
WASTE MANAGEMENT IN KOSOVO: IDENTIFYING CHALLENGES IN THE SECTOR

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Acronyms

A.I – Administrative Instructions

BAT – Best Available Technique

EU – European Union

GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit

GHGs – Greenhouse Gases

JICA – Japan International Cooperation Agency

KAS – Kosovo Agency of Statistics

KEPA – Kosovo Environmental Protection Agency

KLMC – Kosovo Landfill Management Company

MBT – Mechanical Biological Treatment

MESP – Ministry of Environment and Spatial Planning

MoED – Ministry of Economic Development

MoF – Ministry of Finance

MoH – Ministry of Health

MoTI – Ministry of Trade and Industry

MLGA – Ministry of Local Government Administration

PMUPE – Policy and Monitoring Unit of Public Enterprises

PAMKos – Association of Cleaner Environment for Kosovo

RAE – Roma, Ashkali, and Egyptian

TPP – Thermal Power Plant

USAID – United States Agency for International Development

WWRA – Waste and Water Regulatory Authority

Introduction

Economic activities of humans have degraded the environment each year more and more throughout the world. However, environmental challenges are especially evident in developing countries which are generally known to be dealing with plenty of other problems at the same time. For instance, they face problems with poverty, gender and social inequality, corruption and nepotism, political instability, financial insecurities, etc. Kosovo, as well, is currently exposed to all of these problems. However, in the recent years some of the most pressing problems were those that jeopardized environmental sustainability and strongly threatened the health of Kosovars and the environment surrounding them. When considering environmental challenges, an everlasting and worrisome problem remains that of waste management, which is a result of many combined factors.

With a constant increase in world's population and the rapid industrialization, the issue of waste generation started to get a lot of attention from international organizations and communities, due to its observed consequences on environment, public health, and economy; especially when talking about the municipal solid waste. High consumption of goods and change of lifestyle of global citizens have contributed in both unsustainable resource extraction and high rate of waste generation. The estimated number of global population living in urban areas for year 2025 is 4.3 billion with a generating rate of 1.42 kg/capita/day¹, while the current rate is approximately 1.3 kg/capita/day². Because of internal migration the urban areas tend to generate more waste than the rural parts. This coming as a result of the direct relationship between waste generation rate and that of disposal income. Consequently, rural areas tend to consume less of goods due to lower incomes. Hence, it can be stated that the generation of waste is positively linked with urbanization and economic growth. Beside the consumption pattern of goods playing a significant role in tackling the issue of waste management, industrialization also has been evident to increase the magnitude of waste generation rate. It is proven that countries with higher industrialization practices generate more waste, for example, United States, Brazil, China, Japan, and Germany, who are considered to be the leading trash generators³.

As demand and supply for goods remains at its peaks, eventually the product's life cycle will end with it being thrown out in the nature in the form of waste, which unless treated and disposed properly imposes serious externalities on ecosystems and causes severe social health costs. For this reason, in

¹ Hoornweg, D., and Bhada-Tata, P. (2012). "What a Waste: A Global Review of Solid Waste Management". Pg 8. *World Bank*. https://siteresources.worldbank.org/INTURBANDEVELOPMENT/Resources/336387-1334852610766/What_a_Waste2012_Final.pdf

² United Nations Environment Programme. (2015) "Global Waste Management Outlook". Fig. 3.8., Pg. 61. <http://www.unep.org/ourplanet/september-2015/unep-publications/global-waste-management-outlook>

³ Simmons, A.M. (2016). "The world's trash crisis, and why many Americans are oblivious". *LA Times*. <http://www.latimes.com/world/global-development/la-fg-global-trash-20160422-20160421-snap-htmlstory.html>

most countries the responsibilities of waste management fall under the competences of municipalities. Hence, unless some concrete action is taken, waste diminishes the values and benefits of the amenities, increases the level of greenhouse gas (GHGs) emissions in air and pollutants in the water surfaces, surges the number of infectious diseases etc. For this, in an ideal scenario where the waste management sector functions perfectly, the benefits always outweigh the costs.

Kosovo factors contributing to waste mismanagement are similar to the problems faced in this area at the global level. Firstly, a decade after the last war in Kosovo there was a rapid growth of population and internal migration which have increased the waste disposal rate in main cities due to immense consumption of goods. Secondly, relevant institutions have drafted the legislation in accordance with EU's directives (which standards and target are hard to reach at times considering Kosovo's capacity, being that human or financial resources) and whose implementation seems to not take place properly therefore it is not showing any positive outcomes on mitigating the consequences. Thirdly, local authorities are overburdened with responsibilities which are undefined among competent institutions, hence making them deliver ineffectively the basic services on daily basis. Fourthly, rapid industrialization and hard industries that produce goods and release dangerous materials do not have a particular manner and dedicated spot where to dispose their waste. Beside this, decommissioning of Thermal Power Plant (TPP) Kosovo A remains still an environmental problem, as when it is out of function, it generates a lot of waste in the environment. This issue needs a special treatment by policy makers and authorities. Fifthly, technologically advanced methods are not available in Kosovo due to lack of investments or funding and high costs associated with those particular methods. Lastly, inappropriate habits of the citizens and lack of effective awareness are crucial elements in waste management problems.

The genesis of the problem in Kosovo's case lies in the huge amount of waste generated and lack of improper methods for its treatment and disposal. Based on Kosovo's legislation, waste is any by-product that is disposed by the waste holder⁴, and because waste composition varies among products, they are categorized based on their risk exposure, e.g. hazardous, non-hazardous, and solid⁵. Furthermore, they can be classified by the source of waste generation, e.g. municipality, commercial, industrial, and medicinal. Waste management encompasses all the activities, i.e. collecting, treating, reusing, processing, recycling, and disposing, that aim at reducing the level of waste generation in order to prevent the potential negative impacts imposed on the environment and public health. Wherever there is improper waste management than these two problems get even more intensified.

⁴ Assembly of Republic of Kosovo. (2012). "Law No.04/L-060 on Waste". Pg. 2. <https://gzk.rks-gov.net/ActDetail.aspx?ActID=2829>

⁵ Pg. 10.

Due to negative impacts, namely environmental, health, and economic ones, that improper and unregulated waste management imposes on the community, it calls for immediate action from Kosovo's local and central authorities in order to mitigate the consequences for the current generations and those that are about to come. Therefore, this paper will focus specifically on waste management sector in Kosovo, its main stakeholders and their challenges towards delivering properly and effectively waste management services to the society. The good management of these tasks will help on establishing a stable sector from which the citizens of Kosovo will benefit directly in terms of profitable economy, cleaner environment and healthier lives. The aim of this paper is to provide recommendations and conclusions that would promote sustainable development through the adoption of functional waste management practices hence resulting in cleaner environment for Kosovo's communities.

Methodology

Kosovo's waste management sector has been dealing with a lot of challenges for a quite some time now. As it still struggles to establish one profoundly stable sector while fighting plenty of negative impacts imposed on environment and public health, international organizations are giving high importance to this waste issue, and by doing so help Kosovo reach a sustainable environmental development.

In order to get a thorough understanding of this sector's problems, qualitative research methods such as desk research and interviews were conducted. Starting with the former, *desk research* gave an insight of the current waste situation throughout the world and, specifically, Kosovo in the last years. Furthermore, it helped on defining the waste legal and institutional framework in Kosovo. This literature review provided cases for comparative analysis which helped in coming up with effective recommendations, which built on actions applied worldwide, especially in the European Union. Hence, the first steps of the research included the stance and impacts observed globally, and only afterwards it focused precisely in Kosovo.

Beside the aforementioned methods, *interviews* were conducted as a part of providing a much accurate approach to this sector's challenges and stakeholder's points of view regarding this environmental issue which helped on designing tools on how to tackle them down. Unstructured interviews were conducted with the main stakeholders of the sector, namely MESP, Kosovo Landfill Management Company (KLMC), Policy and Monitoring Unit of Public Enterprises (PMUPE) and municipality of Obiliq. Notes and recordings (with the approval of the interviewees) were taken during the meetings which considering the amount of information that could be shared lasted from 30 minutes up to 1 hour or more, which helped in analyzing details after the meetings.

As per limitations, there were a few while conducting this research paper. At first, there is a lack of data on waste management; information which should be published by local authorities. These data are limited in numbers as the reporting is not done periodically, hence one has to vaguely estimate the missing data based on what is available and public. This leads to assuming the numbers of the current waste generation and other variables associated with this sector. Even during interviews with the stakeholders, they tend to not have a clear picture of the situation in the field nor are they well acquainted with number and data regarding waste management sector. Furthermore, many of the identified and potential interviewees taken from both central and local level were reluctant and not willing to participate in the interview, therefore in combination with the available information extracted from the desk research and meetings with some of the stakeholders, the paper attempts to give a realistic insight of this sector in Kosovo.

Environmental & Health Impacts

In regards to environmental damage, destruction of aesthetics, presence of bad odors, potential contamination of life sources like water, air, and productive land are just some of the bad outcomes that the waste management is associated with. One common low-cost method of getting rid of waste worldwide is that of landfilling; a technique that gets followed by severe consequences on the ecosystems and human's health. In Kosovo unsanitary disposal sites and incineration of waste remain big environmental challenges that degrade the nature's setting. Waste dumping is known to produce gases and leachate which happen as a result of decomposition of microbial organisms. This ignites the creation of diseases, land, air, and water contamination, and loss of biodiversity. Furthermore, due to the mixture of the waste compositions, they can have deadly effects on environment and humans, such as explosions, property damage, groundwater contamination, and even climate change⁶.

