EUROSAI
Working Group on the Audit of Funds Allocated to Disasters and Catastrophes

The Accounting Chamber
Supreme Audit Institution of Ukraine

JOINT REPORT

on Results of the International Audit on Waste Management and Utilization

2020

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SUPREME AUDIT INSTITUTIONS PARTICIPATING IN THE INTERNATIONAL AUDIT

This coordinated audit was conducted by supreme audit institutions (SAIs) of the Republic of Moldova, the Republic of Serbia and Ukraine in the framework of the EUROSAI Working Group on the Audit of Funds Allocated to Disasters and Catastrophes activities. The audit coordinator is the SAI of Ukraine.

This audit facilitated the sharing of knowledge and experience between our respective SAIs in order to achieve the overall objective of assisting national governments concerning further steps towards the proper waste management. Inappropriate waste management poses a threat to the environment and human life and health. It is also the cause of environmental and man-made disasters, including fires and ecosystem pollution.

The international audit demonstrated the cooperation of the SAIs of Ukraine, Moldova and Serbia aimed at achieving a common goal, and is also based on open communication and professional excellence.

The Accounting Chamber of Ukraine,
the Chair of the Working Group on the Audit of Funds Allocated to Disasters and Catastrophes

Chairman
Valeriy Patskan

The Court of Accounts of the Republic of Moldova

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The State Audit Institution of the Republic of Serbia

President
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EXECUTIVE SUMMARY

The findings and conclusions of the cooperative audit report were based on individual national audit reports, which were compiled by **the SAIs of the Republic of Moldova, the Republic of Serbia and Ukraine.** These national audits were carried out in the field of household, industrial and other hazardous waste management, which can pose a serious danger to human health and the environment, as well as lead to environmental and man-made disasters.

✓ **Relevance.** Inappropriate waste management poses a threat to the environment and human life and health. It is also the cause of environmental and man-made disasters, including fires and ecosystem pollution.

✓ **The key conclusion.** The waste management system today does not minimize potential threats to the environment and the population of countries, as well as could not prevent the occurrence of environmental and man-made disasters.

✓ **It was recommended** that governments should strengthen their efforts to move from the linear economy to a circular, based on maximum waste processing and the creation of an integrated waste management system in accordance with the EU's waste management hierarchy.

✓ **Expected Result.** Improving waste management, and, as a result - improving the public health, the protection of environment and disasters prevention.

National audits investigated entities that had management decision-making powers and were responsible for waste management.

The aim of national audits was to assess the state and effectiveness of the waste management system in countries of SAIs– participants of the international audit.

The joint conclusion is based on the results of national audits, which revealed inconsistencies/gaps and problems within the existing household, industrial and hazardous waste managing systems. Hesitation with solving these problems will have a negative impact on the country's environment and population health.

The results of national audits showed: for countries whose SAIs participated in the international audit, there are common inconsistencies/gaps and problems within the existing waste management systems:

a) lack of an integrated, event-based management hierarchy and mechanism for extended producer responsibility, a waste management system that is used in the European Union. As a result, the existing waste management system does not minimize potential threats to the environment and the population of countries, as well as could not prevent the occurrence of environmental and man-made disasters;

b) a significant part of waste (80 – 95 %), which are generated annually in the territories of the countries, remained at locations where the waste was produced or disposed of in landfills and rubbish dumps. Only a small part of waste (3 – 10 %) transferred to the procurement points of secondary raw materials for further treatment. The construction of temporary storage facilities for hazardous and other wastes, as well as their processing facilities, is not carried out. At the same time, landfills and rubbish dumps occupy significant territories. As a result, territories are clogged with waste, in particular household waste, which can lead to garbage collapse at both the regional, state and interstate levels. In addition, governments to bear the additional costs of responding to emergencies that occur as a result of environmentally hazardous waste management, and the risks of social tension in society and the concern of neighboring countries as a result of transboundary movement of waste are create;

c) national regulations on waste management are incomplete and uncoordinated, including with international law and standards, in particular in the European Union. Moreover, association agreements with the European Union determine compliance by countries that have entered into such agreements with environmental safety norms and standards. Methodologies for planning and implementing waste control are also not developed. Generally Planned activities that are aimed at more efficient waste management planning are unfulfilled;

d) the activities of authorities in the field of waste management, including due to their significant amount, are insufficiently effective and coordinated. As a result, state environmental control is not effective enough, which leads to high risks of non-compliance by individuals and legal entities with the requirements of legislation in the field of waste management. The level of awareness of citizens and business entities with the requirements of the legislation in this area, and responsibility of these persons is also insufficient;

e) national governments provide funds from state budgets to achieve the goals defined by national government waste management policies. However, due to untimely authorized bodies and officials' management decisions, part of funds was not used and returned to the budget, or was used for other purposes.

