Currently, municipalityis only able to collect waste in cooperation with the regional company “Pastrimi” based on a memorandum. The waste is disposed of in a landfill, where waste is a subject of further processing.The establishment of a separation center would solve this problem and significantly contribute to environmental protection.

## 1.2. Roles and responsibilities in waste management

The roles and responsibilities of municipal bodies in waste management are shown in the box below:

**Department of Public Services (OJS)** *is responsible for managing all the works on public and municipal property, control of companies' activities engaged in maintenance and cleaning of roads and other municipal surfaces.*

**The Department of Finance** *is responsible for determining service fees and method of collection.*

**Department of Urban Planning and Environmental Protection** *which is, among others, responsible for spatial planning and urban development of the municipality, helps in preparing of a local regulation on waste and garbage control in the municipality, and also provides support in the development of projects for the protection and maintenance of the environment.*

**Inspectorate for Environmental Protection and Inspectorate for Public Services,** *which are responsible for supervision and enforcement of laws and provisions of municipal regulations in the sector of Inspection of Environmental Protection, Agriculture and Forestry.*

## 1.3. Waste management [4]

The amount of waste collected during the day ranges from 8-10 tons. As can be seen from the previous conclusion, the present operator fails to collect around 1/3 of the waste. Unfortunately, a significant part of the waste is dumped without control.

The main reasons for incomplete waste collection are different, such as:

- The low level of awareness among the population;
- The limited capacity of the public company for waste management;
- Non-payment of fees by one part of the service users;
- Failure to address the issue of construction waste (demolition);
- The unresolved problem of management of animal waste;
- The low and informal level of classification and recycling.

Currently, the only operator licensed by the municipality is PC "Pastrimi" which, according to the data, provides primary service of waste collection for 70% of the total number of households, 10% in urban and 90% in rural areas, bearing in mind that the municipality of Gračanica/Graçanicë is of rural character.

Despite progress made, several categories of waste represent a major challenge for the municipality, particularly construction waste as result of demolition, animal waste, etc.

As a result of the lack of adequate landfill for this category of waste, waste from construction and demolition materials are thrown everywhere, which worsens the state and aesthetic aspect of the environment. Often, uncontrolled disposal of waste causes the creation of illegal dumps and disposal of various types of waste by residents and businesses. In addition, there is no connection between the issuance of building permits and a system for monitoring waste disposal. As for this type of waste, the municipality is in the process of selecting an adequate location.

Management of animal waste in the municipality of Gračanica/Graçanicë is not in accordance with the applicable provisions, primarily due to lack of facilities for animal waste processing. In the municipality, there are 6 entities involved in the production, processing and conservation of meat, while meat and meat products are sold in all retail facilities. With some of them the current operator has concluded service contracts and provides them waste collection services, while a part of the operators is illegally disposing of waste. In addition, it is not entirely clear how is the animal waste that is collected by the authorized operator being processed, since the landfill does not allow for this type of waste to be disposed in these locations.

4 Data from KRM Pastrimi

## 1.4. The challenges of waste management which are not under the direct jurisdiction of the municipality

In addition to the usual waste from households and businesses that are under the jurisdiction of the municipality, there is another important category of waste that is being disposed in the municipality, but is not under direct jurisdiction of the municipality.

### Chemical-industrial waste:

The biggest problem in the municipality as regards the chemical and industrial waste is the tailings pond of the mine Kišnica/Kishnicë located near Gračanica/Graçanicë, below the Gračanica Lake and the water supply. It is a material which is deposited from lead and zinc mine Kišnica. It represents the most serious environmental problem of the municipality for many years now and is a constant threat to environmental degradation.

Degradation of the environment is reflected in the pollution of watercourses, the air and the surrounding arable land.

Tailings pond, Figures 1 and 2, is built for the disposal of flotation tailings resulting from ore processing plant in the plant for flotation of lead and zinc ores, located in the industrial area of the mine. All the material comes from the process of crushing, grinding and flotation of lead and zinc ore, which used to be excavated in the mine Kišnica.

*Photo 1: View of the Kishnica mine tailings*

*Photo 2: View from the kishnica mine tailings*

Tailing pond from of the mine Kišnica was formed on the border with Gračanica/Graçanicë, in the vicinity of the mine. It was designed for receipt of tailings transported from the flotation plant to the place where it was disposed. There, with the help of a separator, it was separated in two classes - sand (large class) and nuance (small class). The sand was disposed on dams, and thus served for planned and successive building of a dam, while the nuance was directed to the storage space, limited by the dam.

At the dams, as well as the tailings itself, water runoff along the slope was observed, which has resulted in creation of channels, depressions and protrusions. The wind and water practically wash away untied, loosely tied or finer materials, changing the geometry of the dam. The influence of wind to external erosion leads to a large extent to air pollution of the area around the tailings, while the result of erosion by water is mainly retained in and around the tailings, causing the pollution of the river nearby. The water that causes erosion in most cases is a result of precipitation.

*Photo 3: Views from the Kishnica mine tailings by Google Earth*

The lake occupies about 1/4 of the total area at the top and has no vegetation; the size can vary in relation to atmospheric precipitation. Based on the data of the Metallurgical Combine Trepča/Trepça, now abandoned tailings pond has been in use since 1965, and covers an area of about 40 hectares. One small part of the dam is partially recultivated, while the rest of the tailings pond is still uncovered, causing the emission of dust from the dry surface towards Gračanica/Graçanicë and presents an obvious environmental issue.

This landfill complex for disposal of mining waste should be considered as a zone of highest priority for remediation. The reasons are the following: the proximity of the settlement, unfavorable wind rose in relation to the location of the town, intense wind erosion and air pollution due to the formation of dust, water erosion, visual effects, etc.

At the bottom of the tailings pond, tracks of water drained into the river Gračanka were observed, and layers that are washed away from the mine landfill are common images at the bottom of the tailings pond, as well as the river.

*Photo 4. Gračanka River*

*Photo 5. Gračanka River*

Water from the river Gračanka, besides the waste water from the places through which it flows, is also polluted by the waste water from the flotation mine Kišnica, a variety of harmful metals has accumulated in the riverbed (lead, sodium, iron...).

## 1.5. Planned projects for period 2017-2021

### Project of establishing own Public Utility Company (PUC) (by 2021)

By establishing its own PUC, municipality of Gračanica/Graçanicë will take part in the provision of services to the citizens, which will affect the quality of services, reduce the costs of outsourcing these services and will increase employment in the municipality.

Municipality of Gračanica/Graçanicë has drafted a business plan for the said company, which was forwarded to the Ministry. The business plan was drafted in June 2015. The plan includes the following:

**PUC is a local company that will be established for the provision of utility services, as well as activities of general and local character, such as:**

- Waste collection and transportation,
- Maintenance of green and public areas,
- Maintenance of parks and recreational areas,
- Regular maintenance of local roads,
- Organization of markets,
- Regulation of local cemeteries,
- Maintenance of street lighting, etc.

The company will be 100% owned by the founders, i.e. municipality of Gračanica/Graçanicë, with the possibility of ownership transformation in accordance with the law and the decisions of the relevant authorities.

- Planned revenues of PUC for all services amount to around € 394,338 annually.
- The variation in the costs of the company from the initial increased costs due to procurement of equipment, construction of the facility, garages and procurement of other resources necessary for the commencement of the operation of the company, which would later have a trend of reduction and normalization.
- Planned initial expenditures for purchase of fixed assets necessary for operation are the following:

*Table 3: Planned investments in the future*

| Required equipment | Quantity | Price |
|---|---|---|
| Truck | 1 | 40,000.00 € |
| Tanker truck for cleaning streets | 1 | 65,000.00 € |
| Tipper truck | 1 | 68,000.00 € |
| Backhoe loader | 1 | 70,000.00 € |
| Hearse | 1 | 20,000.00 € |
| Cargo vehicle | 1 | 12,000.00 € |
| Chainsaws | 4 | 2,800.00 € |
| Lawn mowers | 8 | 4,800.00 € |
| Total value of investments | | 282,600.00 € |

Planned expenditures of the company for the period of a year after the aforesaid funds amount to about € 225,300, with costs for employees, which would amount to around € 377,590, which will be secured through transfers by the relevant ministry.

*Table 4: Planned revenues and expenses at the annual level*

| Total planned profit of the company in the year of operation | | |
|---|---|---|
| Total revenues | Total expenditures (excluding costs for employees) | Profit |
| 394.338.00€ | 225.245.00€ | 169.093.00€ |

## Project of improvement of collection of fees for utility services (2017)

**The most important measures in the interest of all users of utility services that should be taken are:**

- Rationalization of all aspects of costs of the service provider Public Utility Company through the existing control mechanisms at the local level;
- Limitations and control of employment in PUC, by determining on the basis of predefined indicators the optimal number of the workforce engaged in specific activities;
- Correction of utility prices on the basis of a bylaw which should be adopted - a uniform methodology for determination of prices of all utility services;
- Measures for improving the level of collection of receivables through better legal protection of earned income, better communication with service users and other measures;
- Directing depreciation assets for renewal of old equipment and improving the age structure of utility vehicles.

## Project for repair of the existing and purchase of new equipment (2017)

In order the quality of service to be raised to satisfactory level, in case of non-establishment of PUC, the municipality will provide services according to the current principle, in cooperation with the regional company “Pastrimi”, but for this level to be raised to an expected level, it is necessary:

- Concreting of platforms for containers
- Purchase bins for households where they are missing (2100 bins)
- Purchase containers for places where they are missing (50 containers)
- Reparation of existing bins and containers
- 2 trucks, 8T (which will be given to the use under a contract to an authorized operator).

Approximate value of the project is € 200,000.Method of financing the project: **municipality and potential donors.**

## Project of building of a separation center (by 2021)

The municipality of Gračanica/Graçanicë is currently struggling with the problem of registration of a public utility company, as well as the problem of the creation of illegal dumps. In order to solve these problems and to ensure better operation of the PUC after the registration, it is necessary to open a separation center.

The waste that is collected in the municipality would be delivered to this center, sorted and then transported to the central landfill, depending on the type of waste. Given that waste will be sorted in this center, materials that can be recycled will be sold to collection stations, which will allow the separation center to be self-sustainable.

Approximate value of the project is € 500,000

Implementation of these projects should improve the operation of municipal companies and, through the higher collection of fees, enable normal functioning of municipal services and its capacity for waste management.