Once the degradation of environment takes place, there seem to appear other problems related to public health, such as the spread of enormous viruses and diseases which could be deadly for humans. As the sources of life get polluted by the activities of waste management, the concern over the diseases associated with kidney, heart, nervous system, skin, lungs and respiratory problems, etc., start to rise⁷.

⁶ N. Ejaz, N. Akhtar, H. Nisar & U. Ali Naeem. (2010). 'Environmental impacts of improper solid waste management in developing countries: a case study of Rawalpindi City'. *The Sustainable World*. WIT Transactions on Ecology and the Environment, Pakistan. Pg. 385-386.

<https://www.witpress.com/Secure/elibrary/papers/SW10/SW10035FU1.pdf>

⁷ Rushton, L. (2003). 'Health hazards and waste management'. Pg. 187. *British Medical Bulletin*. The British Council. Leicester, United Kingdom.

https://pdfs.semanticscholar.org/d3df/cf0933b001fa7ef01ce057df038f1d577ba5.pdf?_ga=2.76343260.856575842.1509357761-933535303.1509357761

If considering the no-action alternative towards waste management, it would mean that we would adapt to the environment degradation and impose great threats to the society, not only to the current generation but also on the future ones. Even if measures are taken right away, it will take some years for the benefits to outweigh costs and the situation to stabilize. So, the need of intervention for mitigating the waste management problem will be diminished gradually for the upcoming generations.

In other words, waste management threatens the overall sustainable development. There is a need to adapt eco-friendly and efficient techniques for waste disposal, and also once disposed it has to be monitored and has to be treated specifically so that it does not degrade the environment and human wellbeing.

Legal Framework

Based on the constitutional framework on which principles Kosovo's authorities govern, environment protection should be guaranteed for the citizens. According to Article 7,

*"The constitutional order of the Republic of Kosovo is based on the principles of freedom, peace, democracy, equality, respect for human rights and freedoms and the rule of law, non-discrimination, the right to property, the protection of environment, social justice, pluralism, separation of state powers, and a market economy"*⁸.

Basically, the aforementioned values are fundamental for Kosovo's democratic governance. The Article 52 goes even further on specifying the responsibilities regarding the environment, which states that the main responsibilities of community members are to protect the nature, biodiversity, and national heritage⁹. Moreover, each member has the right to express their opinion and concern over different issues that affect their environment in which they live, which can impact the decision making by public institutions.

However, in order to see what concrete gaps exist regarding the current legislation, we need to go through the Law on Waste in details, so that we are able to identify the obstacles and reasons behind its inefficient design and implementation. In 2012, the Assembly of Kosovo approved the repealed Law on Waste which altered the previous motives of this particular law. The key intention of waste law still remains the same which is to provide a clean and sustainable environment for Kosovars. If the previous legislation did not put much focus on the need to recycle, the current one strongly highlights the circular economy, which activities have been highly promoted also by the European Commission. Besides recycling, the new law changed the competences over waste management from the WWRA

⁸ Assembly of Republic of Kosovo. "Constitution of Republic of Kosovo". Pg. 2. *Official Gazette of Republic of Kosovo*. <http://www.kryeministri-ks.net/repository/docs/Constitution1Kosovo.pdf>

⁹ Pg. 14.

to MESP and municipalities. After WWRA's competences were removed in regards to waste management, the burden of drafting the legislation and strategic policies was laid over to MESP, but at the meantime municipalities were left with low limited capacities. While the data regarding waste management in the national level stagnated with only KEPA reporting sporadically.

Nonetheless, the implementation of Kosovo's legal framework, which needs to be aligned with standards set by the EU in Directive on Waste, is barely conforming to the targets set by them. Below are listed specific laws on waste and their approximation to EU Directives (shown in percentages)¹⁰:

Legal Framework for Waste Management	%
Law on Waste No.04/L-060	80%
A.I No. 29/2014 on Sludge Management by Treatment	100%
A.I No. 26/2014 on Waste Management from batteries and accumulators	75%
A.I No. 27/2014 on Waste Management by Packaging and Wrappings	95%
A.I No. 05/2015 for Management of Biphenyls and Triphenyl Polychlorinated and Wastes with PCB and PCT	93%
A.I No. 19/2012 on Management of End-of-life Vehicles and their Components	100%
A.I No. 15/2015 on waste management of fluorescent tubes containing mercury	97%
A.I No. 25/2014 on Waste Management of Electrical and Electronic Equipment and Restrictions on use of Hazardous substances in Electrical and Electronic Equipment	86%
A.I No. 15/2012. on waste landfill management	100%
A.I No. 06/2016 on conditions for selecting the location of the waste landfill construction	100%
A.I No. 21/2014 on Waste Management from the Extractive Industry and Mining	100%

Tab.1. Kosovo Law Approximation with EU Directives

Even though, Kosovo tries to endorse recycling and reuse of waste, still its problem lies within the first layer of waste hierarchy being the huge amount of generated waste. Hence, the problem should be tackled starting from the initial steps all the way to waste reuse, recycle, treatment, and final disposal. Furthermore, unattractive market for investors still remains a big challenge, especially when it comes for the recycling sector.

In order to mitigate the negative impacts of waste management on public health and environment, law proposes an adequate definition of waste cycle up to the final disposal. Besides the waste cycle,

¹⁰ Government of Republic of Kosovo. (2016). 'First Input of Institutions of the Republic of Kosovo to the European Commission 2016 Kosovo Report'. Pg. 182-183. http://mei-ks.net/repository/docs/input_i_2016_-_ang.pdf

this law takes into consideration also the trans-boundary movement of it, such as export of recyclable waste that is collected mostly by informal sector and private companies. In 2013, in Kosovo the number of these companies that were active in terms of exporting waste was 36¹¹. However, these shipment activities are allowed only if they provide economic and environmental benefits.

Besides exports, imports are also included in the law, mainly elaborating on licensing conditions and other restrictions. However, waste law excludes the emitted gases, waste and land in the timeframe of constructions of buildings, radioactive and explosive materials, pollution of water surfaces, and non-hazardous waste that comes from practices of agriculture, farming, forestry, and energy production by biomass (Law No.04/L-060). One of the key targets of Government of Kosovo is to keep track of waste management expenses and also to stimulate the citizens of Kosovo to pay waste fees in order to finance the activities of waste management. The fee levied on citizens should equal to waste production and competent authorities' expenses for the services provided. In 2015 the Ministry of Finance (MoF) lowered the VAT for some of municipal services. One of those public services involved the waste sector with VAT being reduced from 16% to 8%¹². However, there is insufficient evidence whether it's increased or decreased the collection amount of the fees in the municipal level. The Law on Waste states that the Government of Kosovo should provide the appropriate infrastructure for waste management, starting from the necessary best available technique (BAT) equipment for collection, transport, treatment and final disposal so that it can contribute to a sustainable environment. According to Law No.04/L-060, the 'Polluter Pays Principle' which is in compliance with the EU Recommendations, specifies that for a person that is part of waste management chain should be charged for the total costs and potential social externalities imposed on environment, even though there is no sufficient evidence that this principle is applicable in Kosovo. Based on the new priorities set by the Law on Waste, Kosovo seems to be positioning itself more towards recycling and further from landfilling. Therefore, domestic producers more than ever are required to design and produce eco-friendly products and use a production technology that supports recycling. Hence, the principle of 'Extended Producer Responsibility' implies the duties of any producer or owner of a good that aims to decrease the volume of waste generation who is also responsible for keeping track and treating the generated waste during the whole production cycle up to post-consumption. However, Kosovo still lags behind in basic recycling practices, such as effective projects or facilities that promote this initiative, and the requirements forth set be the last principle

¹¹ Ministria e Mjedisit dhe Planifikimit Hapësinor. (2013). "Strategjia e Republikës së Kosovës Për Menaxhimin e Mbeturinave 2013 – 2022". Pg. 35. http://mmph-rks.org/repository/docs/Strategjis%C3%AB_s%C3%AB_Republik%C3%ABs_s%C3%AB_Kosoves_per_Menaxhimin_e_Mbeturinave_-_alb._219608.pdf

¹² Instituti GAP. (2016). "Efektet e Ligjit për Tatimin mbi Vlerën e Shtuar". Pg. 3. http://www.institutigap.org/documents/13679_Ligji%20p%C3%ABr%20TVSH-%20final1.pdf

are hard to be met for a place like Kosovo. 'Extended Producer's Responsibility' remains a big challenge of MESP, whose implementation is prevented by the MoF that justifies such decision by using the pretext of Kosovo's low budget. For this reason, as MESP cannot focus on the implementation of this part of legislation, together with GIZ it is intending to draft the 'Law on Extended Producer's Responsibility' and is considering to impose a tax on products which tax will vary based on the type of the good. However to this date, this remains a work in progress.

