



PROJECT APPRAISAL DOCUMENT – GRANT APPLICATION

MOGILA MUNICIPALITY

**PROCUREMENT OF 5,5 m³
VEHICLE FOR COLLECTION
OF THE COMMUNAL SOLID WASTE FROM THE HOUSEHOLDS**

JULY 2020

1. PROJECT DESCRIPTION

A. BACKGROUND

1. General information

Mogila municipality is located in the southern part of Macedonia. Its territory of 251km² occupies mainly the middle part of the Bitola field.

In 2005, due to changes in the Law on Territorial Organization, the neighboring municipality Dobrusevo (10 settlements and about 2170 citizens) was merged to Mogila municipality. As a result, Mogila municipality increased its territory to 23 settlements and 6711 citizens and with a population, density of 27 people/ km².

The municipality has a very good geographic location, traffic connection and local road infrastructure. Mogila is a rural municipality with arable land consisting of 16,961ha. Pastures are 5,588ha and forests occupy only 1,037ha. Mogila municipality belongs to the Pelagonija statistical region.

After successful implementation of 10% of the project for the Reconstruction of multipurpose Municipal Building in village of Mogila in 2020, jointly financed by the sub-loan and by the municipality and preparation of Urban Audit the municipality obtained the right to receive a Poverty and Social Inclusion Grant. The municipality, based on the value of contract of the contractor, but not exceeding the value of the sub-loan, obtained the right to receive a Poverty and Social Inclusion grant in the amount of **MKD 1,780,480.00** (27% of the sub-loan value).

Based on the consultations with the citizens of the socially deprived settlements, the Municipality decided to use the grant funds for implementing the project "Procurement of 5,5 m3 vehicle for collection of the communal solid waste from the households". On 2 March 2020 a meeting with the representatives from the village councils was held with representatives from the Municipal administration as well representatives from the Municipal Council and PCE Pela Higiena. At the meeting the proposals were presented by the villagers for improvement of the living conditions within the Municipality especially in the deprived villages with less inhabitants. The project for purchase of smaller vehicle for solid waste collection was the supported project because the usefulness and coverage of more than one village, with accent to the deprived villages. There are meeting minutes and list of attendees available at the Municipal archive under number 03-448/8 from 15.06.2020. The service to the citizens will be delivered by the Municipal public communal enterprise Pela Higiena, Mogila. The estimated value of this project is equal to **MKD 2,550,000.00**

financed under the grant in the amount of **MKD 1,780,480.00** and a Municipal co-financing budget in the amount of **MKD 769.520.00**

The project was conducted from the Study of the URBAN Revision as a No.1 Priority that will improve the public communal services in the depletion communities in Mogila Municipality, part of the Municipal process of improving the living conditions in those communities. On the base of the Urban revision and consultations with the citizens of the deprived communities, the Project proposal, for using the grant from the MSIP program was presented to the Municipal Council at the session on 21.04.2020 and its members have no comments to this proposal hereby approving the project importance to be financed by the grant. In the process latter, on a Council meeting on 29.06.2020 an Official decision was delivered with number 08-498/3 from 29.06.2020 as well a co-financing decision with number 08-498/4 from 29.06.2020 .

B. GENERAL DESCRIPTION OF PROJECT

Mogila Municipality has 23 communities, each one of them on a different level of development and with different numbers of inhabitants. The main shortcomings and needs identified during the analysis and implementation of the List of Infrastructure and Programming Services (SIPU) but also the list of needs by settlements from the conducted consultations with the Local Communities and the inhabitants are: environmental and sanitary services (sewerage, solid waste disposal).

The implementation of the planned projects through the collection of solid waste from households and construction of treatment plants for fecal wastewater in the settlements in the municipality will improve the quality of life of the population, will regulate and reduce groundwater and soil pollution.

Regarding the provision of a healthy ecological environment, additional coverage is needed by collecting solid waste in all settlements without exception.

In most of the settlements that are not covered with the service for solid waste collection in the Municipality, it is very common to appear on illegal landfills which are a high risk to the local population from infectious diseases.

Increasing the coverage of villages served by this service, which includes equipping and strengthening human resources and PCE Pela Higiene, Mogila would be defined as the first phase, after which other additional projects for selection and recycling of waste and waste from packaging, etc.