The lack of capacity leads to creation of illegal dumps that the municipality cleans every year, which incurs additional costs for the municipality. Landfills reappear after they are cleaned, so a long-term solution for this problem has to be found.

## Pilot project for waste separation and recycling

In order to improve the service, reduce costs and raise awareness of citizens, municipality of Gračanica/Graçanicë plans to try through such a project to check if waste recycling can take hold on our territory. The aim of this project is closely linked to the project of building of the separation center, i.e. check the performance of this type of waste management.

For the implementation of the said project, it is required to purchase special recycling containers, as well as a truck that will perform services of separate waste disposal. The place determined for designing is Badovac/Badoc settlement with 150 households, located 2km away from the center of Gračanica/Graçanicë.

Approximate value of the project is € 85.000.

*Photo 6: An example of placed bins for waste separation*

## 1.6. National legal framework and policies

Waste management in Kosovo is regulated through a legal framework which is harmonized with European legislation, i.e. directives and regulations of the European Union regulating the waste sector. The main purpose of the legal framework for waste management is to avoid and reduce as much as possible waste generation, enable reuse of usable components, prevent the negative effects of waste on the environment and human health, as well as the final disposal of the waste in an environmentally acceptable manner.

The legal framework consists of laws and regulations governing waste management. The main law that regulates in detail the Waste Management is Law No. 04 / L-060 on Waste. This law regulates the planning and management; conditions for waste collection, transportation, treatment, storage and disposal, types and classification of waste, the liabilities of legal and natural entities regarding waste management, conditions and procedures of obtaining licenses and permits for waste management, penalties for non-compliance with legal provisions and other issues related to waste. Articles 14 and 15 of Law No. 04 / L-060 on Waste, outlines the responsibilities of institutions at central and local level regarding waste management. According to Law No. 04 / L-060 on Waste, municipalities assume additional responsibilities related to the handling and management of waste.

In addition to these laws, the legal framework for waste management also contains a considerable number of other laws and sectors that indirectly regulate waste management, such as: Law No. 03 / L-025 on Environmental Protection, Law No. 03 / L-040 on Local Self-Government, Law No. 03 / L-087 on Public Enterprises, Law No. 04 / L-174 on Spatial Planning, Law No. 04 / L-045 on Public-Private Partnerships, etc.

Article 17 of Law No. 03 / L-040 on Local Self-Government defines waste management as full and exclusive jurisdiction of the municipality. Based on this jurisdiction, municipalities have the legal authority to create structures and mechanisms, as well as to provide for a separate budget, with the aim of having a better and more efficient waste management sector.

Law No. 03 / L-087 on Public Enterprises define and regulate the ownership of public waste management companies, their corporate governance in accordance with international principles and standards. Article 6 of Law No. 04 / L-111 on Public Enterprises provides the establishment of local public enterprises by municipalities. Whereas, Articles 4, 5 and 6 of the Regulation No. 02/2013 establish the criteria and procedures for the establishment of public waste management companies. According to Article 5.2 of this law, the right of the municipality as a shareholder is exercised by Municipal Shareholder Committee, which consists of one member appointed by the mayor and two other members appointed by the Municipal Assembly. Municipal Shareholder Committee acts in the name of the municipality, in accordance with the Law on Companies.

## Local legal framework

Based on the Law No. 03 / L-040 on Local Self-Government, Law No. 04 / L-060 on Waste, Law No. 03 / L-087 on Public Enterprises and other sectoral laws, municipalities are obliged to create a local legal framework for the effective management of waste on its territory. Local frameworks are composed of municipal regulations, guidelines, policies, various regulators, as well as the decisions relating to the waste management sector.

Within the local legal framework, the municipality has approved: Local Action Plan for Environmental Protection, municipal Regulation on Waste Management in the Municipality of Gračanica and municipal Regulation on Environmental Protection.

# 2. WASTE MANAGEMENT PLANNING

## 2.1. Scope of the plan

Local Waste Management Plan is a document which provides for the organization of the process of waste management at the municipal level, which defines the directions and priorities, as well as the dynamics and the manner of solving the problem in accordance with the applicable national legislation and EU legislation in terms of waste management and environmental protection in general. LWMP, in addition to being a legal obligation, aims to find and implement the best alternatives for waste management.

The aim of drafting this plan is to establish a long-term sustainable system for waste management at the municipal level, and thus improve the quality of life and ensure environmental protection. Rational use of resources and compliance with modern principles of waste management, with the coordinated participation of all acts on waste management.

Within LWMP-a, an analysis of the existing capacities of waste treatment will be carried out, as well as the analysis of existing capacities for waste management, based on which the need for further development will be reviewed. Another important objective of LWMP is to address a lot of unresolved issues that determine the establishment of an entirely new system for waste management, which is based on the direction provided by the National Strategy for Waste Management in Republic of Kosovo, the Law on Waste, European standards and legislative measures concerning this area.

## 2.2. General objectives of the LWMP

LWMP represents the basic document for organizing the process of waste management on the municipal level. The municipality of Gračanica/Graçanicë is committed to improving the state of waste management, and in this regard has foreseen specific objectives that are an integral part of this plan. These include the expansion of services, prevention, minimization and recycling of waste, as well as the elimination of disposal of waste at hotspots, but in designated locations. Objectives are divided into two stages, i.e. in following periods - 2016-2018 and 2018-2021.

Through waste management, the municipality plans to achieve:

- A clean town, a healthy environment for citizens,
- Implementation of the integrated management of urban waste concept,
- Promotion and support of waste processing activities,
- Coverage of the entire zone with services through affordable tariffs,
- Defining the objectives of waste management at the municipal level in accordance with national legislation,
- Defining the optimal waste management system,
- Defining general financial investments and investment of the priority parts of the plan that must be implemented immediately.

**Goals:**

1. Establishing the institutional waste management system;
2. Establishing the tax, tariffs and fee collection system;
3. Covering the entire territory with waste collection services;
4. Project of establishing a separation centre on the territory of municipality – private investments;
5. Elimination of all illegal landfills,;
6. Development of pilot projects for implementation of the concept of 3R (reduction, reuse and recycling).

**Objectives:**

The plan aims to improve waste management related to households and commercial companies, as well as municipal waste management.

- Degree of coverage with waste collection services means degree of the population which received services compared to the general population.
- Degree of collection means the degree of quantity of waste collected compared to the degree of waste generated.
- Level of illegal disposal means the degree of illegal waste disposed, including inappropriate waste disposal within the zone without the services compared to the total amount of waste generated.
- Degree of the final disposal means the degree of disposed waste on licensed and non-licensed landfills (illegal disposal) pared to the total amount of waste generated.
- Degree of recycling means the amount of recycled waste compared to the total amount of waste generated.

## 2.3. Plan implementation phases 2016-2021

The above stated vision will be achieved step by step. The years targeted by the Waste Management Plan for the municipality of Gračanica/Graçanicë are 2016-2021.

Implementation of the Waste Management Plan 2016-2021 has two phases:

- **First phase (2016 – 2018)** - The creation of a sound waste management system, which means that during this period, a waste management sector will be established, with the aim of creating a database that will enable efficient waste management and the capacity for collection of waste in the municipality. In 2017, the objective will be legitimate aim of creating the conditions for the collection of revenues that will go to the municipality; the full implementation of collection is intended to be completed in 2018.
- **Second phase 2 (2018 – 2021)** - Creating a new system for the collection and management of the transfer station, which means that during this period a new system of waste collection will be established, which will cover the entire administrative territory of the municipality with waste collection services; conclude a contract with a private operator to manage the separation centre.

Based on these objectives, divided in two phases, five-year WM plan may be **modified until the end of 2018**, based on the progress achieved in the first phase. Implementation of the plan in the planned period will be modified, monitored and harmonized at the end of 2018, based on the achievement of certain results in the first phase.

### Implementation of the local legal framework

In order to fulfill the local legal framework and its improvement in the aspect of waste management, a Waste Management Regulation should be drafted and approved, defining the organizational scheme, structure and size of waste collection services in all settlements, neighborhoods, areas or public spaces, dynamics of waste collection, the manner and scheme of the fee collection and billing method, penalties, etc..

## 2.4. Establishment of the waste management sector

In order to implement the WM plan, the municipality of Gračanica/Graçanicë is creating a waste management sector, which will be established within the Department of Public Services and have the following responsibilities:

- In cooperation with relevant stakeholders, implements the waste management plan,
- In cooperation with relevant stakeholders, drafts operational plans for the collection and treatment of waste, along with determining operational zones,
- In cooperation with relevant stakeholders, drafts a plan for collection of funds,
- In cooperation with relevant stakeholders, determines special conditions and criteria for operators that will deal with collection, transport and treatment of waste and organizes monitoring and evaluation of these companies,

- In cooperation with relevant stakeholders, develops procedures and activities for the control of activities that reduce the amount of illegal disposals, drafts and manages plans for the elimination of the remaining illegal locations/places,
- In cooperation with relevant stakeholders, develops pilot projects that aim at improving performance of the municipality in the field of waste management,
- In 2017, in the short-term period, the municipality will, through public calls, conclude contracts with operators for the collection and treatment of waste, with the right to collection of fees for provided services.

## 2.5. Service zones

In order to organize waste management, a system for zoning territories was created.

Zoning of the territory is based on the following criteria:

- Proportional distribution of zones in an area and line of waste management operation
- Distribution based on the number of residents
- Distribution based on the number of households
- Distribution based on the number of facilities.