Based in EU's waste classification, which catalogue is adopted also by Kosovo, waste can be: municipal, commercial, industrial, and medical¹³. As mentioned in the first part of this paper, considering its composition, the waste can be hazardous, non-hazardous, and solid. According to the Law on Waste, the holder of the waste needs to classify it according to the categories mentioned above. But, many sectors in Kosovo, such as medicine, do not pay much attention to the disposal manner and even less so for the classification of waste due to the absence of disposal sites constructed for that type of waste. Moreover, chemical waste coming from mining and other hard industries trace back to the pre-war period which still need to be treated. In the case of hazardous waste that the source of waste generation is not known, the costs and clearing is a competency falling under the MESP. Therefore, Law on Waste gives competences to the ministries in regards to dealing with hazardous waste management plan.

Moreover, the IPA II Programme 2015-2017, lists as one of the main priorities the construction of storage sites for the Hazardous Waste Materials (HWM) which includes the waste from the decommissioning of Kosovo A TPP and other industrial production in Kosovo. The project titled "Development of the design for Storage of Hazardous Materials" has been incorporated in the Kosovo Strategy on Waste Management 2013-2022 and in the Mid-Term Expenditure Framework, which project until now has drafted its status and management hierarchy. In order for this project to come to life, it is expected from the new government to approve it and increase its budget used for investment. But this remains a challenge as MESP and other responsible institutions lack data on the overall sector of waste management.

Furthermore, ministries can establish inter-municipal corporations. However, when designing such plan there should be a defined amount and type of waste that can be generated, collected, transported, and disposed. Ministries are also responsible for designing programs for household, business, and industrial waste collection and potential recycling. Same as with the ministry, if the source of waste generation is unknown and it takes place in public spaces, then the municipality is responsible for clearing out the space. In order to control the activities demonstrated by the waste

¹³ Assembly of Republic of Kosovo. (2012). "Ligji Nr. 04/L-060 Për Mbeturina". Neni 6. <https://gzk.rks-gov.net/ActDetail.aspx?ActID=2829>

management participants, municipality entitles inspectors so that their main task would be supervision of the quality of the service and accuracy in terms of license conditions. Whenever there is any violation of the law, then the municipal inspector can charge penalty to the violator.

The law on waste notes also the responsibilities of waste owners and the line of actors up to the producer, importer and exporter, processor, transporter, and lastly the disposer. The waste cannot be flown to the other party without that party being licensed. According to the law, the waste should be treated as predicted by the waste management hierarchy. As the waste reaches the disposal stage, based on the categorization (hazardous, non-hazard, and inert) it should be disposed in the respective landfill. Regarding the hazardous waste, it is restricted by law to be disposed without prior treatment. Furthermore, that type of waste is prohibited to be imported inside Kosovo. Same requirement are applicable for waste such as oil, batteries, electronic, tires, vehicles, medical, fluorescent pipes, construction and demolition, biodegrading, packaging waste, sludge etc. They all need special treatment before being disposed in the landfill.

Based on the Strategy of Waste Management of Republic of Kosovo 2013-2022, the mismanagement of this sector has imposed negative consequences on air, soil, water (especially groundwater), and public health¹⁴. The set goals of the strategy for the 10 year period are to expand the capacities of waste collection which is not the case thus far. Furthermore, it predicted that the current system will be improved, however no major undertakings happened in this regard by our governing authorities.

One of the objectives of the strategy is to educate the public on waste management. In order to receive great results on establishing a stable waste management, there is a need for previously mentioned stakeholders to take initiative on educating the young generations on protecting the environment. It is important to personalize the benefits of doing so for them, as for instance demonstrating the benefits that would derive in terms of improving the public health. Besides educating the public, trainings offered to the personnel working in this sector would yield good results on improving the waste system. The priorities of this strategy are to reduce the amount of waste generated, which volume has actually decreased over the timeframe of 5 years. In 2010, it was estimated that the amount of waste collected was 395,000 tons¹⁵, while in 2015 it was reduced by 75,966 tons¹⁶. According to MESP representatives, 650-700 gr/capita of waste is generated in the

¹⁴ Ministry of Environment and Spatial Planning. (2013). 'Strategy of Waste Management of Republic of Kosovo 2013-2022'. Republic of Kosovo. Pg. 8. <http://mmph-rks.org/repository/docs/Strategjia%20e%20Menaxhimit%20e%20Mbeturina%20e%20Komunale%202013-2022.pdf>

¹⁵ The World Bank. (2013). "Kosovo Country Environmental Analysis". Pg. 37. <http://documents.worldbank.org/curated/en/282361468047686579/pdf/750290ESW0P1310LIC00Kosovo0CEA0Rprt.pdf>

¹⁶ Kosovo Agency of Statistics. (2015). "Anketa e Mbeturinave Komunale 2015". Pg. 8. <http://ask.rks-gov.net/media/2492/anketa-e-mbeturinave-komunale-2015.pdf>

latest year. This information was shared to them by international organizations, such as JICA and USAID, which have been frequent donors to the waste management sector in Kosovo. However, this information is contested by Kosovo Agency of Statistics as their latest data received from the field show that the waste generated per capita reaches 900 gr. Still, MESP tends to strongly rely on credibility of the former organizations, despite the fact that KAS is one of the official institutions responsible for publishing the statistical data for Kosovo¹⁷.

Kosovo is known for its persisting environmental challenges pertaining to the energy sector, due to the pollution of air caused by the old coal-fired power plants. One of the promises coming out by the Strategy was to use waste for energy production which similar to recycling seems to not have been fulfilled and nor initiated by authorities in Kosovo. Lastly, the non-recyclable waste should be disposed in an efficient and eco-friendly manner. When considering the coal-fired power plants, the decommissioning of Kosova A and the waste that it is going to be generated from this process needs a strategic planning for the adequate manner of dealing with it. In order to implement as best as possible the current law on waste, government enlisted priorities on waste management which occur to be the synchronization of EU and Kosovo's waste law, which are:

- Spreading awareness over protection of the environment and particularly for management of waste,
- Preventing excess waste generation, restoration of the badly effected sites by this mismanagement,
- Decreasing the chances of epidemics and contamination of life sources (air, water, and soil), increasing the capacities for energy production coming from waste, recycle, constructing living spaces that efficiently treat waste,
- Investing in collection services and their zones,
- Creating environmentally friendly landfills,
- Monitoring the activities of the participants in waste management,
- Raise the fees imposed on households and businesses that operate with their services in waste management.

¹⁷ Assembly of Republic of Kosovo. (2011). Ligji Nr. 04/L-036 Për Statistikat Zyrtare Të Republikës Së Kosovës. Article 5. <http://ask.rks-gov.net/media/2023/ligji-per-statistikat-zyrtare-te-republikes-se-kosoves.pdf>

Institutional Framework of Waste Management

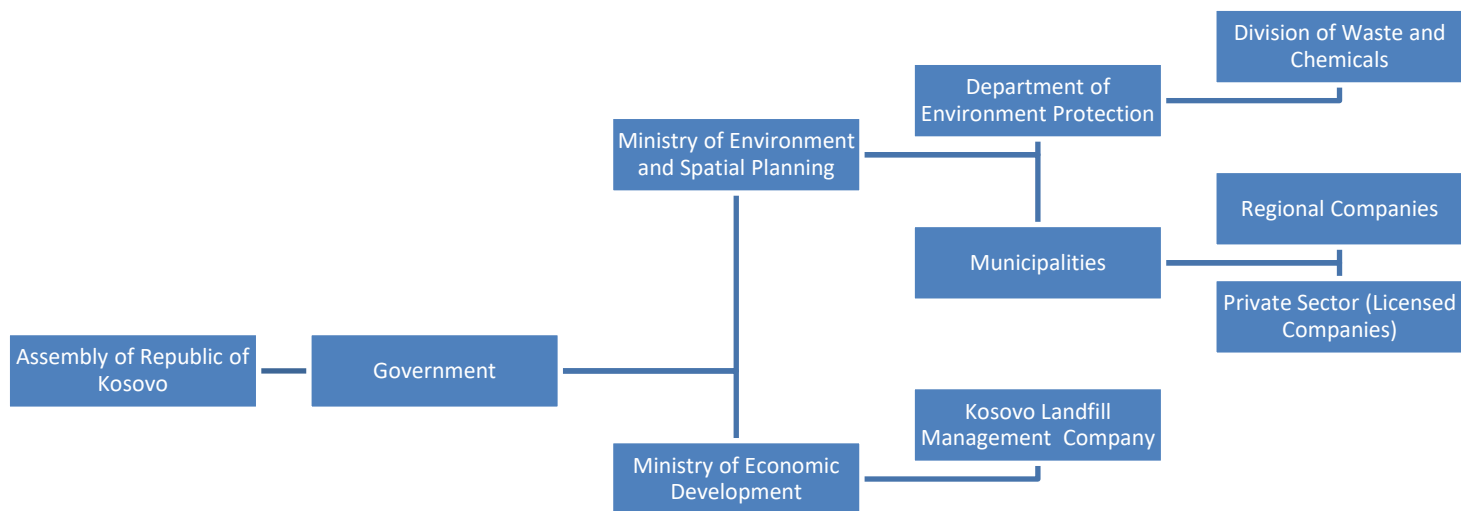


Fig. 1. Waste Management Sector Organogram

The waste management hierarchy starts with the assembly that is responsible for lawmaking, in this case the Law and Strategy on Waste. Their task is to monitor whether the implementation of the law is appropriately being executed. As for the government, it approves the strategy of waste proposed by assembly. Then, MESPP drafts both the legislation and the strategy, designs monitoring programs for waste management participants, compiles data for waste situation, etc. Moreover, MESPP locates the waste stations, sets the amount of disposal fee, and publishes the data collected in the field of the current waste situation. As for the Ministry of Economic Development (MoED), its responsibilities are to arrange the procedure of naming public enterprises and control these organizations, where as such it can influence the decision-making process. There are other ministries who are involved in the waste issue, such as Ministry of Health (MoH) who are responsible for medical waste, Ministry of Trade and Industry (MoTI) responsible for industrial waste, and lastly Ministry of Agriculture responsible of agricultural waste. However, the most problematic remain industrial waste because the facilities producing industrial waste may deal with other waste as well.