The villages that are not covered by the household waste collection service are Alinci, Sv. Todori, Mojno, Novoselani, Podino, Puturus, Crnichani, G. Charlia and Trnovci.

The contamination of the soil by the faeces and their uncontrolled discharge also leads to the contamination of the soil used for food production, which expands the risks to residents who do not live in the municipality while buying the products on the green market in the country.

In the year 2011 as a part of the Municipal competences a Public Enterprise Pela Higiene, Mogila was formed, to deliver services in the public communal hygiene area with solid waste collection and maintenance of the green areas in the Municipal communities, maintenance of the local village water supply systems and winter maintenance of the local roads within the Municipality area.

Since then the Public Communal enterprise is covering 14 villages and the other 9 villages the smallest and the most deprived, are not covered with the service of collection and transportation of the solid waste to the local landfill.



Picture 1. Picture of the village illegal landfill next to village Trnovci before the cleaning



Picture 2. Pictures after cleaning the village illegal landfill

CURRENT SITUATION

PCE "Pela Higiene" - Municipality of Mogila collects and transports municipal solid waste in 14 (fourteen) settlements in the Municipality of Mogila. It has 1 (one) specialized vehicle for waste collection (MERCEDES ATEGO 815), it also has one tractor IMT 539 with which it performs additional activities.

Currently, PCE Pela Higiene, Mogila has only one truck that serves 14 settlements with a very busy schedule during the morning and afternoon.

The collection of waste is performed once a week and the total amount of collected and finally disposed waste on the landfill is around 880 t/year (2019 data). With project implementation the collection of waste will be performed twice a week from selected locations.

Municipal waste consists of classic municipal waste (PET bottles, paper and cardboard, glass, textile, food, waste from agriculture activity in the household yard, etc.). The composition varies according to season, in the spring and fall the content of waste from agriculture activities increases to around 40% of the total amount of municipal waste.

Current prices for solid waste collection are as follows:

- for households – 1,9 MKD per m² of apartment/house area; 0,2 per m² for land around the house, yard
- for enterprises and public institutions – 4,2 MKD per m² of area used by the company. For bigger than 200m², 3,2 MKD per m²

The main solid waste management problems are:

- There is only one vehicle serving as solid waste transportation vehicle, which if it's not in function (regular service maintenance) then there is an environmental risk by not collecting the solid waste on time from the settlements,
- The PCE has no financial resources to purchase another solid waste collection vehicle and provide better service to the households, more frequent waste collection, and spread the collection territory to the other unserved 9 villages;
- The waste collection frequency (once a week) is very low and insufficient;
- Rural settlements are not fully covered by the service;

There is no dedicated separation and storage, as well as appropriate disposal of hazardous, construction (inert) and no hazardous waste;

- Current waste fees are insufficient to cover costs for the waste management services.

The need for a new vehicle is very high in order to cover the other 9 settlements, which are the most deprived. In addition, below is a list of settlements that are served and those in which this service should be introduced after providing another truck for garbage collection.

This will provide a clean and safe hygienic environment in the vicinity of the uninhabited settlements and repair of existing illegal landfills that are a potential source of infection and disease.

Table 1. The village settlements listed by are they getting the service for solid waste collection from the PCE Pela Higiena, Mogila

The village settlements where PCE collects waste are:	Village Settlements in which PCE does not collect waste:
1.Mogila	1.Alinci
2.Dolna Čarlija	2.Gorna Charlija
3.Radobor	3.Mojno
4.Trap	4.Novoselani
5.Budakovo	5.Podino
6.Dedebalci	6.Puturus
7.Dobruševo	7.Crničani
8.Nošpal	8.Sveto Todorj
9.Musinci	9.Trnovci
10.Beranci	/
11.Dolno Srpci	/
12.Vašarejca	/
13.Ivanjevci	/
14.Loznani	/

Table 2. Example, Current condition regarding collection and management of solid waste in the most deprived villages in the Municipality of Mogila, 4 settlements that are subject of the urban revision service scanning analysis.