The target zone of Local Waste Management Plan is the entire administrative area of the municipality of Gračanica/Graçanicë. Zones serve as an attempt to raise the level of waste collection services within the Local Waste Management Plan and are divided in:

*Figure 2: Map of municipality of Gračanica/Graçanicë is divided into 3 zones for waste collection services*

*Table 5. Zones of waste collection based on the number of residents, businesses and institutions*

| Zone | Places | No. of households | No. of business | Institutions | Total | Perc.% |
|---|---|---|---|---|---|---|
| **I** | 5 | 2,420 | 403 | 24 | 2,847 | 48% |
| **II** | 4 | 1,278 | 138 | 10 | 1,426 | 24% |
| **III** | 7 | 1,402 | 89 | 10 | 1,501 | 28% |
| Total | 16 | 5,100 | 630 | 44 | 5,774 | 100% |

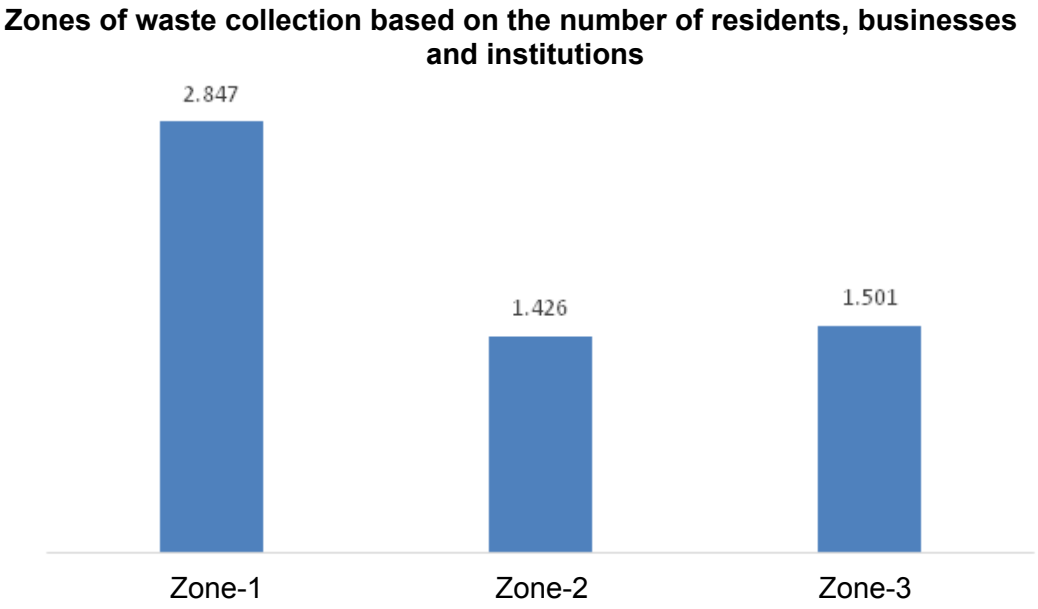



*Figure 3: Graphic display of zones based on the number of residents, businesses and institutions*

## 2.6. Improving the waste collection system

The regional company „Pastrimi“, after collecting it, transports the waste to the central landfill. Due to old vehicles which often break down, it often happens that services in some areas are not provided for one week, which causes dissatisfaction of the citizens, as well as the creation of illegal dumps.

By opening a separation centre, firstly, the waste would be removed more quickly and transported to the intended location. By sorting the waste, only one part would be transported to the central landfill, while the materials which can be recycled would be transported to the buying centers, where they would be sold, which would provide additional funds for the operation of the separation centre, as well as the public utility company.

By implementing abovementioned and other projects (r*econstruction of existing and purchase of new equipment, establishment of own public utility company (PUC),* municipality of Gračanica/Graçanicë would improve the waste collection system.

Construction waste management although challenging at the moment, municipality plans to activate a construction waste landfill during 2017. Currently, waste of this origin is disposed on illegal landfills. Due to a large territory, the plan is to create a centralized location for disposal of construction waste:

**Location: Gračanica/Graçanicë, at Padalište**

**Area:** about 6000m², parcel with cadastral number 0017-7, and cadastral zone: Gračanica/ Graçanicë, property of the municipality Gračanica/Graçanicë. Planned funds for setting up this facility are €10.000 Services will be charged based on the amount of waste. The method of collection is determined by the Directorate of Public Services.

# 3. FINANCIAL PLAN 2016-2021

The financial plan for period 2016-2021 is based on the general state of waste management, the current organization of environmental impact, as well as influence on social factors, financial capacity to manage waste in the municipality of Gračanica/Graçanicë.

General information of the municipality and the last census were used for general characteristics of the municipal territory. General information and waste management methodology is a basis for drafting the financial plan for the period 2016-2021. Based on the general characteristics of the municipality and plans to cover the entire territory with services for all categories of users, the financial plan includes all segments of implementation of the plan.

The main objective of the municipality for period 2016 – 2021 is to fully cover the entire territory with WM services, as well as to improve the quality of services in all segments. Within the plan period, planned investments include all segments that have direct impact on changing the situation in the sector.

*Table 6: General municipal information on WM sector*

| Category | Amount | In % |
|---|---|---|
| Population | 10,675 | |
| Nr. of households | 3,886 | |
| Area in km$^2$ | 164 | |
| Calculated waste in tons (calculated) | 2,749 | |
| Household coverage | 2,941 | 75.7% |
| Household non/coverage | 945 | 24.3% |

| Category | Zone 1 | Zone 2 | Zone 3 | Total |
|---|---|---|---|---|
| Number of location | 5 | 4 | 7 | 16 |
| The average in km | 8.04 | 5,50 | 9.20 | |
| Average in km$^2$ | 83 | 38 | 42 | 164 |
| Nr. of households | 2,024 | 829 | 1,033 | 3,886 |
| Number of households - use WM | 1,478 | 815 | 648 | 2,941 |
| Coverage with WM services | **73.0%** | **98.3%** | **62.7%** | **75.7%** |
| Population | 5,531 | 1,983 | 3,161 | 10,675 |
| Waste generation | 1,544 | 552 | 652 | 2,749 |

| Category | Population | % | Area in km$^2$ | % | Waste generation | % |
|---|---|---|---|---|---|---|
| Urban | 3,309 | 31.0% | 20 | 12.4% | 1,087 | 39.5% |
| Periphery | 4,346 | 40.7% | 119 | 72.8% | 1,110 | 40.4% |
| Rural | 2,128 | 19.9% | 19 | 11.8% | 388 | 14.1% |
| Rural-remote | 892 | 8.4% | 5 | 2.9% | 163 | 5.9% |
| **Total** | **10,675** | **100.0%** | **164** | **100.0%** | **2,749** | **100.0%** |

| Zone | No. locations | Average in km | Area in km$^2$ | No. households | Population | Waste generation |
|---|---|---|---|---|---|---|
| Zona 1 | 5 | 8.04 | 83 | 2,024 | 5,531 | 1,544 |
| Zona 2 | 4 | 5.50 | 38 | 829 | 1,983 | 552 |
| Zona 3 | 7 | 9.20 | 42 | 1,033 | 3,161 | 652 |
| **Total** | **18** | | **164** | **3,886** | **10,675** | **2,749** |

## 3.1. Key assumptions in financial planning

Drafting of the plan is based on key assumptions related to general objectives of the municipality in the WM sector and financial capabilities of the municipality. The main objective of the municipality is overall coverage with WM services, as well as improving services for all categories of users, which is based on the existing situation in the sector, without taking into account new opportunities, such as work of other operators, or the establishment of Public Utility Company in the WM sector.

Key assumptions in financial planning

- "Pastrimi" company is the only licensed and official operator
- Planned investments have been established on the basis of short-term and long-term capital investments to achieve these objectives in the WM sector
- Planned investments are intensive in the first period (2017/2018), as to allow the fast change of the situation in WM
- Financing of planned investments is known
- The overall cost of WM will be reduced as a result of capital investments and modernization of WM sector, which directly impacts the profitability of the sector
- Improved collection of fees for municipal services during the plan period
- The number of users, who are not in WM system for collection of fees for services, will be included in the billing and collection system
- Overall WM service coverage for plan period.

## 3.2. Investments for plan period 2017-2021

**Planned capital investments are based on three categories of investments:**

i Raising public awareness on WM at the local level;

ii Municipal WM sector;

iii Investments-PUC, for purposes of carrying out public utility activities;

iv Reconstruction of existing and purchase of new equipment project -2017;

v Pilot-project for waste separation-recycling (2018);

vi The project of building a separation center (by 2021).

Planned investments for plan period 2017-2021 in the amount of **€ 1.115.050**

*Table 7: Planned investments for period 2017-2021 for main categories*

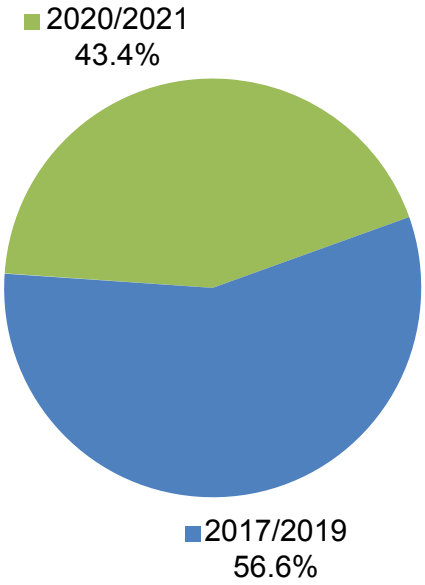
| No. | Category | 2017 | 2018 | 2019 | 2020 | 2021 | Total | Perc. % |
|---|---|---|---|---|---|---|---|---|
| I | Raising public awareness on SP at the local level | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 15,000 | 1.3% |
| II | Municipal WM unit | 1,650 | - | - | - | - | 1,650 | 0.1% |
| III | Investments-PUC, for purposes of carrying out public utility activities | 40,000 | 133,000 | 97,600 | 45,000 | - | 315,600 | 28.3% |
| IV | Reconstruction of existing and purchase of new equipment project | 21,300 | 68,300 | 68,300 | 21,300 | 18,600 | 197,800 | 17.7% |
| V | Pilot-project for waste separation-recycling | - | - | 42,500 | 42,500 | - | 85,000 | 7.6% |
| VI | The project of building a separation center | - | - | 150,000 | 150,000 | 200,000 | 500,000 | 44.8% |
| | **Total: Investments** | **65,950** | **204,300** | **361,400** | **261,800** | **221,600** | **1,115,050** | **100%** |
| | **Percentage %** | **5.9%** | **18.3%** | **32.4%** | **23.5%** | **19.9%** | **100.0%** | |

- **Short-term planned investments for period 2017-2019** in the amount of **€ 631,650.00**, expressed in percentage of total investments amount to 56.6%.
- **Long-term planned investments for period 2020-2021** in the amount of **€ 483,400.00,** expressed in percentage of total investments amount to 43.4%.