At the same time, the state ability to solve existing problems in the field of waste management depends on the effectiveness of the direction and further utilization of funds. In particular, to ensure the complete collection of household waste, its maximum processing and reduction of buried in landfills and rubbish dumps.

The results of the cooperative audit indicate the need to strengthen the governments' efforts to move from the existing linear economy to a circular based on the maximum processing of waste generated in the territories of countries as well as the creation of an integrated waste management system in accordance with the EU waste management hierarchy in order to reduce the negative impact on the environment, public health and prevent the occurrence of environmental and man-made disasters.

If you do not ensure the rational handling and disposal of waste, our planet will turn into one huge garbage bin ...

INTRODUCTION

The proper resolution of waste management issues resulting from human activities is one of the most important problems of the modern world.

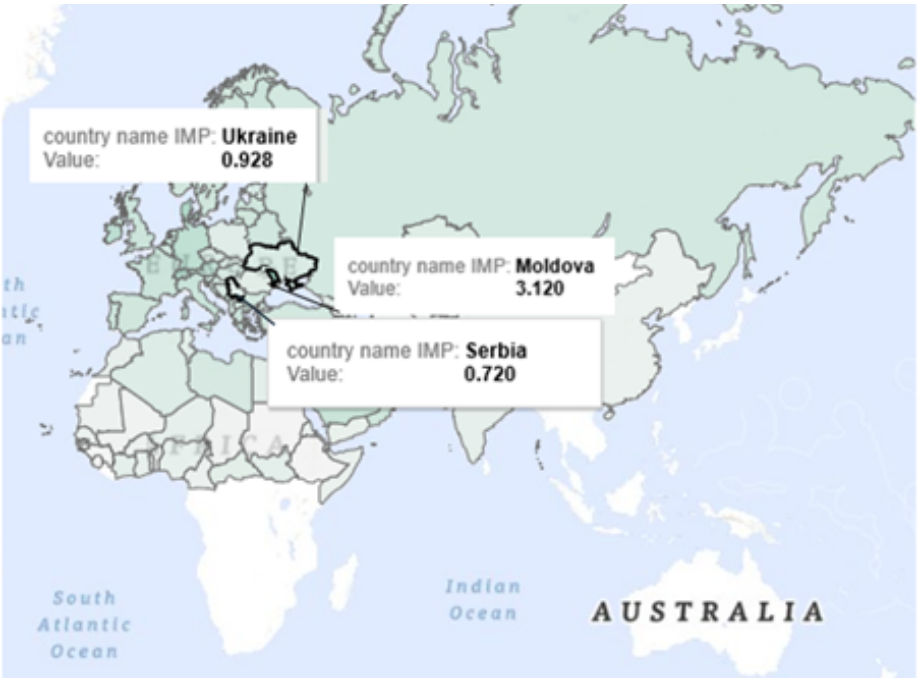
Around the world, waste generation rates are rising.

According to World Bank[1] estimates, today the amount of solid household waste annually generated in the world is at least 2 billion tons, which is one third of all waste that is not managed in an environmentally friendly way. In the countries of Europe and the Central Asia, the amount of solid waste annually generated is almost 400 million tons.

The rate of waste generation is also increasing. According to the above estimates, by 2030, the world is expected to generate 2,6 billion tons of waste annually. By 2050, waste generation across the world is expected to reach 3,4 billion tons. In the countries of Europe and the Central Asia – 440 and 490 million tons, respectively.

In countries of SAIs–participants on this international audit, the annual generation of municipal solid waste today is [2]: in Serbia – 2,3 million tons (0.720 kg of waste per person per day); Moldova – 5 million tons (3,240 kg per person per day); Ukraine – 15 million tons (0.928 kg per person per day) (Figure 1).