	Number of households	Number of household bins	Frequency of solid waste collection / landfill cleaning
Alinci	29	29	Not collected
Sveto Todorj	77	77	Not collected
Trap	60	60	Waste collection once a week
Vasarejca	64	64	Waste collection once a week

FUTURE SITUATION

Project description

In order to improve the living conditions at least in this 4 most deprived village settlements, and additional other 5 villages without the service of delivery of solid waste collection service by the PCE Pela Higiena, the Municipality Mogila suggest a purchase of a new vehicle from 5,5 m3 capacity that will be used for regular solid waste collection and transportation to the legal landfill. With the purchase of the new vehicle, additionally 9 villages with about 2,000 inhabitant will be served, that is one third of the population of the Municipality of Mogila, that means that the expanded service will serve to approximately 400 households and 38 small companies .

During the period of procurement of the new vehicle, the PCE Pela Higiena, Mogila will carry out a parallel procedure to supply for additional 400 trash bins and 38 containers aiming to achieve sufficient service coverage for resident citizens and companies with the enlargement of the serviced area within the Municipality.

Thus, the number of households served will increase from 1220 to 1620 and for companies from 62 to 100. It is expected that the increase in quality of service will be reflected in the collection rate for households that will grow from current 73% to 91%, while the current collection rate for companies (95%) will continue to demonstrate steady trend in the upcoming period as well.

Table 3. Table of current-future area of service

Area of service after procurement of 5,5 m³ vehicle for collection of solid waste		
Present situation	serviced citizens in 14 villages	1220 households and 62 companies
After procurement of one special 5,5 m ³ vehicle for collection of solid waste	serviced citizens in 23 villages	1620 households and 100 companies

The procurement of the special vehicle for collection and disposal of solid waste will lead to signing of agreements with 400 new households and 38 companies in the 9 new settlements, stating the mutual obligations for waste delivery and collection, as well as current prices for solid waste collection (for households – 1,9 MKD per m² of apartment/house area; 0,2 per m² for land around the house , yard and for enterprises and public institutions – 4,2 MKD per m² of area used by the company. For bigger than 200m² , 3,2 MKD per m²).

Signing of the agreements with the new service users will take place within a two months period upon delivery of the new vehicle to the Municipality by the supplier.

The frequency of solid waste collection will increase from once a week presently to twice a week. It will allow rise of tariffs that have not been changed for households since 2015. As this is political decision made by the whole Council, officially adopted on 29.06.2020 that show that the project for purchase of the vehicle for solid waste collection is priority, as well will be co-financed in total with decision numbers 08-498/3 and 08-498/4 from 29.06.2020 , the range of this increase is difficult to predict. However, it is believed that with provision of high-quality service citizens will not oppose higher bills. It should also improve collection rate on payments.

Number of persons responsible for solid waste management in PCE Pela Higiene, Mogila (4) will not change only optional rearranging of the responsibilities of the current employees within the company.

Project goals

With the project proposal the following goals were identified:

- Spread the solid waste collection territory to rural deprived settlements and meet minimal standards of the service
- Introduce more frequent waste collection;
- Provide better quality of communal services to the citizens and companies in the deprived settlements;
- Improve environmental protection.

The improvement of the municipal solid waste collection system (purchase of vehicle) is linked directly to the regional waste management system approach. The purchase of vehicle will ensure more efficient management system with less environmental and health risks.

The project objective is in direct positive line with the goals and objectives of the main strategic development document - Local Economic Development Strategy (2008-2013) of the Municipality of Mogila – in order to deliver high quality public services to the citizens, inhabitants of the Mogila Municipality.

Beneficiaries and transparency

Municipality Mogila communication will be strategic and informational aiming to achieve smooth acceptance of the waste collection service in the three new settlements.

Public meeting was held on 19.10.2018 in Mogila where members from each of the 23 settlements, the Mayor, communal staff and technical team for waste management from the PCE “Pela Higiena” were discussing about the needs in each of the settlements. On the meeting the need of delivery of the service for collection of solid waste was appointed as very high priority. The following meetings with the representatives and citizens from deprived settlements showed the same need as a priority, communal hygiene and solid waste collection, cleaner environment and better life conditions. On March 2nd, 2020, another meeting was held to collect any possible priority projects from the village representatives from the village councils with special accent to the most deprived villages and their needs that are bigger than the needs of the bigger villages with more inhabitants. On this meeting (meeting minutes Municipal archive number 03-448/8 from 15.06.2020) a decision of project that is important for all the villages was selected, the same for

additional equipping of the PCE Pela Higiena and establishing solid waste collection service at the most deprived villages, with providing additional equipment with small vehicle for solid waste collection from 5,5 m³. This vehicle will improve the service as well introduce a new service for the deprived villages to improve the living conditions in those communities.