*Table 8: Planned investments for periods 2017/2019 and 2020/2021 for main categories of investments*

| No. | Category | 2017/2019 | 2020/2021 | Total | Perc. % |
|---|---|---|---|---|---|
| I | Raising public awareness on SP at the local level | 9,000.00 | 6,000.00 | 15,000 | 1.3% |
| II | Municipal WM sector | 1,650.00 | - | 1,650 | 0.1% |
| III | Investments-PUC, for purposes of carrying out public utility activities | 270,600.00 | 45,000.00 | 315,600 | 28.3% |
| IV | Reconstruction of existing and purchase of new equipment project | 157,900.00 | 39,900.00 | 197,800 | 17.7% |
| V | Pilot-project for waste separation-recycling | 42,500.00 | 42,500.00 | 85,000 | 7.6% |
| VI | The project of building of a separation center | 150,000.00 | 350,000.00 | 500,000 | 44.8% |
| | **Total: Investments** | **631,650** | **483,400** | **1,115,050** | **100%** |
| | ***Percentage %*** | ***56.6%*** | ***43.4%*** | ***100.0%*** | |

**Investment structure for periods 2017-2019 and 2020/2021**




i. Raising public awareness on SP at the local level

| No. | Category | Year | Pieces | Price | Inves. value | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Raising public awareness | 2017 | 1 | 3,000 | 3,000 | 3,000 | - | - | - | - | 3,000 |
| 2 | Raising public awareness | 2018 | 1 | 2,500 | 3,000 | - | 3,000 | - | - | - | 3,000 |
| 3 | Raising public awareness | 2019 | 1 | 2,500 | 3,000 | - | - | 3,000 | - | - | 3,000 |
| 4 | Raising public awareness | 2020 | 1 | 2,500 | 3,000 | - | - | - | 3,000 | - | 3,000 |
| 5 | Raising public awareness | 2021 | 1 | 2,500 | 3,000 | - | - | - | - | 3,000 | 3,000 |
| | Total | | | | 15,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 15,000 |

### ii. Municipal WM unit

| No. | Category | Year | Pieces | Price | Inves. value | 2017 | 2018 | 2019 | 2020 | 2021 | Totali |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | IT - equipment - computers | 2017 | 1 | 500 | 500 | 500 | | | | | 500 |
| 2 | It - equipment - printers | 2017 | 1 | 350 | 350 | 350 | | | | | 350 |
| 3 | Office equipment | 2017 | 1 | 800 | 800 | 800 | | | | | 800 |
| Total: Municipal WM sector | | | | | 1,650 | 1,650 | - | - | - | - | 1,650 |

### iii. Investments - PUC, for purposes of carrying out public utility activities

| No. | Category | Year | Pieces | Price | Inves. value | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Truck | 2017 | 1 | 40,000 | 40,000 | 40,000 | - | - | - | - | 40,000 |
| 2 | Tank truck for cleaning streets | 2018 | 1 | 65,000 | 65,000 | - | 65,000 | - | - | - | 65,000 |
| 3 | Tipper truck | 2018 | 1 | 68,000 | 68,000 | - | 68,000 | - | - | - | 68,000 |
| 4 | Backhoe loader | 2019 | 1 | 70,000 | 70,000 | - | - | 70,000 | - | - | 70,000 |
| 5 | Hearse | 2019 | 1 | 20,000 | 20,000 | - | - | 20,000 | - | - | 20,000 |
| 6 | Procurement of cargo vehicle | 2020 | 1 | 45,000 | 45,000 | - | - | - | 45,000 | - | 45,000 |
| 7 | Procurement of chainsaws 4 pieces | 2019 | 4 | 700 | 2,800 | - | - | 2,800 | - | - | 2,800 |
| 8 | Procurement of lawn mowers | 2019 | 8 | 600 | 4,800 | - | - | 4,800 | - | - | 4,800 |
| | Total | | | | 315,600 | 40,000 | 133,000 | 97,600 | 45,000 | - | 315,600 |

### iv. Repearing of existing and purchase of new equipment project

| No. | Category | Year | Pieces | Price | Inves. value | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Concreting platform for containers | 2017 | 30 | 180 | 5,400 | 5,400 | - | - | - | - | 5,400 |
| 2 | Concreting platform for containers | 2018 | 30 | 180 | 5,400 | - | 5,400 | - | - | - | 5,400 |
| 3 | Concreting platform for containers | 2019 | 30 | 180 | 5,400 | - | - | 5,400 | - | - | 5,400 |
| 4 | Concreting platform for containers | 2020 | 30 | 180 | 5,400 | - | - | - | 5,400 | - | 5,400 |
| 5 | Concreting platform for containers | 2021 | 30 | 180 | 5,400 | - | - | - | - | 5,400 | 5,400 |
| 6 | Bins for households | 2017 | 420 | 28 | 11,760 | 11,760 | - | - | - | - | 11,760 |
| 7 | Bins for households | 2018 | 420 | 28 | 11,760 | - | 11,760 | - | - | - | 11,760 |
| 8 | Bins for households | 2019 | 420 | 28 | 11,760 | - | - | 11,760 | - | - | 11,760 |
| 9 | Bins for households | 2020 | 420 | 28 | 11,760 | - | - | - | 11,760 | - | 11,760 |
| 10 | Bins for households | 2021 | 420 | 28 | 11,760 | - | - | - | - | 11,760 | 11,760 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | New containers for places where missing-2017 | 2017 | 10 | 270 | 2,700 | 2,700 | - | - | - | - | 2,700 |
| 12 | New containers for places where missing -2018 | 2018 | 10 | 270 | 2,700 | - | 2,700 | - | - | - | 2,700 |
| 13 | New containers for places where missing -2019 | 2019 | 10 | 270 | 2,700 | - | - | 2,700 | - | - | 2,700 |
| 14 | New containers for places where missing -2020 | 2020 | 10 | 270 | 2,700 | - | - | - | 2,700 | - | 2,700 |
| 15 | Reparation of existing bins and containers | 2017 | 24 | 60 | 1,440 | 1,440 | - | - | - | - | 1,440 |
| 16 | Reparation of existing bins and containers | 2018 | 24 | 60 | 1,440 | - | 1,440 | - | - | - | 1,440 |
| 17 | Reparation of existing bins and containers | 2019 | 24 | 60 | 1,440 | - | - | 1,440 | - | - | 1,440 |
| 18 | Reparation of existing bins and containers | 2020 | 24 | 60 | 1,440 | - | - | - | 1,440 | - | 1,440 |
| | Reparation of existing bins and containers | 2021 | 24 | 60 | 1,440 | - | - | - | - | 1,440 | 1,440 |
| 19 | Trucks, 8 T | 2018 | 1 | 47,000 | 47,000 | - | 47,000 | - | - | - | 47,000 |
| 20 | Concreting platform for containers | 2019 | 1 | 47,000 | 47,000 | - | - | 47,000 | - | - | 47,000 |
| | **Total** | | | | **197,800** | **21,300** | **68,300** | **68,300** | **21,300** | **18,600** | **197,800** |

v. Pilot-project for waste separation-recycling

| No. | Category | Year | Pieces | Price | Inves. value | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Waste separation-re-cycling -phase 1 | 2019 | 1 | 42,500 | 42,500 | - | - | 42,500 | - | - | 42,500 |
| 2 | Waste separation-re-cycling -phase 2 | 2020 | 1 | 42,500 | 42,500 | - | - | - | 42,500 | - | 42,500 |
| | **Total** | | | | **85,000** | **-** | **-** | **42,500** | **42,500** | **-** | **85,000** |

vi. The project of building a separation center

| No. | Category | Year | Pieces | Price | Inves. value | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Building of a separation center Phase 1 | 2019 | 1 | 150,000 | 150,000 | - | - | 150,000 | - | - | 150,000 |
| 2 | Building of a separation center Phase 2 | 2020 | 1 | 150,000 | 150,000 | - | - | - | 150,000 | - | 150,000 |
| 3 | Building of a separation center Phase 3 | 2021 | 1 | 200,000 | 200,000 | - | - | - | - | 200,000 | 200,000 |
| | **Total** | | | | **500,000** | **-** | **-** | **150,000** | **150,000** | **200,000** | **500,000** |

## 3.3. Sources of funding for planned investments for plan period 2017-2021

Planned investments for period 2017-2019 are based on the need for the fulfillment of planned results for the plan period. Sources of funding for investments are based on three categories:

- The municipality - budget allocated for WM
- Donations / Foreign - through donations and grants from international organizations present in Kosovo
- Donations / Budget - grants and donations from the budget and the competent ministries.

Funding structure is planned on the basis of potential and known sources for capital investments, as well as for the planned actions to improve the situation in WM.

*Table 9: Sources of funding for the main categories of investments - percentage of funding for the investments*

| No. | Category | Municipality | Donations/ Foreign | Donations/ Budget | Total |
|---|---|---|---|---|---|
| I | Raising public awareness on SP at the local level | 15,000 | - | - | 15,000 |
| II | Municipal WM sector | 1,650 | - | - | 1,650 |
| III | Investments-PUC, for purposes of public utility activities | - | 157,800 | 157,800 | 315,600 |
| IV | Reconstruction of existing and purchase of new equipment project | 59,340 | 79,120 | 59,340 | 197,800 |
| V | Pilot-project for the separation-recycling of waste | 25,500 | 34,000 | 25,500 | 85,000 |
| VI | Project of building of a separation center | 150,000 | 200,000 | 150,000 | 500,000 |
| | **Total** | **251,490** | **470,920** | **392,640** | **1,115,050** |
| | **Perc. %** | **22.6%** | **42.2%** | **35.2%** | **100.0%** |

*Table 10: Financial flow of investments for plan period 2017-2021 for three categories of sources of funding*

| Category | 2017 | 2018 | 2019 | 2020 | 2021 | Total | Perc % |
|---|---|---|---|---|---|---|---|
| Municipality | 11,040 | 23,490 | 81,240 | 67,140 | 68,580 | 251,490 | 22.6% |
| Donations/Foreign | 28,520 | 93,820 | 153,120 | 108,020 | 87,440 | 470,920 | 42.2% |
| Donations/Budget | 26,390 | 86,990 | 127,040 | 86,640 | 65,580 | 392,640 | 35.2% |
| **Total** | **65,950** | **204,300** | **361,400** | **261,800** | **221,600** | **1,115,050** | **100.0%** |