After designing and approving the legislation, municipalities design their respective waste management plans. Municipalities, which play a crucial role in the waste management chain especially for municipal waste, are obliged to provide waste infrastructure, hire trained staff with expertise in

this field, and define the hierarchy with the respective staff's competencies and responsibilities. Furthermore, they have to respect the legislation and implement it correctly. Whilst using different types of measures, they can design and give incentives to citizens in order to manage properly the disposal issue by constructing their behavior. They have to monitor both sectors, the public and the private and check whether they are complying with the rules, and also identify the informal sector participants in waste management. Municipalities are the ones that can contract licensed private companies on providing waste management services, starting from collection to final disposal of the waste. Therefore, municipalities need to monitor the quality of the services provided by these companies and check whether they are complying with the set quality standards. In this case, there rises a need of assistance from other stakeholders, namely Ministry of Local Government Administration (MLGA), which institution is responsible of supporting the provision of effective and proper waste management services to the citizens.

As most of the waste is disposed in landfills in Kosovo, there is a need for an organization to supervise and manage the disposal sites. For this reason, KLMC looks after the municipal landfills. Regional companies are stakeholders in the waste management too. They play a significant part in collecting the waste in urban and rural areas, and at times not only in one municipality but for that are geographically located close to each other and do not provide to their citizens waste management services. These regional companies are located mainly in the big cities of Kosovo. The table below links the regional companies to their respective municipalities in which they operate.

Regional Company	Municipality
KRM - Pastrimi	Prishtine
KRM Ekoregjioni	Prizren
KRM- Eco-Higjiena	Gjilan
KRM- Pastërtia	Ferizaj
KRM-Çabrat	Gjakove
KRM - Ambienti	Peje
KRM - Uniteti	Mitrovice
KRM - Standard	Mitrovice
Kompania e Mbeturinae Zvecan	Zvecan
Kompania e Ujesjellesit dhe Mbeturinae Ibri	Zubin Potok
Kompania e Ujesjellesit dhe Mbeturinae 24 Nentori	Leposaviq
Komuna Klllokot	Klllokot

Komuna Partesh	Pasjan-Partesh
Komuna Ranillug	Ranillug

Tab. 2. List of Regional Companies

The northern Kosovo municipalities such as Mitrovica, Leposavic, Zvecan, and Zubin Potok, which have their waste management established by parallel Serbian municipality and are being monitored by board members that operate under the Government of Republic of Serbia¹⁸, represent a challenge of their own. As in regards to information provision over the waste management situation, Kosovo Environmental Protection Agency (KEPA) is responsible for data information and report publication over this specific topic.

Even though they are not listed as the main stakeholders in the organogram demonstrated above, namely the public, urban planners, NGOs, education institutions, hospitals, industries and corporations (as polluters) still play a crucial role on the issues of waste management. For instance, duties of the members of community or public are expected to try and decrease the waste generation, collaborate with civic bodies and identify waste dumping (legal and illegal), and participate regularly by paying the bill for waste management to their respective municipality. One of the main tasks when it comes to the issue of waste disposal pertains to urban planners who need to precisely and effectively locate that disposal sites while designing the city plan. Besides making decisions about stationing the disposal sites, they also have to locate the facilities that are part of the waste management as closely as possible to these sites.

In regards to civil society, they should make sure to participate in issues that affect the whole community. They can raise their voices related to citizens' concerns, support and contact local authorities, organize awareness campaigns on different environmental sustainability problems, and at the same time collaborate with other NGOs and try to mitigate the consequences of waste management. But beside NGOs, educational institutions can also elaborate different topics on environmental sustainability by teaching to young generations on how to protect the environment they live in. Lastly, hard industries, corporations, and healthcare sector which are some of the biggest polluters that generate hazardous waste due to their nature of work practices are always targeted in order to moderate the generation of waste. Because they dispose big amount of waste that could be fatal to environment and humans, authorities should highly consider disposal sites and manners for these particular sectors.

¹⁸ Riinvest Institute. (2016). 'Waste Management in 16 Municipalities: Opportunities for Inter-Municipal Cooperation'.
http://www.riinvestinstitute.org/uploads/files/2016/September/20/Waste_Management_in_16_Municipalities_ENG1474375664.pdf

Financial Resources in Support of Waste Management

EU's assistance for Kosovo has taken various forms. As mentioned earlier, one of its objectives for Kosovo was to support sustainable environmental development. Kosovo does not treat appropriately the non-hazardous waste. Out of both categories of waste, the amount generated for non-hazardous waste is 97% while the hazardous one only 3%¹⁹. As in terms of generation of the municipality waste, according to the KAS, their latest data that date back to 2015 demonstrate that the amount generated was 319,034 ton²⁰. As the situation is unfavorable regarding waste management, the local authorities are more than willing and open to cooperate with international organizations and agencies in this regard. Government of Kosovo dedicates a portion of its budget to waste management however it is not able to cover all of its costs without such financial support from international grantors. While considering the monetary value dedicated to waste sector throughout the years, the national budget allocates a good portion of funding to this sector however very little is done in establishing a profound infrastructure and management. As such, the actual amount allocated to waste in 2016 was 9,816,400 EUR²¹, while it was estimated that the amount for 2017 to be around 2,910,000 EUR²². But in the national budget for year 2017, such expenses are higher, respectively 3,397,814 EUR²³. When it comes to raising funds for waste management, municipalities can do so in different manners; for instance funds provided from the municipality budget, revenue from the fees collected from households and businesses, donations, economic measures (such as taxes imposed on imports, products etc). The main motive behind these funds is for them to be used for the creation of a sustainable eco-friendly waste management. In the latest years, there was an increased interest on promoting recycling in Kosovo, especially from foreign experts. For instance, in 2016 there was a financial support given to Kosovo from the Government of France in order to improve the wastewater treatment in Kosovo. From 2014 up until now, the financial support given to Kosovo from EU only for waste management amounts to 1,052,830 EUR²⁴, while the overall financial aid equals to 645.5 million EUR²⁵ for a 6 year period. While aids coming from other donors varies in amount, for instance, Germany gave

¹⁹ Kosovo Agency of Statistics. (2016). "Anketa e Mbeturinave Industriale 2015". Pg. 8. <http://ask.rks-gov.net/media/2619/anketa-e-mbeturinave-industriale-2015.pdf>

²⁰ Pg. 8.

²¹ 'Buxheti i Kosoves per vitin 2016'. (2015). Ministria e Financave. Pg. 24. <https://gzk.rks-gov.net/ActDetail.aspx?ActID=11324>

²² Pg. 24.

²³ 'Buxheti i Kosoves per vitin 2017'. (2016). Ministria e Financave. Pg. 33. <https://gzk.rks-gov.net/ActDetail.aspx?ActID=13230>

²⁴ Calculations of the author.

²⁵ European Bank for Reconstruction and Development. (2016). 'Strategy for Kosovo'. Pg. 18. www.ebrd.com/downloads/country/strategy/kosovo-strategy.pdf

2,000,000 EUR²⁶, Japan provided 154,425 EUR²⁷, while Switzerland gave 8,000,000 EUR²⁸ solely for a project taking place in Gjakova.

Overview of the Current Waste Management Practices in Kosovo

Environmental challenges in Kosovo have been evident throughout the years which unless they become more grave, they neither improve nor mark any tangible progress in addressing them. Inability to reach the targets of EU regarding waste comes as a result of political unwillingness, lack of law implementation and prioritizing environmental problems, deficiency of expertise of workers of this sector and insufficient financial resources are some of the reasons that contribute to the worsening of the current situation in Kosovo regarding this particular problem. Nonetheless, the duty of improving the waste situation does not fall only on public sector, but also in the private enterprises that are stakeholders in the waste management, which companies by the time Kosovo enters the EU have also to conform the strict regulations imposed on them.

As the youngest European state, Kosovo has been monitored in different statewide aspects by the EU; an assistance which is seen as valuable in order to build a stable state. According to MESP, waste situation seems to have improved, however not substantially, therefore Kosovo still has a lot to do in order to establish a sustainable environment²⁹. In 2014, MESP had been highly engaged in designing a strategy for managing and collecting waste. Throughout the years, this particular institution has also recommended that the best solution for the waste management sector would be to contract only private companies; this still remains quite problematic even today.