Furthermore, campaigns have also included components of participatory and engaging communication, where the beneficiary becomes a key actor. Following the initial public meetings, a team of municipal and PCE representatives will visit each household to present them the Agreement and explain any additional solid waste collection issues. This process will be conducted during the first and second month upon delivery of the new vehicle to the Municipality.

In addition, the Municipality will post appropriate information on its web-site www.mogila.gov.mk and social networks. Within the municipal administrative building a publicly accessible Complaint Dropbox is placed where citizens can place their opinions and comments to the services. Municipality will strictly monitor any feed-back especially during the first year of the new solid waste management service aiming to obtain feed-back and improve any inconsistencies.

The direct beneficiary of the project are:

- citizens of 9 deprived villages,
- approximately 400 households
- approximately 2,300 inhabitants,
- 38 companies,
- Churches and monasteries in the deprived communities

Indirect beneficiaries of the project are the 17 employees of the PCE. The special vehicle, which will be provided by the project, will improve the working conditions for the employees in the Public Enterprise as well as prevent their direct contact with the waste that is a potential carrier of infectious diseases caused by disintegration of organic substances.

Technical solution

The proposed technical characteristics of the special vehicle for collecting waste are provided in the table below:

Engine type	Diesel
Exhaust emissions	EURO 5
Power engine	Min 155Hp/114KW
Engine operation	1900 2200 cm ³
Manual switch	6 + 1
Distance Between the wheelbase of the vehicle	min 4000 mm
Total allowed mass of the vehicle	min 4000 max 8.500 kg
Number of seats in the driver's cabin	1 + 2 seats
Minimal vehicle equipment	
ABS +ESP	
Minimum airbag for the driver	
Manual air conditioner	
Front fog lights	
Electricity on glass and mirrors	
Central remote control lock	
Servo steering wheel	
Digital tachograph (speed record and mileage)	
Upgrading - Compact Solid Waste Body	
Volume	Min 5.5m ³
Capacity of solid waste	Min 500kg
Maximum weight of the upgrade	max 1.100kg
All upgrade surfaces made of steel with a thickness of	Min 3mm
Compaction rate	Min 3 : 1
Manual control system	
Working pressure on the press	Min 150bar

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Electro hydraulic upgrade power supply	
Number of lifting clips	2
Dumping system - waste disposal system. With the help of a lowering platform (discharge panel) that activates a hydraulic telescopic cylinder.	Yes, manuel
Compression time	Max 20 sec
Container download time	Max 8 sec
Stabilizers	2 hydraulic on the back
On the back of the upgrade there should be a container lifting device (equipped with a return filter, tank cover and oil indicator), with capacity	from 900 - 1100 liters for containers and from 100-150 liters for household baskets
2 LED headlights mounted on the top of the front and rear of the vehicle	
1 unit LED reflector placed on top of the upgrade	
Two back stairs for the crew, according to European norms, with sensors for use	
One elliptical handle on each side (tube ƒ¼ ") for holding the crew according to European norms	
Monitoring system	monitor mounted in the driver's cab with at least one back camera

Table 4. Technical specifications for Solid waste collection vehicle with a capacity of 5.5m3 quantity (1) vehicle

ENVIRONMENTAL IMPACT ASSESSMENT

Mogila Municipality is rural municipality with 23 settlements located in the southern part in Republic of North Macedonia, in Pelagonija Administrative Region.

The procurement of one communal vehicle for solid waste collection, transportation and disposal of communal solid waste to the landfill "Meglenci" will make the service provided by the Public Communal Enterprise PCE "Pela Higiena", Mogila more efficient and effective through better and more frequent waste collection from households and companies within the settlements in the municipality.

Current situation

According to Article 22 of the "Law on Local Self Government" – the municipality is responsible for collection and transport of communal waste. This obligation was delegated to Public Communal Enterprise "Pela Higiena", Mogila, established in 2011 by Mogila Municipality.