**Sources of funding for main categories of investments - for period 2017-2021**

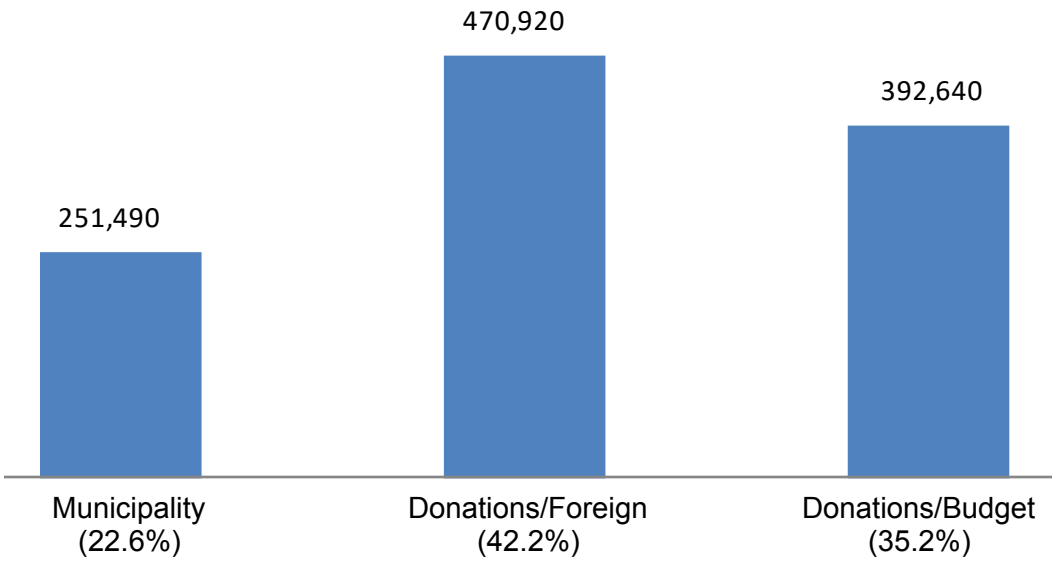
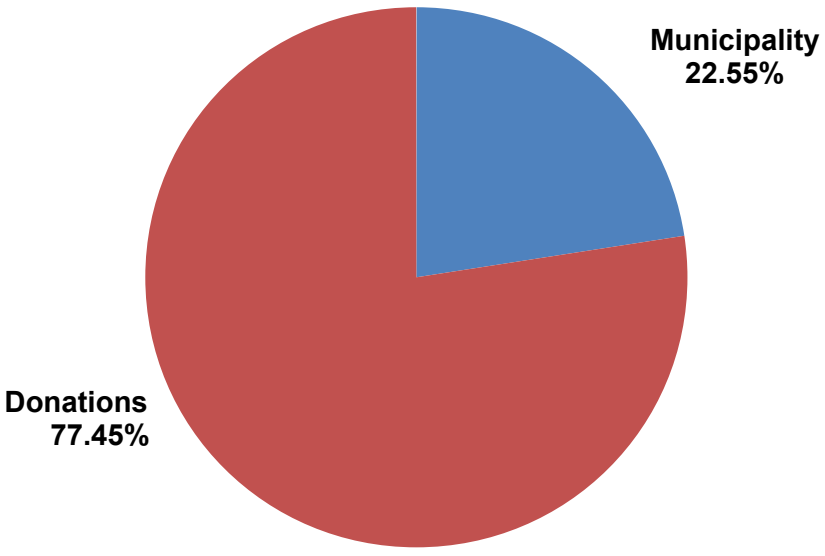



*Table 11: Financial flow of investments for plan period 2017-2021, sources of funding, Municipality/Donations*

| Category | 2017 | 2018 | 2019 | 2020 | 2021 | Total | Perc % |
|---|---|---|---|---|---|---|---|
| Municipality | 11,040 | 23,490 | 81,240 | 67,140 | 68,580 | 251,490 | 22.6% |
| Donations | 54,910 | 180,810 | 280,160 | 194,660 | 153,020 | 863,560 | 77.4% |
| **Total** | **65,950** | **204,300** | **361,400** | **261,800** | **221,600** | **1,115,050** | **100.0%** |

**Source of funding Municipality/Donations**



## 3.4. The mechanism of collection

Current collection of fees for provided utility services is very low and amounts to only 20%. Bearing that in mind, it is necessary to improve the mechanism of the collection of fees for utility services.

In order to increase the fee collection rate the plan is to introduce, beside collectors on the field, a counter which will be located in the building of the municipality of Gračanica/Graçanicë. Also for the same purpose, municipality is planning to take over the fee collection which will then lead municipality to issue a special regulation according to which the clients will have to pay for utilities to obtain certain documents issued by municipalities.

## 3.5. Planned revenues from fee collection

There is a total of 5100 households in the territory of municipality of Gračanica/Graçanicë that currently use the services of regional company “Pastrimi”, as well as other operators who provide services without the consent of the municipality. However, the current collection rate is very low and amounts to only 20%. By improving the quality of service and improving the mechanism of collection, we expect a much higher rate of collection, and therefore the greater inflow of funds.

Municipality  estimates that if the collection of fees for utility services for households will increase to 80%that would mean that out of 5100 households, 3200 would be paying utility services. Therefore, revenue from households would amount €16.000.

On the territory of the municipality of Gračanica/Graçanicë, there are about 500 registered, active business entities. We estimate that the collection rate for legal entities will be 90%. This means that the total inflow of funds from this side will be around €7,000.

# 4. STRATEGICAL ENVIRONMENTAL ASSESSMENT

Strategic Environmental Assessment (SEA) is a systematic process for assessing consequences of the proposed policy, the initiative of a plan or program in order to ensure that they are fully engaged and appropriately treated at the earliest stage appropriate for decision-making, at the same level as economic and social issues.[5]

The main objective of SEA is to provide a high level of environmental protection and to contribute to the promotion of sustainable development. SEA aims to improve a plan or a program, by proposing objectives or new strategies, as well as by considering the proposed strategy and suggesting those that might be the best in terms of environmental protection and minimizing and preventing impact and risks to the environment. SEA as a process should start in the early stages of the process of preparation of the plan and should be developed in parallel with the plan and to be fully integrated into it.

The basic principles on which SEA is based are:

- **The principle of sustainable development -** which means reviewing and includes all the essential aspects of the environment for preparing and approving certain plans and programs and with confirmation of the conditions for the preservation of material goods, cultural and natural assets, space, biodiversity, wild species of plants and animals and authentic ecosystems, i.e. rational use of natural resources, contributes to sustainable development.
- **The principle of integrity -** which requires the implementation of policies on environmental protection, is achieved through plans and programs based on the inclusion of the requirements of environmental protection, i.e. preservation and sustainable use of natural resources and biodiversity in the intersectional plans and programs.
- **Protection principle -** which means that each activity should be carried out in such a way to, prior to adoption, prevent or reduce the negative impacts of certain plans and programs on the environment and to ensure the rational use of natural resources and reduce the risk to human health and material goods.
- **The principle of hierarchy and coordination -** by which the assessment of plans and programs which are implemented at the central level and plans and programs that are adopted at the central and local level is carried out and level of transparency of SEA process, plans and programs is increased in decision-making and mutual coordination of competent bodies and organizations in the process of granting consent for SEA, through consultation or publication and opinions given on those plans and programs.
- **The principle of public information**, which is implemented in order to inform the public about plans or special programs and their potential impact on the environment in order to provide full transparency of the preparation, adoption and approval of plans and programs, before decision making, and after approval of the plan or program the public certainly must have access to information related to these plans or programs and their modifications.

5 Sadler and Verheem, 1996

In Kosovo SEA is regulated by Law on Strategic Environmental Assessment (Law No. 03/230), which determines the conditions, form and procedures for the implementation of the SEA. This law is in conformity with the requirements of the EU Directive on Strategic Environmental Assessment (Directive on Strategic Environmental Assessment 2001/42 /EC).

Law on Strategic Environmental Assessment states that the procedure of SEA is composed of:

- Preparation of SEA report with regard to the significant impact of the draft plan or program (PP) if that plan/program after scanning, according to the criteria established by law, has a negative impact on the environment;
- Consultation of the relevant authorities, as well as the general public, on the draft plan or program and the accompanying SEA report;
- Review of the report on SEA and the results of consultation in decision-making;
- Communication of the results of SEA and including of the results in the plan or the relevant program. In accordance with the Law No. 03/230, in particular Article 3, SEA is mandatory for plans and programs as follows:
  - Plans and programs prepared for purposes of spatial planning, city planning, land use, agriculture, forestry, fisheries, hunting, energy, industry, mining, traffic, waste management, water management, telecommunications, tourism, which represent a framework for future development projects, which undergo SEA, according to the Law on SEA;
  - On the other hand, realizing the purpose that this plan aims to achieve, it can be concluded that in municipality of Gračanica/Graçanicë SEA report for the Waste Management Plan (WMP) is not prepared and that is in accordance with the said Article. Point 2 of this article highlights that "... **SEA report is mandatory for plans in the field of waste management...";** But, in the second part of that paragraph it is further stated**" ... which provide a framework for future development projects, which undergo environmental impact assessment, according to the law..."**

**While Article 5 reads:**

**Article 5 Determination of need for SEA**

- The responsible authority shall determine, in a case-by-case examination, in accordance with the criteria from Annex I, whether the plans or programs referred to in Article 3, paragraphs 3 and 4 of this law, are likely to have significant environmental impact and therefore is required to be subject of SEA.

The working group for the preparation of the WMP, referring to the above provisions, has reviewed the WMP by comparing the criteria set out in Annex 1 of Law on SEA, and found that a WMP is not expected to have a large impact on the environment, and as such is not subject to the procedure of SEA.

**Waste Management Plan includes:**

- Procurement of equipment for waste management;
- Building ofgarage;
- Public awareness;
- Waste separation;
- Functionalization of the landfill for construction waste;
- Functionalization of the Municipal public enterprise.