One common way of disposing waste in Kosovo is that of landfilling, but because they were considered to be of low capacity and lacked proper investments, not all of the municipalities had a respective disposal site which engaged them in inter-municipal corporation. For this reason, the EU Commission through Progress Report for 2014 and 2016 stated that MESP must start to encourage recycling, so that the lifespan of disposal sites would increase³⁰. Despite its promotion, there was a lack of investments as Kosovo was not a target for investors. Hence, the local authorities need to do a lot of work towards attracting investors of recycling facilities and by that creating favorable conditions for

²⁶ Ministria e Integrimit Europian. (2016). 'Donor Profile'. Pg. 27. http://www.mei-ks.net/repository/docs/annualreport_donorprofiles_printready.pdf

²⁷ Pg. 30

²⁸ Swiss Cooperation Programme in Kosovo. (2015). 'Democratic Governance and Decentralization'. Pg. 7. https://www.eda.admin.ch/content/dam/countries/countries-content/kosovo/en/Project-list-February-2015-update_EN.pdf

²⁹ Balaj, I. Ministry of Environmental and Spatial Planning. Personal Communication. 22 August 2017.

³⁰ European Commission. (2014). "Raporti i Progresit 2014 Për Kosovën*". pg. 49. [http://www.mei-ks.net/repository/docs/Final_20141008-kosovo-progress-report_en_\(2\).pdf](http://www.mei-ks.net/repository/docs/Final_20141008-kosovo-progress-report_en_(2).pdf)

them. If nothing is done in relation to recycling or construction of new disposal sites, the landfills are capable of receiving waste only for the next 2 to 3 years.³¹

According to MESP, legislation has been drafted closely to the Directives of EU. A legal framework which consists of waste on law, 29 administrative instructions and 1 regulation (see appendix). However, one big problem remains the partial implementation of them by public institutions, especially when it comes to municipal waste. Back in 2012 while in the pursuit of mitigating the situation, the responsibility of municipal waste and determination of tariffs were delegated to the municipalities, which decision decentralized the waste management sector. Nonetheless, not all municipalities stand the same, such as Prizren who has been strongly supported by JICA during the last years and has established a stable waste management sector which respects all of the directives, has set its tariffs and collects the bills regularly with both public and private sector involved. Beside law implementation, the respective municipality has created a certain functional unit that deals specifically with municipal waste; a unit which every municipality is required to create by MESP but only some of them have done so by now.

In order to encourage other municipalities to follow the same example as that of municipality of Prizren, MESP in collaboration with GIZ have organized “Clean Environment Race” competition in which 17 municipalities participated³². This project included 7 garbage companies and 69% of the populations. One condition for being eligible to enter the competition was to own a municipal plan for waste management which stimulated those that did not have to compile one, as the best performer considering municipalities needs would receive an investment with the aim of undertaking actions that contribute to a more sustainable environment. The outcomes were quite desirable where the waste service network expanded for 11%, collection of fees for waste collection services increased for 5%, presence of illegal landfills decreased for 35%, and last but not least the establishment of the basic structures of local government in participatory municipalities has begun.

As Kosovo lags behind in proper waste collection, the main priority of MESP is to improve it by extensively assisting this fragment of waste management. For this reason, MESP frequently organizes campaigns for raising awareness, such as holding workshops in public schools on how to reduce the level of waste generation, where the targeted group are the younger generations. The potential solutions that MESP considers to undertake in order to mitigate the consequences of the sector are to put sanctions, subsidizing the sector, and establishing an inspectorate³³. Furthermore, the municipalities should be more rigid in terms of the quality of waste service delivered by companies,

³¹ Haxhiu, A. Kosovo Landfill Management Company. Personal Communication. 12 September 2017.

³² Balaj, I. Ministry of Environmental and Spatial Planning. Personal Communication. 22 August 2017.

³³ Personal Communication. 22 August 2017.

being those public or private, in which case the latter (known to be profit driven) should be strictly monitored so that there would be no misusages.

Overall, 60% of the citizens in the whole Kosovo are provided with basic services of waste management, while only 70% of those service receivers pay the waste bills³⁴. This low level of bill collection poses a serious problem to public and private companies on covering their operations costs, but also to the whole sector which prevents it from investing in effective projects that would benefit the waste management sector. According to the Mayor of the municipality of Pristina, starting from January 2018, waste bills will be collected together with the property tax³⁵. In other words, citizens will pay the waste fee to the municipality and not to the regional company 'Pastrimi'. As the latter is contracted to collect waste from the trash bins around the municipality, substantial parts of the city remain polluted as waste is thrown also outside of the containers. Therefore by paying the waste bill directly to the municipality, the municipality will be divided in zones so that the affected parts will be cleaned out as well.³⁶ Furthermore, the payments will contribute on establishing a new proper schedule and logistics plan for waste management in the municipality of Pristina.

This decision came as a result of the inability of companies to receive payments from their clients, namely households, businesses and institutions, which in turn create another problem which is that of the formation of illegal dumping sites. Almost 30% of waste generated is dumped in illegal sites and collected by informal sector, but as the waste producer is unknown in such case, for governing authorities this remains an inaccessible and uncontrolled fragment of waste management³⁷. Nonetheless, illegal dumping is not only carried by individuals, but also by collecting companies. As collecting companies send the gathered waste for final disposal to specific municipal sites, they have to pay a certain disposal fee per ton. Hence, in order to lower their costs they tend to evade the payment of the disposal fee by disposing waste in illegal sites.

When it comes to the landfill fee, it is an ongoing debate taking place between KLMC and MESP, as according to the former this fee is very low. This fee for quite some time has been 5.31€ which is insufficient to cover the companies costs³⁸. All of the four landfills were financed by the European Agency for Development and at that time international experts considered that the price level for landfill fee should be 8.60€, not including VAT. But, unfortunately, with the waste generation level going up, the main shareholder, namely government alongside with the Waste and Water Regulatory

³⁴ Personal Communication. 22 August 2017.

³⁵ Ahmeti. Sh. (2017, September). The Business of Waste Recycling and Green Jobs Opportunities in Kosovo. Panel Discussion in Second Green Festival, Pristina, Kosovo.

³⁶ RTK Live. (2017). 'Të Pavërtetat e Ahmetit për Bllokadë rreth Heqjes së Bërllokut'. Par. 13. <http://www.rtklive.com/sq/news-single.php?ID=208742>

³⁷ Balaj, I. Ministry of Environmental and Spatial Planning. Personal communication. 22 August 2017.

³⁸ Haxhiu, A. Kosovo Landfill Management Company. Personal Communication. 12 September 2017.

Authority (WWRA), decreased the fee to 5.26€ without considering that the factors that affect the costs for treating that extra waste which was being generated. The central public enterprise, KLMC, filed complaint about increasing this fee in which case it was raised for only 0.06 cents.

After that, their complaints about increasing the fee again barely received any answer. According to the Unit for Policy and Monitoring of the Public Enterprises, a department in the MoED, stated that due to low standards in Kosovo and social welfare, this fee did not increase as beside increasing the costs of the collecting companies, customers would be worse off³⁹. In addition, the stakeholder claimed to cover the other costs of KLMC, which participation lasted for only for 1 or 2 years and then stopped after 2015⁴⁰.

Nonetheless, in order to prevent illegal dumping, penalties should be applied by inspectors on the field. Even though the law on waste approves penalties, MESP and municipality inspectorates are inadequately staffed and resourced, while the monetary value levied on the responsible person is very low. As most of the municipalities do not have a functional inspectorate for waste, MESP highly suggests creation of such entities. Furthermore, cases that go all the way to the court never get reviewed by the judicial persons as it does not consist to be a priority considering other cases.

Just as it was previously stated, obstacles regarding waste management in Kosovo include lack of waste law enforcement and investments, ineffective and undefined policies, absence of inspection, inappropriate public habit, etc. It also lags behind in recycling as just currently 32% of collected waste in Kosovo is recyclable, but only 5% are being treated as such. The remaining waste composition consists of 40% biodegradable and the rest is other waste⁴¹. The problem of municipal waste intensifies even more during the summer season when the temperatures are high and this contributes to the creation of bad odors around living spaces and increase of toxics and diseases. Hence, the developments of new effective plans that promote circular economy do not only bring benefits to the environment, but also to the economy and social lives of citizens. Therefore, encouraging recycling activities is one of the main goals of Germany's assistance in Kosovo's municipalities. Just recently, this EU member state dedicated a fund of 3.4 million EUR to Kosovo which deposit will be used for public enterprises on upgrading their equipment, containers, and clothing for employees, etc., as they are currently extremely deteriorated⁴².

³⁹ Spahiu, F. Njesi per Politika dhe Monitorim te Ndermarrjeve Publike. Personal Communication. 22 September 2017.

⁴⁰ Haxhiu, A. Kosovo Landfill Management Company. Personal Communication. 12 September 2017.