Currently the PCE provides solid waste collection service to inhabitants of 14 settlements, as presented in Table 1 above: Mogila, Dolna Čarlija, Radobor, Trap, Budakovo, Dedebalci, Dobruševo, Nošpal, Musinci, Beranci, Dolno Srpci, Vašarejca, Ivanjevci and Loznani. Waste collection is carried out from 62 metal containers and 1225 plastic bins and is performed once per week in each of the 14 settlements during the five working days through optimized routes.

The specialized waste collection and transportation vehicle owned by the PCE with capacity of 8m³, purchased in 2011 is insufficient to perform waste collection in all 23 settlements in the municipality, on a weekly basis.

There is no legal landfill for communal solid waste disposal on the territory of the Municipality of Mogila and waste is deposited in "Meglenci" landfill owned by Bitola Municipality, which is located at a distance of 18 km from the Municipal Center settlement Mogila. For disposal of the solid waste in "Meglenci" landfill there is an Agreement for performing of communal services with number 02-517/3 from 26.09.2011 signed between the PCE "Pela Higiena" from Mogila and PCE Komunalec Bitola that regulates the rights and obligations of both parties involved. According to this Agreement the PCE Pela Higiena is not charged for the deposited waste; the decision is still valid.

Mogila Municipality is very active in the regional cooperation and development of regional approach for improving the solid waste management in Macedonia. Mogila is member of Pelagonija Planning Region. So far, the Waste Regional Cooperation Body was established and external consultant employed for proposing feasible waste management for the Pelagonija Planning Region. As a result, two locations of new regional landfill were proposed. Next step is selection of the location that would satisfy the criteria of all members, followed by long processes for technical design planning and construction.

Environmental impact of the Project

In general, the procurement of the special vehicle for collection and disposal of solid waste to the landfill "Meglenci" with a capacity of 5,5 m³ will generate very positive long term impacts. The frequency of the waste collection will be improved, the remaining 9 settlements will be covered with communal service as well, and the risks of soil and air pollution will be minimized.

The project activity (purchase, delivery and running of the waste collection vehicle) has very low limited adverse environmental impacts mainly possible to happen if the regular annual pre-registration test and regular maintenance and repair are missing and those impacts will be short term, with local significance, possible to occur with very low intensity. In order to prevent and reduce possible environmental and occupational safety risks, the procurement of the new vehicles for the Mogila Municipality should be in accordance with the following standards:

- 1) Minimum engine standards, aiming to limit the air pollutant emissions within the national level standards - EURO 5
- 2) EU Directive 2000/14/EC (noise specification- noise level lower than 102 dB (A)); To comply with this, the Bidder shall propose vehicle which will possess Compliance Letter in line with the *Rulebook for the closer types of specific sources of noise and terms and conditions which should be fulfilled by the facilities, equipment, installations and devices that are used in the open space in respect of the emitted noise and the standards for noise prevention (Official Gazette No. 142/2013)*.
- 3) Training should be delivered to at least one driver and 2 workers from the PCE "Pela Higiena" from Mogila Municipality, to be familiar with handling of the new vehicle, its use and maintenance. The driver/s involved in carrying out the waste management service should be trained on environmentally friendly driving manner aiming to increase fuel efficiency, to maintain the vehicle clean to avoid unpleasant odor and also to keep the vehicle in good running condition. The regular maintenance of vehicle is crucial for minimization of the environmental and occupational safety risks for workers and general public.

To ensure immediate putting into operation of the new vehicle, the PCE "Pela Higiena" shall conduct a campaign for signing of Agreements with approximately 400 new households and 38 companies in the 9 new settlements for delivery of their communal solid waste by the PCE "Pela Higiena" and payment of a set monthly fee in the amount of (for households – 1,9 MKD per m² of apartment/house area; 0,2 per m² for land around the house , yard and for enterprises and public institutions – 4,2 MKD per m² of area used by the company. For bigger than 200m² , 3,2 MKD per m²)as per the current Decision for communal solid waste collection (Municipal Council Decision No 08-580/4. From 29.04.2015). These Agreements shall be signed within a 3 months period upon delivery of the new waste collection vehicle to the Mogila Municipality by the supplier. During the same preparatory period, the PCE Pela Higiena shall conduct public tender procedure for procurement of 38 new containers (1,1 m³) to be placed at defined locations within the 9 new settlements and 400 plastic bins (120 l). Plastic bins will be delivered to each household upon signing of the Agreement for the service.