**Waste Management Plan does not include:**

- Projects and major construction interventions that affect the environment
- Construction of landfills
- Construction of supporting infrastructure, such as waste transfer stations and waste treatment plants
- Other projects, which according to the law, will require environmental impact assessment

**COMPARATIVE ANALYSIS ACCORDING TO THE CRITERIA FROM THE APPENDIX 1 LAW ON SEA NO. 03 / L-230, AND ACTIVITIES OF SP OF THE MUNICIPALITY OF GRAÇANICË/ GRAČANICA**

| Assessment criteria as set out in Appendix 1 of the Law on SEA | Effects of Local Waste Management Plan (LWMP), municipality of Gračanica/Graçanicë |
|---|---|
| **1. The characteristics of plans and programs, having regard, in particular, to:** | |
| 1.1. degree to which the plan or program sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or certain resources | WMP does not foresee development projects (infrastructure, supporting facilities for waste treatment), which will be the subject of EIA in accordance with the law. The main objectives will be much greater coverage of the territory with services of municipal waste collection. |
| 1.2. degree to which the plan or program influences other plans and programs included in the hierarchy | his plan is in line with the municipal development plan, for which SEA was also carried out, but does not affect other existing plans, whether municipal or national |
| 1.3. linking the plan or program for the integration of environmental considerations, in particular with a view to promoting sustainable development | In general, the plan is in accordance with the principles of sustainable development, proposed measures to cover the widest possible range of users, increasing the quality of services, but also the promotion of waste separation at the source. |
| 1.4. environmental problems linked to the plan or program | In the objectives set in the framework of the LWMP for the municipality of Gračanica/Graçanicë no potential environmental problems are observed that may arise as a result of the implementation of the above objectives. |

| | |
|---|---|
| 5. compatibility of the plan or program for the implementation of European Community legislation on the environment (e.g. plans and programs regarding waste management or water protection). | It should be noted that the plan should be in accordance with the laws, whether in any area of environment or those on local government, and the aim is to promote sustainable development, improve the quality of life and the environment, etc.<br><br>Among other, it should be noted that this plan and all the objectives contained in this plan are in accordance with the Municipal Development Plan, which underwent the process of SEA. |
| **2. Characteristics of the effects and areas likely to be affected, having regard, in particular, to:;** | |
| 2.1. probability, duration, frequency and nature of the effects | WMP covers a 5 year period (2016-2021). During these years, positive growth of effects is expected. (See section 1.3) |
| 2.2. cumulative nature of the effects | In the context of cumulative effects, the plan does not foresee that it could lead to consequences for the environment. On the contrary, by increasing the coverage of waste collection, waste disposal without control (illegal) will be the reduced, which directly contributes to the establishment of environmental quality in the municipality. |
| 2.3. trans-boundary nature of the effects | There will be no adverse trans-boundary effects. |
| 2.4. the risks to human health and the environment (e.g. due to an accident) | Local waste management plan is of local character. Positive effects are expected, which will be direct. |
| 2.5. degree and spatial range of the effects (geographical area and size of the population likely to be affected) | The positive effects of the plan on the environment by the end of 2021 will affect 100% of the territory, and 5100 households of the municipality of Gračanica/Graçanicë. |
| 2.6. value and vulnerability of the area likely to be affected as a result of: | |
| 2.6.1. special natural or cultural heritage characteristics | WMP does not foresee physical interference, construction of facilities, infrastructure, deforestation, occupation of land, excavations, etc. there will no damage/degradation of areas of natural or cultural heritage. |
| 2.6.2. excessive environmental standards and limit values | WMP does not include projects that will result in emissions, whether in the air or water, which will be subject to consideration in the context of excessive standards or limit values. |
| 2.6.3. intensive land-use | WMP does not foresee occupation or land use, all actions towards the objectives will be carried out within the existing situation. |
| 2.7. effects on areas or surfaces which have a recognized national, communal or international protection status | The municipality of Gračanica/Graçanicë covers the central part of Kosovo, bordering in the north with the municipality of Priština/Prishtinë, in the south with the municipality of Lipljan/Lipjan and the west with the municipality of Kosovo Polje/Fushë Kosovë. Municipality extends to the eastern edge of the Kosovo basin, where branches of the Valetina are slightly elevated and somewhat steeper branches of Staževac on the river Gračanka and in the west to Sitnica. |

# 5. RAISING PUBLIC AWARENESS

All stakeholders should have clear WMP objectives. Awareness is raised by creating a strong identity of the plan and by consistently and uniformly communicating it. Support from the public sector is essential for the community, in order to identify why it is important to change behavior towards waste management and thus accept the need for waste disposal as it should be, meaning to recognize that the community itself is a part of the chain in the management of municipal waste. The next section explains public awareness for the implementation of the WMP for the municipality of Gračanica/ Graçanicë.

## 5.1. Public Awareness and Information Strategy

Awareness raising strategy will be a special strategy, which will enable the implementation of WMP, include many stakeholders, and it is important for this strategy to be in compliance with national policies and as such, it could have 4 points:

- Purpose - main goals/objectives according to the legislation in force
- Key issues – focus on key local issues
- Strategies and implementation - oriented messages for the general public, means of communication and techniques for achieving these objectives
- Transfer of messages – that will include development of the key messages, awareness raising and education of the parties involved.

Public awareness raising campaign will create a basis, considering the objectives of the plan that will be achieved, and for example may include:

a. Explanation of new roads and the essence of the coverage of territory with services of waste management;

b. Increase of public participation in recycling activities, and as stated in the document, launch initiatives for waste separation at the source;

c. Further improvement of waste management infrastructure.

### Objectives

The context for this communication strategy will be decided on several levels which are interconnected:

- EU policy

As it is known, EU policies on waste management provide specific objectives to be achieved by every country that aspires to be a member and that must be met.

- Among other, these include directives on landfills, directives on waste management, measures to be taken at the local level of waste management, etc. These objectives listed in the directive are often challenging and require the change in the approach, and a more frequent interactive public participation is required.

- National Waste Management Policy

In Kosovo, there is a Law on Waste Management, Waste Management Strategy and Plan of the Republic of Kosovo, which as documents can serve as a good guide and support the further implementation of the WMP by municipalities. Soon, another study on waste will be prepared, which will be supported by GIZ and implemented with the support of MESP.

Achieving these objectives requires more active cooperation of stakeholders across the region. All stakeholders should be able to identify why this change to its existing approach in terms of waste management needs to happen.

Some of the proposals for a more direct approach to the public, for example, transfer of messages, may be :

- Environmental education in municipal schools through the establishment of environmental clubs;
- Organize a study tour of the landfills, to see up close management and importance of reduction of the waste compared to the occupied green spaces;
- Competition of schools in painting on the topic of waste;
- Competition among schools in building/designing from recycled waste;
- Awards for private companies for their achievements and contribution to the improvement of waste management in the municipality;
- Composting at home (possibility of obtaining a composter through grant);
- Promotion of recycling in schools;
- Organization of annual events, concert/half-marathon against waste;

All these proposals, if implemented, will contribute to raising public awareness, starting from elementary school students who will pass it to their homes, and this strategy of public awareness is normally prepared in accordance with the WMP - and it would also help in:

- Reducing the amount of produced waste
- Raising awareness on waste separation at the source

## Key issues

Regarding key issues, there are four main areas in the strategy of public information and raising awareness in the municipality of Gračanica/Graçanicë and they are as follows: the task is urgent - the campaign will determine the quantitative scope of the task at the local level and make a connection between it and the need for everyone to participate in local initiatives that are organized in the municipality of Gračanica/Graçanicë.

The municipality is ready - the campaign will clearly show that the municipal authorities are prepared to overcome this challenge.

With slogan like “This is what we should/can do” - clear and simple messages will be transmitted to stakeholders on when (households, schools, businesses and agriculture, community leaders, etc) they can help in achieving the objectives in relation to simple daily tasks. This would include clear messages on prevention and waste minimization that will be associated with events “race/concert against waste”

## Strategy and implementation

The strategy will include a set of interrelated elements, some temporary, and some permanent. Temporary aspects will be primarily related to raising awareness, while those permanent to the aspect of education.

## Transfer of messages

The main campaign will cover four broad phases:

- **Development** - identification of the key messages and images and communication development (tools and materials). A flexible approach is required in the implementation of the campaign for communication and education because the situation on the ground can vary depending on issues arising.
- **Awareness** needs to be high profile, with wide influence in order for actors to get involved and work with enthusiasm actors, especially stakeholders
- **Education** - the above program that constantly reiterates so as to maintain the issue of waste in people's memory, and at the same time offers advice and information on what to do and how to participate; continuous information will help maintain awareness.
- **Assessment** - at the time the plan is implemented, measurements should be carried out in order to identify where necessary messages can be repeated, and also where is success observed, and make a record of it, which would help in maintaining motivation.

# 6. THE ACTION PLAN

## 6.1. Clarifying the responsibilities of citizens, businesses and local government

The municipality of Gračanica/Graçanicë, on one hand, is responsible for waste management and maintenance system within its borders, and on the other hand, the residents and economic entities have to take an active role, as already mentioned in the chapter „awareness“, and together they must build an appropriate waste management system, taking ownership over the responsibilities, individually and jointly:

### Residents

Residents are required to pay the fee within a period specified by the municipality of Gračanica/ Graçanicë.

### Respecting the rules of disposal

One of the main rules of functioning of the waste management plan is above all is for citizens to respect and not ignore certain methods of waste disposal. Residents who live in parts of the settlement where separation of waste is enabled (cardboard, plastic, metal, etc.), should treat secondary raw materials properly and in accordance with the instructions of the municipality.

### Active cooperation within the plan

Residents actively cooperate on measures for the implementation of a waste management plan. In most cases, municipality is maximally engaged in combating pollution, but it is impossible to achieve this in all cases, so it expects its citizens to cooperate, in order to ensure cleaner environment and reduce pollution.

### Businesses

#### Polluter pays

Businesses need to pay fees within the deadline set by the municipality; individuals should conclude contracts for collection and transport with service providers, licensed by the Ministry of Environment and Spatial Planning.

Polluter pays a fee for environmental pollution when their activities cause or may cause pollution of the environment, or if he produces, uses or places raw materials, semi-finished product or a product containing materials harmful to the environment on the market.

Polluter, in accordance with regulations, shall bear the total costs of measures for prevention and reduction of pollution, which includes costs of risk to the environment and costs of eliminating environmental damage.

## Local governments

### Proper waste disposal

The municipality is making efforts to create collection and transport services, with respect to efficiency, environmental and hygiene. The municipality is trying to reduce waste through 3R activities with residents and businesses.

### Implementation

DPS is responsible for implementing the plan. In accordance with the Law on Waste, the Municipality updates the Regulation on Waste Management, where, after taking over the collection of waste charges, it should also review the fees and ultimately to provide mechanisms for improving the collection, including the conditioning the provision of certain utility services with payment of waste fees.

DPS reports on the implementation of this LWMP to the Municipal Assembly each year, based on the Annual Plan of the Municipal Assembly. The DPS also reports to the Public Service Commission at least once a year, or at the request of the Commission.