Figure 1. Waste generation per capita, 2016 (kg / person / day)



Source: Based on http://datatopics.worldbank.org/what-a-waste/.

1 http://datatopics.worldbank.org/what-a-waste/ What a Waste 2.0 : A Global Snapshot of Solid Waste Management to 2050 // https://openknowledge.worldbank.org/handle/10986/30317.

2 http://datatopics.worldbank.org/what-a-waste/ (database of What's Waste 2.0, which was updated in 2018 and contains information on 105 countries).

According to the Environmental Performance Index 2018[3], among the 180 countries in the world, Serbia ranks 84th, Ukraine – 109 and Moldova –112. This indicator allows us to assess at the national level how close countries are to the established goals of environmental policy. Switzerland (1 place), France and Denmark take the lead in this rating.

✓ ***Reference.***

Waste generation: per capita, 2016:
Switzerland – 1,982 (kg / person / day);
France – 1,378 (kg / person / day);
Denmark – 2,172 (kg / person / day).

An increase in waste that is not managed in an environmentally sound manner leads to increased levels of water, air and soil pollution. The negative impact on human life is increasing. Biodiversity is being destroyed. Risks of man-made and natural emergencies are increasing. State borders are not a factor in restraining such processes, and therefore the problems that arise as a result of inappropriate waste management become global. A significant negative impact on the environment, in particular to waterways and ecosystems, today is caused by plastic waste.

Impact of poor waste management on the ecosystem
Source: Open Internet Resources.

Supreme Audit Institutions around the world have recognized the problems of inappropriate waste management. Given their global nature, in the framework the EUROSAI Working Group on the Audit of Funds Allocated to Disasters and Catastrophes activities for 2015–2017 and 2017–2020, the Supreme Audit Institutions agreed to conduct an international coordinated audit.

The Common Position on Cooperation Within the International Coordinated Audit on

[3] https://epi.envirocenter.yale.edu/downloads/epi2018policymakerssummaryv01.pdf.

Waste Management and Utilization, was signed by the SAIs of Ukraine and the Republic of Moldova. The report also includes contributions from the SAI of Serbia from recent audits performed in this area. The audit was coordinated by the Accounting Chamber of Ukraine – the Chair of the EUROSAI Working Group on the Audit of Funds Allocated to Disasters and Catastrophes.

The methodology for conducting national audits was in accordance with INTOSAI International Auditing Standards (ISSAI) and Guidance (GUID), in particular ISSAI 100 «Fundamental Principles of Public-Sector Auditing», ISSAIs 300, 3000, GUID 3910, GUID 3920 on performance audits, GUID 9000 «Cooperative Audits between SAIs» and national audit standards and/or Guidelines of SAI-participants of the audit.

Collaboration between the SAIs-participants of the audit was carried out in the form of national audits, taking into account the purpose and subject of the international coordinated audit, within the activities of the EUROSAI Working Group on the Audit of Funds Allocated to Disasters and Catastrophes.

National audits were conducted in accordance with the national programs of the SAI-audit participants in the overall coordination of the Accounting Chamber of Ukraine. The SAIs-audit participants could make independent decisions to evaluate or expand the subject, issues, and scope of the audit at the national level.

The information, conclusions and recommendations of the national audits are presented in this joint report.

The SAIs the Republic of Moldova, of the Republic of Serbia and Ukraine, as participants of this international audit, identifying inadequate waste management in their countries, have joined and directed their efforts to raise awareness of authority and responsibility, which will improve the waste management system and, as a result – improving public health, protect the environment and prevent disasters.

JOINT CONCLUSIONS AND RECOMMENDATIONS OF THE INTERNATIONAL AUDIT

SAIs of the Republic of Moldova, the Republic of Serbia and Ukraine, based on the results of national audits in the field of household, industrial and other hazardous waste management, which can pose a serious danger to human health and the environment, as well as lead to environmental and man-made disasters, recognizing the importance of the problem of handling waste and its disposal, according to the results of the joint report, came to the following joint conclusions:

1. The governments of the country are taking measures to reduce and remove waste, including hazardous (unsuitable pesticides) and disinfecting land from persistent organic pollutants. However, such measures do not completely solve the problems of waste management. Existing systems of environmental and technological safety of the population in countries need to increase their effectiveness.