The measures have been proposed to avoid, prevent or mitigate the adverse impacts and to establish the good waste management practice using the waste collection vehicles in Mogila Municipality. The Environmental Mitigation Plan is presented in the following table where the responsibility for implementation lays to the Contractor-Supplier, PCE “Pela Higiena” (the Director and technical team) and Mogila Municipality.

The Municipality and PCE “Pela Higiena” are responsible for implementation of the mitigation measures during the operational phase (running of the vehicle) and they are responsible for monitoring as well.

The Mayor is fully responsible for reporting to the Ministry of Environment and Physical Planning on the annual quantity and type of collected, transported and disposed waste to the “Meglenci” landfill.

TABLE 5 : ENVIRONMENTAL MITIGATION PLAN

Potential impact	Impact scale	Proposed mitigation measures	Responsibility
Project Activity: Procurement and Delivery of the vehicle for collection of communal solid waste for Mogila Municipality			
Positive environmental, social and health impact to the improved collection and transportation of solid waste in the settlements which are not covered with communal service	Local/ Long term/ Mayor	<p>The preventive measures could be implemented when the new vehicle is delivered including:</p> <ul style="list-style-type: none"> • Check all technical specifications of the delivered vehicles in compare with the technical requirements (at least EURO 5 engine specification and noise specifications as min. env. requirements) established prior the tender procedure • Check the fuel quantity, lubrication oil quantity, breaking and steering system at the spot and lighting system as well • The review of the producer manual and driving manual recommendations for smoothly running of the vehicles (nomination of the responsible person within the PCE) • Delivery of short running training to driver/drivers of the vehicles for the most economically running of the truck and training for communal workers operating with vehicle collection mechanism <ul style="list-style-type: none"> • Delivery of training for regular maintenance of the vehicle as well • Implementation of the Occupational Health & Safety measures for prevention of COVID -19 for the workers and participating municipal staff, during the procurement process 	<ul style="list-style-type: none"> • Supplier • Director of the PCE and technical staff within the PCE
Project activity: Putting the vehicle into operation			
<p>Environmental and health impacts Improper put into operation (running), or not prior check of the fuel quantity, lubrication oil quantity and breaking and steering system at the spot could cause adverse environmental and health impacts. The non-compliance of the EURO 5 engine standards on emissions limit values could cause more pressure to the air quality:</p> <ul style="list-style-type: none"> • High emission of GHGs 	Local / Long term / Mayor	<ul style="list-style-type: none"> • Homologation of the vehicles by a certified body, • The technical specifications provided by the vehicles supplier should be checked according the at least EURO 5 emission standards, general and specific safety requirements and all fitted devices like: rear protection devices, warning light, speed limitation device, braking and anti-blocking system, electrical and hydraulic system for waste compression, etc. <ul style="list-style-type: none"> • The noise specification should be checked as well • The level of noise should not exceed more that national limited level (according to national legislation and EU requirement); • Perform the annual approval test at the authorized compliance body issuing the registration card for the vehicles • For traffic control and safety, the information about the project – new waste collection vehicle should be announced through the social media of the Municipality informing about the planned vehicle routes and frequency of waste collection (especially important for new settlements which will be covered with communal service) • The traffic flow through the Municipality need to be coordinated with the responsible technical staff within the PCE 	<ul style="list-style-type: none"> • Supplier • Director of the PCE and technical staff within the PCE