*In addition, the Inspection Department, in cooperation with law enforcement agencies, will undertake measures to implement the provisions of the Administrative Instruction on Mandatory Penalties, as well as other relevant legislation for the prevention and punishment of violations that are mainly related to the illegal disposal of waste.*

## 6.2. Review of the Implementation Plan 2016-2021

| No | Measures | Investment objective | Leading agency activity | Time period (quarter-Q) | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | O1 M1 | Completion of LWMP | Working group / DEMOS | Q4 2016 | | | | | | |
| 2 | O1 M2 | Public discussion | Working group / DEMOS | Q4 2016 | | | | | | |
| 3 | O1 M3 | Approval of the Municipal Assembly | Working group | Q4 2016 | | | | | | |
| 4 | O1 M4 | Updating of LWMP | Working group | Q2 2018 | | | | | | |
| 5 | O2 M1 | The municipality prepares an internal regulation on functionalization of the company that deals with cleaning/ greening areas and cemeteries by zones, especially cleaning services, which determine the duties and rights of staff | Municipality | Q1 2017 | | | | | | |
| 6 | O2 M2 | Establishing and strengthening the waste management sector | Municipality | Q2 2017 | | | | | | |
| 7 | O2 M3 | Improving collection services provided by existing companies in the transitional period. The provision of waste collection services by private, RWMC operators or establishment of a public utility company | Municipality / WM Operators / Private sector/ NGOs/Residents | 2017-2021 | | | | | | |
| 8 | O3 M1 | Reducing illegal landfills and transform one of their part into areas suitable for the residents | Municipality / WM Operators / Private sector/ NGOs/Residents | 2017-2021 | | | | | | |
| 9 | O3 M2 | Gradual increasing of the involvement of residents in the waste management system | / WM Operators / Private sector/NGOs/ Residents /Education system Municipality | 2017-2021 | | | | | | |
| 10 | O3 M3 | Determining the tariff | Municipality | 2017 | | | | | | |
| 11 | O3 M4 | Increasing fees for waste collection | Municipality | 2017-2021 | | | | | | |
| 12 | O3 M5 | Creating a central database and information on the state of waste management | Municipality | 2016-2017 | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 13 | O4 M1 | Ensure the purchase of necessary machinery for waste collection | Municipality / WM company | 2017-2021 | | | | | | |
| 14 | O4 M2 | Investments -PUC performance of utility activities | Municipality | 2017-2020 | | | | | | |
| 15 | O4 M3 | The project of building of a separation center | Municipality | 2019-2021 | | | | | | |
| 15 | O4 M4 | Raising public awareness | Municipality / WM Operators / Private sector/ NGOs/Residents / Municipality Education system | 2016-2021 | | | | | | |
| 16 | O4 M5 | Start with waste separation and recycling, pilot projects | Municipality / WM company | 2019-2020 | | | | | | |
| 17 | O4 M6 | Determining the location and obtaining licenses for disposal of construction waste | Municipality | Q2 2017 | | | | | | |
| 18 | O4 M7 | Activating landfills for construction waste | Municipality | Q3,4 2017 | | | | | | |

# 7. MONITORING AND REVIEW

Within the function as a “client”, the municipality of Gračanica/Graçanicë should ensure that the services are offered according to necessary standards, that they meet the expectations of citizens and that they are consistent with the principles of environmental protection. The implementation of control function will require monitoring and control of quality and quantity of services, contracts or other agreements, and guarantee the fulfillment of the standards and conditions by operators and measures provided by this plan. On the other hand, monitoring of services and other waste activities will enable the municipality of Gračanica/Graçanicë to recognize the costs, human resources and usability of equipment, to adjust and improve the system according to real needs and to achieve continuous progress (in terms of quality and efficiency), as well as to plan the necessary equipment for organization of waste disposal services and activities in the future. It is important to monitor the progress and effectiveness of the measures taken.

Monitoring of implementation can be considered as inclusion of four elements:

- Efficiency of implementation – monitoring of performance
- Efficiency of these actions - monitoring of cohesiveness
- Identification of new needs – response to changes
- Review of the Action plan.

Only the analysis of specified elements will enable finding the right way.

For the implementation of Local Waste Management Plan (LWMP), local authorities need the support of regional authorities, as well as central institutions, including the Ministry of Environment and Spatial Planning, Ministry of Economic Development, Environmental Protection Agency, the Forest Agency, and various non-governmental organizations.

General coordinator for the implementation of LWMP will be DFS - Waste management sector (WMS), which currently does not exist, but is recommended to be established as soon as possible. At the same time, waste management sector will be the main body that will monitor the implementation of the results of this LWMP referring only to waste management in the municipality of Gračanica/Graçanicë.

One team (the Working Group for Environment - WGE), as part of the Waste Management Department, will be responsible for monitoring the process. WGE, which acts within the Directorate for Inspection Affairs, which begins to work immediately and at the Directorate of Public Service, at the start of the implementation of this LWMP. People responsible for this task should have the official authority and knowledge to perform the functions of monitoring on the field. Also, there must be a sufficient number of people to ensure that all monitoring indicators were measured, that data were processed and, lastly, the conclusions achieved.

One of the most important tasks of the Waste Management Department will be to draft a monitoring plan, which must be in accordance with the following indicators:

1. Which indicators will be monitored?
2. How will monitor these indicators?
3. When and how often will these indicators be monitored?
4. Who is responsible for monitoring specific indicators?
5. Who is the person responsible for data analysis?
6. When will the monitoring of these specific indicators start?
7. What are the basic (initial) data for each of the indicators that will be monitored?
8. What will be the cost of monitoring?

Monitoring will be carried out using a set of indicators. One major group that will be registered as permanent includes the following types of indicators:

- indicators of environmental infrastructure
- financial indicators
- administrative indicators (no. of regulations, penalties, reports, etc.)

In order to facilitate the monitoring process related to this LWMP, the following table shows clear indicators to be considered for measurement, such as: indicators of success, targeted results to be achieved, the competent authorities and expected impact.

## 7.1. Defining performance indicators and sources of verification

| Objectives | Activities | Competent authority | Indicators of success | Impact /Effects |
|---|---|---|---|---|
| Waste management planning | Submitting LWMP to the municipality for adoption<br>Reviewing and updating LWMP in accordance with the updated operational plan, including monitoring plan | The municipality of Gračanica/Graçanicë<br>The Directorate of Public Services<br>Waste management sector | Approval of LWMP by the Assembly | Start of implementation of LWMP<br>Improvement of WM services and cleaner environment |
| Increase of the percentage of collection of fees for waste collection | Identification of households which never pay a collection fee for waste collection and households which do not pay this collection fee regularly and make the information acquired public Impose fines and set binding measures for households which do not pay the collection fee and raise awareness of households which do not pay for waste collection services | Waste management sector<br>Residents<br>NGOs<br>Inspection Directorate and the Working Group for the Environment | Number of press releases<br>Number of fines for households which do not pay the collection fee | Increase of transparency<br>The increase of revenues from WM fee collection and increase of citizens' awareness |
| Creation of a special Waste Management Department in the municipality of Gračanica/Graçanicë | The creation of the WM Department within the organizational structure of municipality of Gračanica/Graçanicë and staffing offices of the Directorate (at least 3 employees should be admitted) | The Directorate of Public Services | Waste management sector, present in the organizational chart of the municipality of Gračanica/Graçanicë and completely functional number of staff | Update confidential data<br>Better WM services.<br>More opportunities for attracting respective investments. |
| Include recycling companies | Recycling companies advertise in printed and electronic media. (Advertisement should be focused on the benefits of recycling for the environment and society)<br>Signing of the Memorandum of Understanding between recycling companies/ central institutions for waste separation at the source in all offices of state administration | Recycling companies<br>Recycling companies<br>The municipality of Gračanica/Graçanicë State institutions | Number of advertisements<br>Number of publications in the media<br>Number of signed Memorandum of understanding | Increased public awareness regarding recycling.<br>Increasing the amount of recyclable material<br>Reduction of the amount of waste which goes to the landfill.<br>Employment growth in the recycling industry |
| Establishment of the PUC | Application and approval of the Ministry of Economic Development (MED) | The municipality of Gračanica/Graçanicë | The establishment and commencement of work of PUC | Improvement of services<br>Increase of efficiency of Waste Management<br>Reduction of illegal landfills on the territory of the municipality |
| The project of building a separation center | Application and approval of the Ministry of Environment and Spatial Planning (MESP) | The municipality of Gračanica/Graçanicë | Establishment and commencement of | Improvement of the Waste Management sector<br>Job creation<br>Reduced amount of waste on landfills<br>Reduction of illegal landfills on the territory of the municipality |
| Public awareness | Conducting activities according to the list in the chapter on public awareness | The municipality of Gračanica/Graçanicë, clubs for environmental protection in schools, businesses and residents | The number of organized activities | Public awareness, creating habits for better waste management. Assistance in the implementation of LWMP<br>Cleaner town |

# Annex I: General characteristics of the Municipality of Gračanica/Graçanicë

*Table 12: Number of residents and households (Urban and Periphery)*

| Category | Number of residents | In % | Number of households | In % |
|---|---|---|---|---|
| Urban | 3,309 | 31% | 1,172 | 30.2% |
| Periphery | 4,346 | 41% | 1,599 | 41.1% |
| Rural | 2,128 | 20% | 772 | 19.9% |
| Rural-distant | 892 | 8% | 343 | 8.8% |
| **Total** | **10,675** | **100%** | **3,886** | **100.0%** |

*Table 13: Table of distribution of the population based on distance and location*

| Category | 0-3 km | 3-6 km | 6-9 km | 9-12 km | 12-40 km | Total | No % |
|---|---|---|---|---|---|---|---|
| Urban | 2,686 | 623 | - | - | - | 3,309 | 31.0% |
| Periphery | 723 | 1,362 | 1,468 | - | 793 | 4,346 | 40.7% |
| Rural | - | 278 | - | 1,850 | - | 2,128 | 19.9% |
| Rural-distant | - | 892 | - | - | - | 892 | 8.4% |
| **Total** | **3,409** | **3,155** | **1,468** | **1,850** | **793** | **10,675** | **100.0%** |
| No % | 31.9% | 29.6% | 13.8% | 17.3% | 7.4% | 100.0% | |