⁴¹ KOSID. (2017). "Menaxhimi i mbeturinave përmes Ekonomisë Cirkulare, zgjidhja kundrejt degradimit mjedisor". Par. <http://kosid.org/sq/news/101>

⁴² Infobox. (2017, June). *Menaxhimi i Mbeturinave eshte i ulet dhe larf direktivave te BE-se*. <https://www.youtube.com/watch?v=JP7sFVzTMT8&feature=youtu.be&t=21m21s>

Kosovo has been struggling on managing all types of generated waste. The formal sector, composed of public and private companies, is responsible for collecting, transporting and disposing the waste. However, as informal sector has been extensively operating for a few years now in the waste management, they inflict new challenges for the formal sector. For instance, the informal sector works closely with small businesses who seek profit rather than practicing their activities for the sake of environmental benefits. This sector is mainly composed by RAE minority community. This fact too has been evident in municipality of Obiliq, where informal sector has helped a lot on improving the waste situation within the community, whose waste collection ends up in one of the biggest companies of the municipality which recycles materials, especially plastic, cans, and scrap⁴³. Within this group, child labor is very common whose work conditions are unfavorable and include high life risk.

Based on an informal interview with some teenagers, they collect cardboard from the early morning up until 6 PM, after which time they continue to work in the bazar. The maximum amount they can collect per day is 700 kg which then get transported in a small company in the center of Pristina. However, they were reluctant on elaborating the issue of payment, but they stated that once the company receives the material, it measure the weight and then pays the price per kilo. The interviewees were hesitant on telling the real price and average income they get during one day. So, informal sector has two possible ways on generating income and those are either by selling the recyclables collected to these small companies at a specific price or they can be employed by them. But during their collection activities at the waste disposal points, the informal sector tends to dump waste outside of the containers and as such it imposes difficulties regarding collection activities for the formal sector.

The bad situation regarding waste management is also as a result of undefined share of responsibilities of this sector's stakeholders which most of the time do not respect their competencies and fulfill their duties as promised to do. When it comes to waste disposal manner, Kosovo depends heavily on landfilling. Beside it being an inefficient manner of disposal, Kosovo does not apply the principle of 'Polluter Pays'. According to Eurostat statistics, in 2015 out of 319,034 ton, 99.98% were dumped in landfills⁴⁴. So if considering kilograms/capita, this would result to be 177 kg/person, or 0.48 kg/person a day. Even though the data are predicted to be generated every year and provided to Eurostat, the respective stakeholders in Kosovo report intermittently rather than on a yearly basis. Hence, lack of data poses a great threat to policy makers on making accurate estimations and taking adequate action because the severity of environmental problems remains ambiguous. The more economic

⁴³ Berisha, A. Municipality of Obiliq. Personal Communication. 31 August 2017.

⁴⁴ Eurostat. (2017). "Municipal waste by waste operations".
<http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

development we have, the more waste we will produce, hence a functioning waste management system is crucial.

Challenges and Obstacles in Kosovo's Waste Management

Having identified the main stakeholder in waste management chain, this paper elaborates further on challenges and obstacles with which all of these actors encounter, so that we can clearly see the existing problems that prevent them from delivering the services properly. Based on desk research and the conducted interviews, inability for the management chain to deliver even the basic municipal waste treatment is as a result of problems like lack of law implementation, political unwillingness, public habits, self-interests of operative companies, etc. Hence, finding the answers of such questions can significantly help Kosovo on designing effective policies which would contribute in the creation of a sustainable environment in the future, and as such secure long-term wellbeing of its citizens.

As it was previously claimed, human's activities are the main source of waste generation. Its high rate is a global concern which includes also (and especially) Kosovo, where this huge amount of waste almost totally ends up in landfills which are in horrible conditions. In Kosovo all types of waste are dumped in landfills, being those solid, hazardous or non-hazardous, in which sites no waste classification takes place. Even more, institutions which dispose hazardous waste, such as hospitals, use municipal trash bins and do not treat them prior of disposing them. As regarding oil, only some companies receive back the used oil which then can be used for their needs during winter, such as heating, or they sell it to road building companies which need it as construction material.

Considering the capital invested, a value of 10 million EUR, by EU for the construction of the Kosovo's regional disposal sites, they would normally be expected to be in a better condition and also possess the necessary gas extraction and water treatment system. Furthermore, in the latest years there has been an increase in bill collection, monetary inflows which could be used on investing on the improvement of these sites. Nonetheless, at the times of construction four of the disposal sites of Kosovo did not possess nor were eligible to obtain an integrated environmental permit by the government, because they were not constructed in accordance with standards and initially not advised by MESP. Landfill in Mirash, which is one of the largest in Kosovo, is the worst in terms of its conditions, holding substantial amount of water and large number of waste dumping, which poses a great threat to the environment and human's health. Moreover, it threatens the sustainability of the site and the lives of the workers and residents of that particular area. In the absence of such systems, the risk of groundwater contamination rises as most of the Kosovo citizens use this type of water on daily basis. While regarding the gas extraction system, the risk of fire and ignition of the waste due to the presence of methane in the landfill is not inevitable.

According to Kosovo Landfill Management Company, the accepted amount of waste in their four disposal sites, those of Prishtina, Prizren, Podujeva, and Gjiilan, but also in the transfer station in Ferizaj, was 249,440 ton⁴⁵.

Until 2019, the level of waste generation in Kosovo is estimated to increase for **17.37%**.

Based on this amount, the estimated level of waste generated until 2019 will result in an increase of 43,328 ton, with an annual growth rate of 3%⁴⁶. Therefore, the operational costs of this organization are forecasted to increase during these years, e.g. hiring additional staff where the overall salary and benefit costs will grow, maintaining the old equipment and machinery, transportation costs like oil and fuel etc. Their costs tend to increase significantly in the years 2017 and 2018 as most of their projected investments are expected to take place during these upcoming years which are forecasted to be finished by 2019; for instance, rehabilitation of the disposal sites, reinstallation of wastewater drain system, supply with new machinery and gas extraction system, construction of recycling infrastructure in Mirash (Pristina) disposal site and waste transfer station in Ferizaj, monitoring the disposal sites and opening of new sectors in disposal sites as most of them have reached their full capacities. So basically the priorities of KLMC in their plan for the upcoming three years are to monitor the disposal sites and provide properly the services to their clients which can be public and private companies, and by their new investments adapt to eco-friendly manners of disposal.

Besides public companies that were listed in previous sections, there are 15 other private companies that collect and transport waste in selected municipalities, like Pristina, Kline, Obiliq, Fushe Kosove, Prizren Rahovec, Malisheve, Gracanice etc. However, the aforementioned private companies have to be licensed by the municipality in which they provide the services. The role of these private companies are to collect, treat, recycle, and transport waste up to the disposal sites. They collect waste door-to-door and at collection points.

Private Companies	Municipality
ASDA INSAAT	Prishtinë
Benita Company, SH.P.K	Gremnik
N.P.SH. Katana	Obiliq
N.SH.T. Kanalprofis	Fushë Kosovë

⁴⁵ Kompania per Menaxhimin e Deponive ne Kosove. (2016). "Plani i Biznesit per vitin 2017-2019". pg. 9. http://www.mzhe-ks.net/npmnp/repository/docs/2359_KMDK_Plani_i_Biznesit.pdf

⁴⁶ Pg. 8.

N.SH. Xhaferi	Prizren
SH.P.K Ekodrina	Rahovec
N.T.SH. ZAHIRI	Prishtinë
N.T.SH. Krasniqi	Kaçanik i Vjetër
N.N Lindi-2	Balincë-Malishevë
N.N.T Hamiti	Balincë-Malishevë
SH.P.K. Rec- Kos	Fushë Kosovë
SH.P.K. Toifor	Prishtinë
SH.P.K VIGANI	Prishtinë
SH.P.K. Plastika	Fushë Kosovë
P.P. Rata i Pet Brata	Graçanicë

Tab. 3. List of Private Collecting Companies

In order to protect their rights and interests, the regional companies have established an association called PAMKos. However, there have been cases when the regional companies had experienced conflicts with the municipalities or even KLMC. As such, many times the KLMC prevented the public enterprises and private companies on disposing the waste in the disposal sites due to the high debt that they owe. Nevertheless, as their services are considered a public good rather than private, they continue to operate under such circumstances. On average, 60% of households pay the waste bill while the rate for the businesses equals to only 70%, therefore making regional companies not able to pay their financial obligations on time. Beside the problems of bill collecting, there are other challenges that this sector faces and prevents them from delivering properly their services, like the presence of informal sector who while looking for certain materials in the collection points they scatter the waste in that specific area outside of the bins.

Informal sector, which is indirectly involved in the waste management hierarchy, has been present in this sector for a while now. Undesirable economic and social situation in Kosovo has pushed the ones who fall below the poverty line to go out in the streets, seek and collect recyclable materials, so at the end of the day they can gain some income by selling them to small private companies with whom they normally are not in a contractual relationship. Furthermore, the profits gained by such exporting recycling companies are incomparable with what the economically effected groups get at the end of the day. This community consists mainly of minorities, such as Roma, Ashkali, and Egyptian, who work under terrible conditions with no appropriate clothing and in dangerous circumstance. Such activities have at times resulted in fatal accidents. For instance the case of the death of Elbasan Isufi who lost his life in Gjilan's disposal site when crushed by the garbage truck. Besides them looking in

municipality's garbage bins, even though unauthorized, minorities seek recyclables at disposal sites too⁴⁷. Hence, in some sites the fences of the disposal sites are damaged. There are times when they have to go twice a day on the streets or sites to collect particular waste, so that they can feed their families. At most that they can get is, on average, 5 to 6 EUR always depending on the price paid by the companies on recyclables. The collected classified waste is sent straight to the companies or at times sent to the collection points which are located at their neighborhoods. Thereafter, the recyclables are transported to private companies who then export outside of Kosovo by trucks. The targeted places for export are Albania, Macedonia, Serbia, Turkey, and Germany⁴⁸. Evident is also child labor, and the school attendance of children from the minority communities is quite low. Their activities can be considered as a consequence of ineffective waste management. Thus by taking proper decisions and implementing certain effective policies, this community can contribute in reducing the waste generation and transform Kosovo in a recycling society.