2. National regulations on waste management are incomplete and uncoordinated, including with international law and standards, in particular the European Union. Moreover, Association Agreements with the European Union determine compliance by countries that have entered into such agreements with environmental safety norms and standards. Also, relevant national waste management strategies that effect on environment are not approved. There are also no methodologies for planning and implementing waste control. Generally, planned activities that are aimed at more efficient waste management planning are unfulfilled.

The governments of the countries are adopted a number of regulatory acts in the field of waste management on the proposals and recommendations of the SAIs that were provided as a result of national audits. However, national legislation remains irreducible in full compliance with the provisions of European Union legislation and standards**.**

3. The activities of authorities in the field of waste management are not sufficiently effective and coordinated, in particular due to their significant amount. As a result, the state environmental control is not effective enough, and therefore there are high risks of non-compliance by individuals and legal entities with the requirements of legislation in the field of waste management. The level of awareness and responsibility of these persons is also insufficient.

4. National governments provide funds from state budgets to achieve the goals defined by national government waste management policies. However, due to untimely authorized bodies and officials' management decisions, part of them was not used and returned to the budget, or was utilized for other purposes. As a result, the ability of countries to solve existing problems in the field of waste management, in particular in ensuring the complete collection of household waste, its maximum processing and reducing the amount of buried in landfills and rubbish dumps, is not sufficient.

5. There are no corresponding to international standards capacities for the processing, treatment and disposal of hazardous industrial and other wastes in countries, which does not contribute to the creation of an integrated waste management system.

A significant part of waste (80–95 %), which are generated annually on the territories of the countries, remained at locations where the waste was produced or disposed of on landfills and rubbish dumps. Only a small part of waste (3–10 %) transferred to the

procurement points of secondary raw materials for further treatment. Landfills and rubbish dumps occupy significant territories, therefore, are risks of negative impact on the environment and human activity. There are also high risks of emergencies associated with improper waste management and further incurring additional costs for their elimination.

The social tensions in society are also growing, as are the concerns of neighboring countries over the transboundary movement of waste.

Recommendations

The SAIs-audit participants recommend to their governments increase efforts for the wider implementation of legal and economic mechanisms aimed at preventing or reducing the generation of waste and its maximum recycling (reuse).

To this end, it is proposed to develop and take following measures:

1. To strengthen coordination, interaction and responsibility of state authorities in matters of waste management, as well as monitoring the effective implementation of its functions.

2. To alignment of national regulations in the field of waste management with the requirements of international law, in particular, certain Association Agreements with EU countries.

3. To strengthen the role of state environmental control, including in the field of waste management.

4. To increase citizens and entities awareness with requirements of waste management legislation. Increasing responsibility for non-compliance with this legislation by amending administrative and criminal law. Take into account the costs that must be incurred to eliminate the consequences of pollution and restore the environment when determining the losses caused to the environment by various types of waste.

5. To implement of a system of extended producer responsibility: on the principle of «polluter pays».

6. To implement of a packaging waste collection and return system, defining the financing arrangements for relevant activities, a list of obligations of packaging waste producers, requirements for packaging labeling and the use of eco-packaging. A ban on the use of disposable plastic tableware and limit the use of plastic packaging.

7. To implement of the latest environmental and low-waste production technologies and economic mechanisms for stimulating business entities up to:

- reduction of harmful emissions and production wastes;
- creation of facilities for processing, treatment and disposal of hazardous, industrial and other wastes that meet international standards.

KEY FINDINGS OF THE INTERNATIONAL AUDIT

As defined in the Directive 2008/98/EC of the European Parliament and of the Council[4] on waste and repealing certain Directives, «waste management» means the collection, transport, recovery and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker.

✓ ***Reference.***

In 2008, the European Union adopted the revised Directive on waste, the four waste directives of 2018, as well as the decisions of 2019. These directives and decisions establish new obligations for Member States on waste management, as well as waste management objectives.

Directive (EU) 2018/849 of the European Parliament and of the Council of May 30, 2018 Amending Directive 2000/53/EC on End-of-life Vehicles, 2006/66/EC on Batteries and Accumulators, and 2012/19/EU on Waste Electrical and Electronic Equipment.