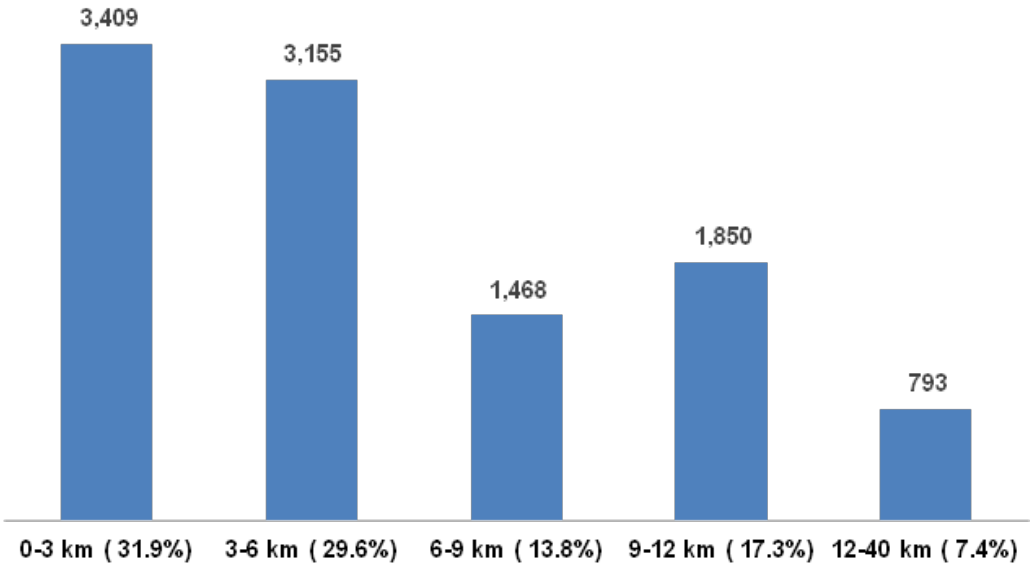



*Chart 1: Graphical representation of the population based on the distance*

*Table 14: Table of distribution of households based on the distance and location*

| Category | 0-3 | 3-6 | 6-9 | 9-12 | 12-40 | Total |
|---|---|---|---|---|---|---|
| Urban | 915 | 257 | - | - | - | 1,172 |
| Periphery | 571 | 465 | 449 | - | 114 | 1,599 |
| Rural | - | 83 | - | 689 | - | 772 |
| Rural-distant | - | 343 | - | - | - | 343 |
| **Total** | **1,486** | **1,148** | **449** | **689** | **114** | **3,886** |
| No % | 38.2% | 29.5% | 11.6% | 17.7% | 2.9% | 100.0% |

*Table 15: Table of distribution of locations based on distance- number of locations*

| Category | 0-3 | 3-6 | 6-9 | 9-12 | 12-40 | Total |
|---|---|---|---|---|---|---|
| Urban | 1 | 1 | - | - | - | 2 |
| Periphery | 1 | 3 | 4 | - | 2 | 10 |
| Rural | - | 1 | - | 3 | - | 4 |
| Rural-distant | - | 1 | - | - | - | 1 |
| **Total** | **2** | **6** | **4** | **3** | **2** | **17** |

*Table 16: Table of distribution of areas in km2 based on the distance*

| Category | 0-3 | 3-6 | 6-9 | 9-12 | 12-40 | Total |
|---|---|---|---|---|---|---|
| Urban | 10 | 10 | - | - | - | 20 |
| Periphery | 11 | 27 | 68 | - | 18 | 125 |
| Rural | - | 6 | - | 13 | - | 19 |
| Rural-distant | - | 5 | - | - | - | 5 |
| **Total** | **22** | **48** | **68** | **13** | **18** | **170** |
| No % | 12.7% | 28.5% | 40.3% | 7.7% | 10.8% | 100.0% |

*Table 17: Zoning of the territory with the aim of providing waste collection services*

| Zone | No. of locations | Area in km² | Waste gen. | Number of residents | Number of households |
|---|---|---|---|---|---|
| Zone 1 | 5 | 83 | 1,544 | 5,531 | 2,024 |
| Zone 2 | 4 | 38 | 552 | 1,983 | 829 |
| Zone 3 | 7 | 42 | 652 | 3,161 | 1,033 |
| **Total** | **16** | **164** | **2,749** | **10,675** | **3,886** |

*Table 18: General characteristics of Zone 1*

| No. | Zone | Category | Zone | Distance KM | Range/dist. | Number of population | Number of households | Waste gen. |
|---|---|---|---|---|---|---|---|---|
| 1 | Kišnica/Kishnicë-Badovac/ Badoc | Periphery | Zone 1 | 8.7 | 6-9 | 715 | 122 | 183 |
| 2 | Čaglavica/Çagllavicë | Periphery | Zone 1 | 1.0 | 0-3 | 723 | 571 | 185 |
| 3 | Gračanica/Graçanicë | Urban | Zone 1 | 1.0 | 0-3 | 2,686 | 915 | 882 |
| 4 | Laplje Selo/ Llapllasellë | Rural-distant | Zone 1 | 4.0 | 3-6 | 892 | 343 | 163 |
| 5 | Sušica/Sushicë | Periphery | Zone 1 | 25.5 | 12-40 | 515 | 73 | 132 |
| | Ukupno | | | | | 5,531 | 2,024 | 1,544 |

*Table 19: General characteristics of Zone 2*

| No. | Zone | Category | Zone | Distance KM | Range / dist. | Number of residents | Number of households | Waste gen. |
|---|---|---|---|---|---|---|---|---|
| 1 | Dobrotin/Dobratin | Urban | Zone 2 | 6 | 3-6 | 623 | 257 | 205 |
| 2 | Gornja Gušterica/ Gushtericë e Epërme | Periphery | Zone 2 | 4 | 3-6 | 393 | 133 | 100 |
| 3 | Donja Gušterica/ Gushtericë e Ulët | Periphery | Zone 2 | 4 | 3-6 | 723 | 280 | 185 |
| 4 | Livadje/Livagjë | Periphery | Zone 2 | 8 | 6-9 | 244 | 159 | 62 |
| | Total | | | | | 1,983 | 829 | 552 |

*Table 20: General characteristics of Zone 3*

| No. | Zone | Category | Zone | Distance KM | Range /dist. | Number of residents | Number of households | Waste gen. |
|---|---|---|---|---|---|---|---|---|
| 1 | Batuse/Batushë | Periphery | Zone 3 | 15 | 12-40 | 278 | 41 | 71 |
| 2 | Lepina/Lepi | Periphery | Zone 3 | 6 | 3-6 | 278 | 83 | 51 |
| 3 | Preoce/Preoc | Periphery | Zone 3 | 8 | 6-9 | 509 | 168 | 130 |
| 4 | Radevo/Radevë | Periphery | Zone 3 | 5.5 | 3-6 | 246 | 52 | 63 |
| 5 | Skulanevo/Skullan | Rural | Zone 3 | 11 | 9-12 | 194 | 160 | 35 |
| 6 | Suvi Do/Suhadoll | Rural | Zone 3 | 9.2 | 9-12 | 470 | 176 | 86 |
| 7 | Ugljare/Uglar | Rural | Zone 3 | 9.7 | 9-12 | 1,186 | 353 | 216 |
| | | | | | | 3,161 | | |

# Annex II: DPS Reporting Sample

**Municipality of Graçanicës/Gračanica**
**Directorate of Public Services**

**Report on Implementation of the Local Waste Management Plan**

This annual report is based on the data from the Local Waste Management Plan 2017-2022, as well as on the field data.

This report is compiled by the Directorate of Public Services and its purpose is to inform about the fulfillment of the objectives in accordance with the above mentioned plan and.

**According to the plan, the following actions were planned in 2017:**

1) xxx

It is foreseen xxx. Municipality implemented xxx

2) xxx

It is foreseen xxx. Municipality implemented xxx

3) xxx

It is foreseen xxx. Municipality implemented xxx

In addition, in the past year the following was also implemented xxx.
(Additional information – some actions were implemented in cooperation with the Direction for Inspection):

In cooperation with the Directorate for Inspection and Law Enforcement Agencies, measures have been taken to implement the provisions of the Administrative Instruction on Mandatory Fines, as well as other relevant regulations for the prevention and punishment of offenses that relate mainly to the illegal disposal of waste.

In the past year, we have implemented the following activities in order to ensure better implementation of the plan.

- number of inspections,
- number of fines
- citizens' satifaction (if the survey was conducted),
- number of citizen's complaints (if there are data), etc. If there are data for two years, it would be possible to compare them

Table of measurement indicators for the waste management sector in the municipality;

| Area | Objective | Indicator | Basis | Purpose |
|---|---|---|---|---|
| Waste collection | Waste collection and management for all residents of the municipality | % waste collection | | |
| | | % coverage | | |
| | | % new clients registered in the system | | |
| Invoicing and collection of fees | Raising financial performance in the WM sector | % collection of fees | | |
| | | % payment of old debts | | |
| | | % coverage of the WM expenses from income | | |
| Raising public awareness | Raising awareness among citizens | No. of performed activities | | |
| | | % budget allocated for this purpose | | |
| | | Number of the citizens complaints | | |
| Inspections | Inspections as a means to achieve the perfectness of the WM system | No. of inspections of the municipal inspection | | |
| | | NO. of the inspections of the company by their staff | | |
| | | No. of imposed fines | | |
| Waste disposal | Proper disposal of waste helps to prevent the creation of new illegal landfills and reduce the negative impact on the environment. | Quantity of disposed waste | | |
| | | Elimination of illegal landfills | | |
| | | Quantity of solid disposed waste at the solid waste landfill | | |

Mainly, the actions undertaken affected the xxx (eg. better quality of the environment, reduction of illegal landfills and creation of green areas, etc.).

For 2017, the following actions are planned, for which the budget is allocated in the amount of xxx Euros. The focus will be on xxx

Annex: Monitoring table, evidence (before/after photos, monitoring reports by certain municipal officials, citizen survey reports).

| No. | Objective 1 | Procedures/actions | Timeline foreseen by the plan | Indicator | Status |
|---|---|---|---|---|---|
| | xxx | eg. appointing a responsible officer to implement the plan | xx | Decision on the appointment of an official | |
| | | | | | |
| | | | | | |
| | | | | | |
| **No.** | **Objective 2** | **Procedures/actions** | **Timeline foreseen by the plan** | **Indicator** | **Status** |
| | xxx | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| **No.** | **Objective 3** | **Procedures** | **Timeline foreseen by the plan** | **Indicator** | **Status** |
| | xxx | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| **No.** | **Objective 4** | **Procedures** | **Timeline foreseen by the plan** | **Indicator** | **Status** |
| | xxx | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

# Local Waste Management Plan 2016-2021

HELVETAS Swiss Intercooperation | KOSOVO

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

**Swiss Cooperation Office Kosovo**