Still, transforming our society in one that recycles is not an easy task. Firstly, because we lag behind in effective education and awareness raising among community members. Secondly, there have been many recycling projects that failed, and that for the mere reason of implementing inadequate ones considering Kosovo's capacities, hence structural gaps were overlooked. Therefore a lot of work needs to be done in order to mitigate the consequences of waste management in Kosovo with certain policy tools being implemented.

Comparative Analysis

It has been argued by many researchers and agencies that the resource consumption in today's economy is highly unsustainable. During the last two decades, EU has strongly promoted environmental sustainability among their member states; for instance cutting down carbon emissions coming from vehicles and energy production or even recycling for municipality waste. By switching to eco-friendly manners of producing goods, humans do not benefit only in terms of environment but also economic. According to European Environmental Agency, in the last decade there was an increase of 50% in European's countries GDP while the Greenhouse Gases (GHGs) were reduced by 24%⁴⁹. One good sign is that there is an increased level of public awareness over the negative impacts of poor waste management, however there is still a need for concrete actions to be undertaken while using different policy tools and instruments. The latter greatly corresponds to the low developed countries,

⁴⁷ Molliqaj, L. (2017). "Vdekja e paralajmëruar". *Preportr*. <http://preportr.cohu.org/sq/hulumtime/Vdekja-e-paralajmëruar-218>

⁴⁸ Boletini, B., and Molliqaj, L. (2015). "Sot punon sot han". *Preportr*. <http://preportr.cohu.org/sq/hulumtime/Sot-punon-sot-han-75>

⁴⁹ European Environmental Agency. (2017). "Circular economy in Europe: we all have a role to play". Par. 2. <https://www.eea.europa.eu/articles/circular-economy-in-europe-we-all-have-a-role-to-play>

such as South Eastern Europe, which have a lot more to do in terms of sustainable development issues. When it comes to promotion of recycling, the production systems and consumption patterns need to change as well.

Our research demonstrates that there are many examples from the region that resulted to be successful, namely the cases of Croatia, Macedonia, Serbia, and Montenegro. For instance, Croatia, demonstrates a possible option on how to build a stable waste management by promoting cooperating among local governments. It has been done by constructing a joint collection and disposal system which operates with the collaboration of private companies and local governments.

As for the case of Macedonia, they built a joint disposal site for hazardous and infectious waste⁵⁰. Having as a priority to regulate the issue of hazardous waste disposal, this practice resulted as successful up until now. This benefits especially the touristic places as this joint disposal sites was initiated specifically by the municipalities which benefit the most from tourism. Furthermore, the success of this project was possible due to the arranged logistic system which includes three transfer stations and seven small transfer points which enables other municipalities that are in long distances to manage their waste. Five major towns are responsible for collecting and then transporting the waste. This particular project also promoted recycling.

The case of Serbia remains slightly the same as that of regional landfill in Macedonia, however it includes more transfer stations and points of collection⁵¹. Its project was funded by the EU, and based on the reports due to its 46 hectares dedicated to disposal site it resulted to be successful on mitigating the negative impacts of waste management. Just like this case, also Montenegro built a regional landfill while at the same time created recycling centers.

If the previously mentioned projects were undertaken mostly by the local governments, in Albania the waste management project was under the direction of Zadrma Association which is a representation of an inter-municipal communication. It was registered as a non-governmental organization and includes five local governments from the northern part of Albania. The association had the right to take any type of measure towards mitigating the consequences of waste management⁵². And, as seen from the examples from the region, Inter-municipal Corporation is the most frequently implemented

⁵⁰ Institute for Development Research Riinvest. (2016). "Waste Management In 16 Municipalities: Opportunities For Inter-Municipal Cooperation". Pg.28.
http://www.riinvestinstitute.org/uploads/files/2016/September/20/Waste_Management_in_16_Municipalities_ENG1474375664.pdf

⁵¹ Pg. 28.

⁵² ⁵² Institute for Development Research Riinvest. (2016). "Waste Management In 16 Municipalities: Opportunities For Inter-Municipal Cooperation". Pg. 29.
http://www.riinvestinstitute.org/uploads/files/2016/September/20/Waste_Management_in_16_Municipalities_ENG1474375664.pdf

practice, hence designing a project that promotes such corporation would potentially lead to good outcomes.

On the other hand, taking a look of other European countries that seem to do much better in terms of waste management, and especially recycling, we can see different ways of authorities dealing with such sector. For instance, Portugal has included the Mechanical Biological Treatment (MBT) which is a system that processes waste by composting or anaerobic digestion, which product then can be used for farming or even electricity and heating⁵³. Furthermore, it has adapted the national legislation conforming to that of EU Directives and it introduced landfill tax back in 2007 which seemed to increase over times. Regarding stakeholders who have certain targets to meet in relation to waste generation and recycling, a new waste management tax will be imposed on those who do not meet such goal; a tax which cannot be borne by customers. Portugal also has Extended Producers Responsibility scheme in regards to packaging.

Just like Portugal, another EU member state, Slovenia, has included the landfill tax levied to landfill operators, revenues of which tax are attributed to build up recycling sector. Slovenia adopted a couple of national environmental programmes which highly promoted waste hierarchy in order to reduce the amount of waste generated. In addition, Slovenia has embraced the pay-as-you-throw scheme; a scheme which charges the producers based on how much they generate waste⁵⁴.

Besides introducing landfill tax, some European countries went that far as they banned disposing combustible and municipal waste in landfills, e.g. Sweden and Switzerland. While countries like Belgium apply heavy penalties up to 625 EUR if households do not separate waste⁵⁵. Overall, it is crucial for governing authorities and waste management stakeholders to corporate among each other in order to deliver proper waste management services.

Conclusion

To sum up, the challenges in the waste management sector come as a consequence of ineffective implementation of the law on waste and administration instructions which burden the stakeholders with additional responsibilities, as they are the ones that have to design policies in order to mitigate the negative impacts on environment and public health. Kosovo has found itself in this position for

⁵³ European Environment Agency. (2016, October). "Portugal – Municipal Waste Management". <https://www.eea.europa.eu/publications/managing-municipal-solid-waste/portugal-municipal-waste-management/view>

⁵⁴ European Environment Agency. (2016, October). "Slovenia – Municipal Waste Management". <https://www.eea.europa.eu/publications/managing-municipal-solid-waste/portugal-municipal-waste-management/view>

⁵⁵ European Environment Agency. (2016, October). "Belgium – Municipal Waste Management". <https://www.eea.europa.eu/publications/managing-municipal-solid-waste/portugal-municipal-waste-management/view>

plenty of reasons like: rapid population growth and industrialization, undefined share of responsibilities among the stakeholders resulting in partial implementation of the law, absence of inspectorate and technological methods for waste treatment and disposal, high dependency on donors for financial support, and last but not least improper habits of citizens regarding waste generation and disposal issue.

If no immediate action is taken, negative impacts on environment and public health will harden even more for the current and next generations. Beside environmental degradation, destruction of aesthetics, bad odors, potential explosions and property damage, public health is put at risk with many diseases spreading among the community living in the polluted life sources, such as water, air, and soil. The most common diseases include nervous system, skin, respiratory system, heart, and kidney. Regarding waste management, EU trends move towards the application of economic instruments, e.g. levying fees or tariffs for waste cycle, subsidizing potential recycling firms, designing trading schemes for waste emissions coming from the production of waste, etc. Basically, the priorities set by EU policies in regards to waste management is reduction of the overall waste level within its member states, encourage reuse of waste and its trading under strict regulations, adequate disposal, etc., so that when waste is thrown into the environment, it is not harmful. As per hazardous waste, first, there needs to happen the identification of the waste type from the waste owner, tactics and goals for preventing the generation of these waste, then apply economic incentives, and lastly define the waste producer's responsibilities and influence the consumer's behavior towards goods that generate small amount of waste.

With the aim of mitigating the consequences of malpractices of waste management, government of Kosovo in its legal framework has enlisted priorities regarding this sector which consist of awareness raising over the protection of environment, preventing high rates of waste generation, restoring existing disposal sites and investing in eco-friendly landfills, increasing the capacities for energy production coming from waste, investing in the network and infrastructure of waste management, strict monitoring of the stakeholders, and lastly raise the fees levied on households and businesses. When it comes to fees imposed on waste service receivers, starting from 2018 the waste bills will be collected together with the payment of the property tax. This is thought to help the municipality on providing effective waste management services and cleaner environment, as throughout years one of the biggest challenge of garbage collection companies remains bill collection from the receivers of such services. Other challenges of the sector involve the absence of inspectorate, low capacity landfills which will be closed for the next 2-3 years, informal sector and child labor, etc.