Potential impact	Impact scale	Proposed mitigation measures	Responsibility
<p>and other pollutants (CO, HC, PM and NOx)</p> <ul style="list-style-type: none"> • More environmental pressure on the human life and plant life through formation of tropospheric ozone and climate change • More indirect health problems with human respiratory system <p>The non-compliance with noise requirements will cause noise disturbance</p>		<ul style="list-style-type: none"> • Signing of Agreements with approximately 400 new households and 38 companies in the 9 new settlements for delivery of their communal solid waste to the PCE “Pela Higiene” and payment of a set monthly fee. These Agreements shall be signed within a 3 months period upon delivery of the new waste collection vehicle to Mogila Municipality by the supplier. 	
Project activity: Regular operation of the vehicle			
<p>Improper or lack of regular maintenance could increase the environmental and occupational safety risks and health risks to all citizens due to the following:</p> <ul style="list-style-type: none"> • low fuel efficiency, • higher emissions of GHGs and other pollutants (CO, HC, PM and NOx) • increase of noise level • leakages of liquid waste from the truck • not good fitting of the all (compression system for example) and spoil of waste on the streets 		<ul style="list-style-type: none"> • Implementation of the Occupational Health & Safety measures for prevention of COVID -19 for the PCE workers/ municipal staff and local population • Regular maintenance and repair of the new vehicles and delivery of the spare parts on time by the professional service company • Signing a contract with the service company for regular maintenance, replacement of spare parts, preventive lubricant oil changes, checks on electronic and hydraulic compression waste system, proper tire maintenance as one of the most important safety function, etc. • Regular washing of the vehicles and keep the parking site clean • Full restriction of replacement of lubricants at the parking site to avoid pollution of waters and soil by oils, grease and fats • Perform regular annual approval test during the annual registration of the vehicles • During the approval test the environmental and safety checks should be performed according the vehicles protocol (related to noise, exhaust emissions and fitted devices) • The level of noise must be below 60 dB in the populated areas according to the Art. 5 of the Rulebook on limit values of environmental noise. • The PCE should prepare the Fuel consumption and CO₂ emissions data Report on annual base • The Report should contain at least the amount of diesel fuel consumption, type of diesel fuel used and the CO₂ emissions derived from the consumption, total length of the routes passed, the distance routes among the local settlements and all settlements covered with waste collection 	<ul style="list-style-type: none"> • Director of the PCE and technical staff within PCE

Potential impact	Impact scale	Proposed mitigation measures	Responsibility
<ul style="list-style-type: none"> • inappropriate odor due to lack of truck washing practice • water and soil pollution as a result of possible oil leakages 		<p>and distances to the municipal landfill</p> <ul style="list-style-type: none"> • The PCE should prepare the Waste Collection Plan on monthly/annual base including all local settlements with frequency of collection and the most efficient traffic routes • The PCE should perform regular measurements of the ground waters quality nearby the landfill according the legal regulation during operation phase • Primary selection of used paper and PET bottles as a recyclable waste in order to decrease the quantity and volume of waste collected (Placement of several collection bins for disposal of paper and PET bottles) • Announcement of the possibility for primary selection of these two waste types to all citizens through already established communication channels (during the distribution of communal bills) • Signing the Contract with authorized collectors for recyclable waste to collect, transport and recycle primary selected paper and PET bottles. 	

TABLE 6: ENVIRONMENTAL MONITORING PLAN

What Parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored (frequency of measurement)?	Why is the parameter to be monitored?	Responsibility	
					Delivery and put into operation of the vehicles	Operation of the vehicles
Project activity: Procurement and Delivery of basic equipment for the maintenance of public hygiene: vehicle for collection of communal solid waste						
The environmental and safety protection measures applied before put the vehicles into operation Prevention measures for COVID-19 are in place	On the parking site of the PCE Pela Higiene Mogila Availability of OH&S Plan including measures for COVID-19 prevention	Check the fuel quantity, lubrication oil quantity and breaking and steering system at the spot Test running successfully done Visual check of the implementation of prescribed COVID-19 prevention measures	Immediately after arriving of the vehicle in Mogila	To prevent health and safety risks – mechanical broken and injuries	Supplier Director of the PCE Municipal appointee	
EURO 5 technical specifications	At the homologation site (Homologation attest) The	Review the technical specifications of the	At the beginning of the running phase	To minimize the adverse environmental and	Supplier	

What Parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored (frequency of measurement)?	Why is the parameter to be monitored?	Responsibility	
					Delivery and put into operation of the vehicles	Operation of the vehicles
Noise level specification of the vehicles Lights, electronic and hydraulic system, braking and anti- blocking system and tires	approval test site at the authorized body for annual registration (Registration card of the vehicles)	vehicles Mechanical and electronic checks	Before put into operation (running)	health impacts	Director of the PCE	
Standard technical operational parameters of this kind of vehicle (protective steering, brakes, fuel consumption)	Pre-registration inspection at the authorized body for annual registration	Monitoring of the technical specifications Approval test Report showing that the vehicles are in compliance with safety requirements, environmental requirements related to noise, exhaust emissions and fitted devices	Annually	To ensure safety running of the vehicles and minimization of the environmental and health impacts		Director of the PCE with the technical team
Announcement of the frequency and start-up of vehicle's running and collection	Through the public announcement via social media and announcement table in the municipality building of Mogila	Visual/audio check	Before start-up of running the vehicle's	To increase the public awareness about the new waste management practice and waste collection frequency		Director of the PCE with technical team Municipal appointee
Signed Agreements with the new 500 household users and 38 companies	Administration of PCE "Pela Higiene "	Visual check of the documentation	Before start-up of running the vehicle	To introduce the regular waste management practice and waste collection frequency in the new settlements		Director of the PCE with technical team Municipal appointee
Project activity: Running of the vehicle						

What Parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored (frequency of measurement)?	Why is the parameter to be monitored?	Responsibility	
					Delivery and put into operation of the vehicles	Operation of the vehicles
Skill of driver/s on modern driving techniques and some improved performances of the new vehicle	At the Mogila sites	Training records kept Review of the training records	Before official startup of running	To improve the driving techniques and to be familiar with vehicles characteristics and compression system		Director of the PCE with technical team Municipal appointee
Good maintenance practice and repair performed by professional staff	At the service company	Review of reports from the service company	Periodically (six months min.)	To ensure minimization of the environmental and occupational safety risks through high fuel efficiency and decrease of emissions of GHGs and other pollutants (CO, HC, PM and NOx)		Director of the PCE with technical team Municipal appointee
Fuel consumption trend, annual quantity of waste collected and disposed at municipal landfill	At PCE Pela Higiene site	Annual Report of the PCE	On annual basis reporting in front of the Management board and Municipality Council	To monitor the regular maintenance and to calculate the carbon footprint of the communal enterprise		Director of the PCE with technical team Municipal appointee
Fulfilled Annual Report for collection, transportation and disposal of waste	Local self-government administration	Review of documentation – Identification waste List	After the accomplishment the task of collection, transportation, temporary disposal and final disposal of waste	To improve the waste management, compliant with the national requirements		Director of the PCE with technical team Municipal appointee

2. FINANCIAL ANALYSES

The estimated value of the project is MKD 2.550.000 (41.350 EUR) including VAT.

The investment value is higher than the available grant 1.780.480 MKD (EUR 28.904), therefore co-financing from the municipal budget is need.

According to the Council decision number 08-498/4, dated 29.06.2020, Mogila Municipality will assure co-financing of the rest of the amount to the full amount of the contract signed by the Municipality after the public procurement procedure is completed.

Value of investment	Value (MKD)	Value (EUR)
Procurement of one communal vehicle for collection, transportation and disposal of solid waste 5,5 m ³	2.550.000	41.350
Source of Financing		
Social Inclusion Grant	1.780.480	28.904
Mogila Municipality co-financing	769,520	12.446

The project beside the environmental has social character as well and contributes to improved living conditions and standards of local population and at the same time reduces the disparities between rural and urban settlements and rural and deprived settlements.

The PCE operates with one waste collecting vehicle and it's not sufficient for the requirements of performing waste collection service in the Municipality. After project implementation, waste collection service will be regularly provided to the remaining 9 deprived settlements with approximately 400 households and 38 companies. Thus, the number of households served by the PCE will increase from 1220 to 1620 and for companies from 62 to 100. It is expected that the increase in quality of service will be reflected in the collection rate for households that will grow from current 73% to 91%, while the current collection rate for companies (95%) will continue to demonstrate steady trend in the upcoming period as well.

The procurement of the special vehicle for collection and disposal of solid waste to the landfill with a capacity of 5.5 m³ will generate very positive long-term impacts. The frequency of the waste collection will be improved, all settlements will be covered with communal service as well and the risks of soil pollution and air pollution will minimize.

The economic justification of this project is strengthened by the fact that it will be financed in greater part with grant funds. Therefore, the final recommendation is to proceed with this project.