Directive (EU)2018/850 of the European Parliament and of the Council of 30 May 2018 amending Directive 1999/31/EC on the landfill of waste.

Directive (EU)2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste.

Directive (EU)2018/852 of the European Parliament and of the Council of 30 May 2018 amending Directive 94/62/EC on packaging and packaging waste.

Commission Implementing Decision (EU) 2019/665 of 17 April 2019 amending Decision 2005/270/EC establishing the formats relating to the database system pursuant to European Parliament and Council Directive 94/62/EC on packaging and packaging waste.

Commission Implementing Decision (EU) 2019/1004 of 7 June 2019 laying down rules for the calculation, verification and reporting of data on waste in accordance with Directive 2008/98/EC of the European Parliament and of the Council.

The European Commission has announced amendments to the current EU regulations - the EU Sector Waste Directive, which will, first and foremost, set new goals for EU member states and candidate countries for the collection and recycling of all waste streams. The obligations of member states and candidate countries to join the EU as soon as possible to fully harmonize national legislation with the new EU regulations.

[4] Directive 2008/98/EC of the European Parliament and of the Council of 19 Nov 2008 on waste and repealing certain Directives.

The international hierarchy of waste management (by priority) is shown on Figure 2.

Figure 2. International waste management hierarchy

Source: The Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives.

The highest priority in the waste management hierarchy is the **prevention** of waste generation or the minimization of generation, that is, the greatest efforts should be aimed at reducing the volume of waste generation and reducing the degree of hazard.

The audit showed that only through sound waste management can the health of the population and the environment, as well as natural resources, be protected.

Waste management in the EU is based on the reuse of waste, the continuous reduction of the quantity and toxicity of the waste, insisting on the processing and purchase of products made from recycled materials.

According to EU directives, recycling (the third priority in the waste management hierarchy) provides important economic and social benefits: it generates economic growth, stimulates innovation, creates jobs and helps ensure the availability of critical resources.

Recycling is vital for the main priority of European and global politics, for the **transition to a circular green economy, instead of the existing linear economy,** it will generate a healthy environment for present and future generations.

✓ ***Reference.***

*In the world accentuate a five-stage waste management system based on the **priority of waste prevention.** If prevention fails - efforts are made to **re-use.** If this is not possible, **recycling** is carried out (materials from waste are processed into products, materials or substances).*

***Recycling** includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.*

*When recycling is not possible, **other types of waste utilization are used,** including energy recovery or processing operations for materials that will be used as fuel or materials for backfilling.*

*In the absence of opportunities to carry out previous operations, waste **is disposal** - it is buried in specially engineered landfill and destroyed (rendered harmless) at facilities that do not meet environmental standards.*

✓ ***Reference.***

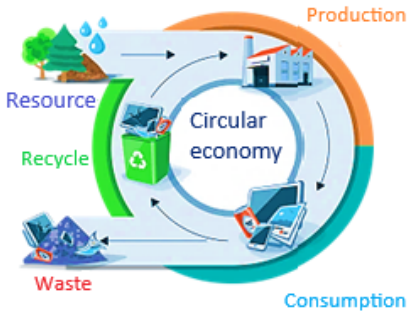
A circular green economy *(often referred to simply as «circularity») is an economic development model based on the restoration and rational consumption of resources, an alternative to the traditional, linear economy. It is characterized by the creation of new alternative economic approaches, the task of which is to minimize the negative human impact on the environment. That is an economic system aimed at eliminating waste and the continual use of resources. Circular systems employ reuse, sharing, repair, refurbishment, remanufacturing and recycling to create a close-loop system, minimizing the use of resource inputs and the creation of waste, pollution and carbon emissions.*

A linear economy *traditionally follows the «take-make-dispose» step-by-step plan. This means that raw materials are collected, then transformed into products that are used until they are finally discarded as waste. Value is created in this economic system by producing and selling as many products as possible.*

The economic turnover aimed at the linear economy used in the countries of SAIs – participants on international audit, shown on Figure 3, the circular economy aimed at waste processing, which is used in the EU countries - Figure 4.

Figure 3. Linear economy

Figure 4 Circular economy



Source: Reports on waste management systems used in EU countries/SAI of the Republic of Moldova.