Waste management sector in Kosovo is financed mainly through donors, who also express their interest on establishing a sustainable environment on different forms. Lately, the main stakeholder in

collaboration with international German donor organized a competition which gathered 17 municipalities, where one of the most desirable outcome was that of municipalities designing their plan for waste management within the community. Furthermore, the bill collection was raised and slight improvements were seen in the participatory municipalities. Even though, legal framework for waste management was quite approximated to the EU Directives, there is still a need to draft new administration instructions, for instance 'Extended Producer's Responsibility' is not applicable yet in Kosovo.

As Kosovo recycles only 5% of recyclable waste, by 2020, it is impossible for it to reach the 50%; a target set by EU on reducing the waste generation and encouraging recycling. Hence, Kosovo can take different approaches on mitigating the situation of waste management, either by properly sharing the responsibilities or defining policies and therefore promote environmental sustainability.

Recommendations

In order to see positive trends and improvements regarding environmental challenges in Kosovo, especially waste management, designing and implementing different measures and tools would enable the municipalities to mitigate the negative effects of this particular sector. Fortunately, Kosovo has a legislation, strategy, and plan on waste management and defined institutional framework, but still few years since its compilation it struggles with the enforcement of law. Taking into consideration all the factors mentioned throughout the paper, Kosovo can undertake some affordable and realistic solutions in terms of waste management, which are listed below:

1. *Create a functional inspectorate* which unit would add value to the effort of establishing environmental sustainability in Kosovo, specifically waste management, by identifying and eliminating illegal disposal sites, while also applying penalties to citizens and companies violating the laws. Actions performed by inspectors are central to the regulation of the sector. However, both inspectorates in Kosovo, that of MESP and municipality, are not well equipped with human and financial resources. In this regards, MESP can accelerate the implementation of 'Green Police', which project is thought to enforce the implementation of the laws in power and promote adequate spatial planning. Furthermore, it would intervene during the times of natural disasters, as well as in the cases of emergencies that would be prone to destroy environmental surroundings.

2. *Construction of new disposal sites* consisted to be one of the recommendations coming out from KLMC, which would contribute on environmental sustainability. The capacity of the four existing disposal sites is 3 more years of receiving waste. Hence, opening new disposal sites would be favorable, however they should be in compliance with the standards of EU. In contrary to the current four disposal sites, the new ones should have adequate systems and environmental permit. Meaning

that the location should be planned ahead by urban planners so that no community is affected by the side-effects of landfilling. By any moment, this should not imply heavy reliance on landfills rather there should be recycling practices taking place as well.

3. *Encourage the establishment of credible information system*, which indicated periodic data reporting and monitoring of waste management stakeholder; a component of this sector that still remains poor in quality and quantity. Data reporting in Kosovo has happened rather sporadically. This prevents policymakers on making accurate projections for planning purposes and taking actions. Moreover, it cannot measure the performance of the stakeholders. A good information system would involve MESP and municipalities which directly would provide each other with data regarding the current waste situation in the community and hence take immediate actions whenever needed.

4. *Increase the capacities in central and local level*, being that human or financial resources. Beside human and financial resources, administrative capacities at central and local level is weak. Hence, taking into consideration the discussions with the stakeholders, there is a need for the municipalities to have special units that deal particularly with municipal waste which only one of them has already dedicated waste management staff in this aspect. Furthermore, the share of responsibilities and duties should be clearly defined, so there would be no interference in each other's competences.

5. *Subsidizing recycling companies and those of special waste*, like oil, vehicles, tires, etc., would encourage circular economy within the community. At the meantime, giving incentives to citizens on classifying waste at source, which waste would be received by subsidized companies would add value to the cycle. For instance, deposit-refund system would be suitable. As for the special waste, which fragment of waste management has pretty much stagnated, subsidies could be provided to certified companies that would collect and treat properly such waste that at times could be quite dangerous and impose great threat to community.

Nonetheless, there are risks and obstacles related to the implementation of such policy solutions. There can still be political unwillingness of implementing the recommendations. The local government can continue to operate under undefined strategic planning for the mitigation of waste management, hence not fulfilling the interest of the public. The risk of engaging private companies that have private interests in mind rather than public and do not bring any benefit to environmental sustainability, as seemingly the financial benefits remain the main driving force.

Appendix

Legal and Strategic Framework of Waste Management

- Ligji për mbeturina (Ligji Nr. 04/L-060),
- Direktivat e BE-së për Mbeturina dhe Kimikate,
- Strategjia për Menaxhimin e Mbeturinave 2013-2022,
- Plani për Menaxhimin e Mbeturinave 2013-2017,
- Planet Lokale për Menaxhimin e Mbeturinave,
- Udhëzim Administrativ (QRK) Nr.08/2017 Për Menaxhimin E Deponive Të Mbeturinave,
- Udhëzimi Administrativ (QRK) Nr. 06/2016 Mbi Kushtet për Zgjedhjen e Lokacionit dhe Ndërtimin e Deponisë së Mbeturinave,
- Udhëzim Administrativ MMPH - Nr.01/2015 për Listën e OECD-së për Mbeturina,
- Udhëzim Administrativ MMPH -Nr. 05/2015 për Menaxhimin e Bifenileve dhe Trefenileve të Polikloruara dhe Mbeturinave me PCB dhe PCT,
- Udhëzim Administrativ MMPH - Nr. 07/2015 për Menaxhimin e Mbeturinave Nga Ndërtimi dhe Demolimi i Objekteve Ndërtimore,
- Udhëzim Administrativ MMPH - Nr. 10/2015 për Trajtimin e Mbeturinave Nga Produktet Medicinale,
- Udhëzimi Administrativ MMPH - Nr. 14/2015 për Ndëshkimet me Gjoka Mandatore,
- Udhëzim administrativ MMPH - Nr. 15/2015 për Menaxhimin e Mbeturinave nga Gypat Fluoreshent që Përmbajnë Merkur,
- Udhëzim administrativ MMPH - Nr. 22/2015 për Menaxhimin e Mbeturinave që Përmbajnë Azbest,
- Udhëzimi Administrativ Nr. 07/2014 për Kompetencat e Zotëruesit të Mbeturinave, Prodhuesit dhe Importuesit të Produktit,
- Udhëzimi Administrativ Nr.09/2014 Licenca për Menaxhimin e Mbeturinave,
- Udhëzim Administrativ MMPH - Nr. 20/2014 për Menaxhimin e Mbeturinave Biodegraduese,
- Udhëzim Administrativ MMPH - Nr. 21/2014 për Menaxhimin e Mbeturinave Nga Industria Ekstraktive dhe Minerave,
- Udhëzim Administrativ MMPH – Nr. 25/2014 për Menaxhimin e Mbeturinave Nga Paisjet Elektrike dhe Elektronike dhe Kufizimin e Përdorimit të Substancave të Rrezikshme në Paisjet Elektrike dhe Elektronike,
- Udhëzim Administrativ MMPH - Nr.26/2014 për Menaxhimin e Mbeturinave nga Bateritë dhe Akumulatorët,
- Udhëzim Administrativ MMPH - Nr. 27/2014 për Menaxhimin e Mbeturinave nga Ambalazhet dhe Paketimet,
- Udhëzim Administrativ Nr. 05/2013 për Menaxhimin e Vajrave të Përdorura dhe Mbeturinave me Vajra,
- Udhëzim Administrativ Nr. 13/2013 për Katalogun Shtetëror të Mbeturinave,
- Udhëzim Administrativ Nr. 16/2013 për Vlerat Kufitare të Përqendrimeve për Komponentet e Rrezikshme në Mbeturina,
- Udhëzim Administrativ (MMPH) Nr. 22/2013 për Menaxhimin e Mbeturinave Medicinale Humane dhe Veterinare,
- Udhëzim Administrativ Nr. 23/2012 për Menaxhimin e Gomave Jashtë Përdorimit dhe Mbeturinat e Gomës,
- Udhëzimi Administrativ Nr. 19/2012 për Menaxhimin e Automjeteve Mbeturinë dhe Komponentët e tyre,

- Udhëzimi Administrativ Nr.20/2012 për Eksport, Import dhe Transit të Mbeturinave,
- Udhëzimi Administrativ Nr. 05/2008 për Administrimin me Mbeturinat Medicinale,
- Udhëzimi Administrativ Nr. 06/2008 për Administrimin e Mbeturinave të Rrezikshme,
- Udhëzimi Administrativ Nr.12/2008 për Asgjësimin e Mbeturinave të Produkteve Medicinale,
- Udhëzimi Administrativ - Nr. 36/07 për Ambalazhin dhe Ambalazhet Mbeturinë,
- Udhëzimi Administrativ Nr. 39/07 për Administrimin e Mbeturinave nga Pajisjet Elektrike dhe Elektronike,
- Udhëzimi Administrativ - Nr. 80/07 për Mbeturinat nga Bateritë dhe Akumulatorët e Shpenzuar,
- Rregullore Nr. 02/2012 për Administrimin e Mbeturinave Minerare.ⁱ

ⁱ Received from The Office of Prime Minister. Web. http://www.kryeministri-ks.net/repository/docs/REGJISTRI_I_AKTEVE_NENLIGJORE._P%C3%ABrditesuar_m%C3%AB__20..10.2017.pdf