In particular, the aforementioned Directive obliges EU member states to develop and implement waste management plans based on the waste management hierarchy, main principle – «polluter pays», that is, the owner, previous owner or person who produces the waste has to reimburse the costs of waste management goods, waste should be used as recyclables.

1. *Waste accumulation and generation on the territory of the countries - international audit participants*

The conducted national audits on household, industrial and other hazardous waste management indicate: significant amount of various types of waste, including hazardous, have been accumulated and annually generated in the countries of SAIs - international audit participants.

It should be noted that waste accumulates not only in specially designated places, but also in unauthorized waste dump, which are illegal and dangerous.

Thus, a national audit conducted by the SAI of Ukraine found that as of January 1, 2019, almost 13 billion tons of waste have been accumulated in Ukraine, including 12.2 million

✓ ***Reference.***

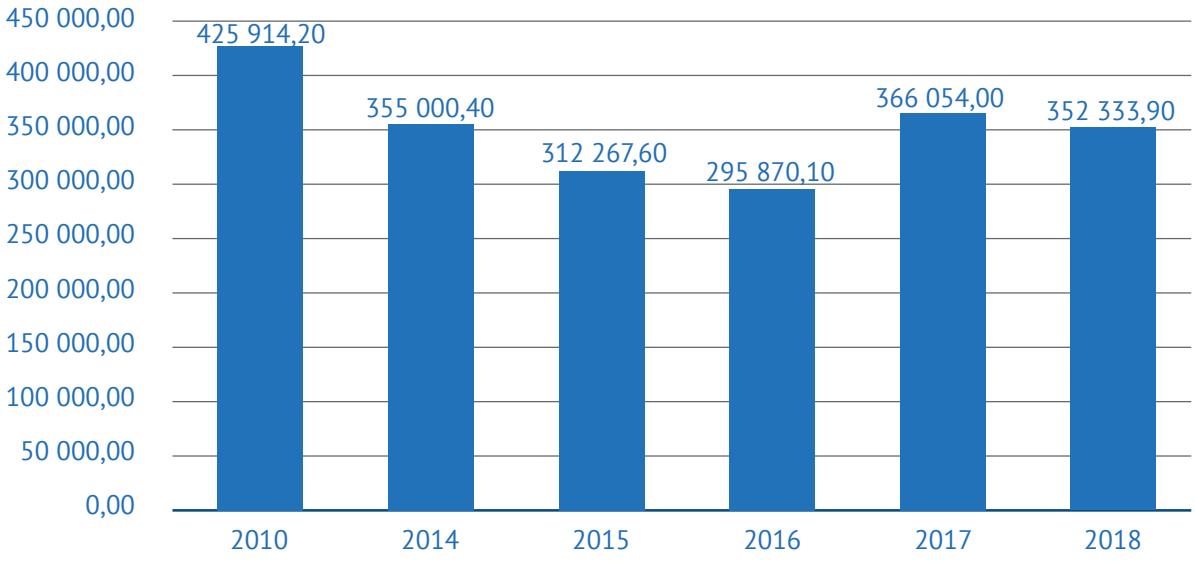
Unauthorized waste dumps are *a source of intense pollution of land, atmosphere and groundwater, lead to the alienation of lands, violation of the territory and changes in terrain during construction, possible activation of exogenous processes, changes in hydrogeological characteristics and conditions of surface runoff, the risk of erosion, increased loads on soils, the formation of specific technogenic zones, pollution soils with oil products. Wastes are not kept at unauthorized dumps, which makes it impossible to ensure the sanitary and epidemic well-being of the population, the environmental safety of the environment, and the prevention of the development of dangerous geological processes and phenomena.*

tons I–III grades hazardous wastes. Only in 2018, Ukraine generated 352 million tons of waste, or 8 tons per capita (Diagram 1).

At the same time, according to the Ecology map[5] (interactive) data, unauthorized dumps were identified in Ukraine. 315 applications were received about unauthorized dumps, including information about mercury-containing waste (Figure 5).

So, according to reports posted on an Ecology map (interactive), citizens found, for example, hundreds of mercury lamps thrown into the forest in different regions of Ukraine.

Diagram 1. Dynamics of I-IV grade hazard wastes generation in Ukraine (thousand tons)

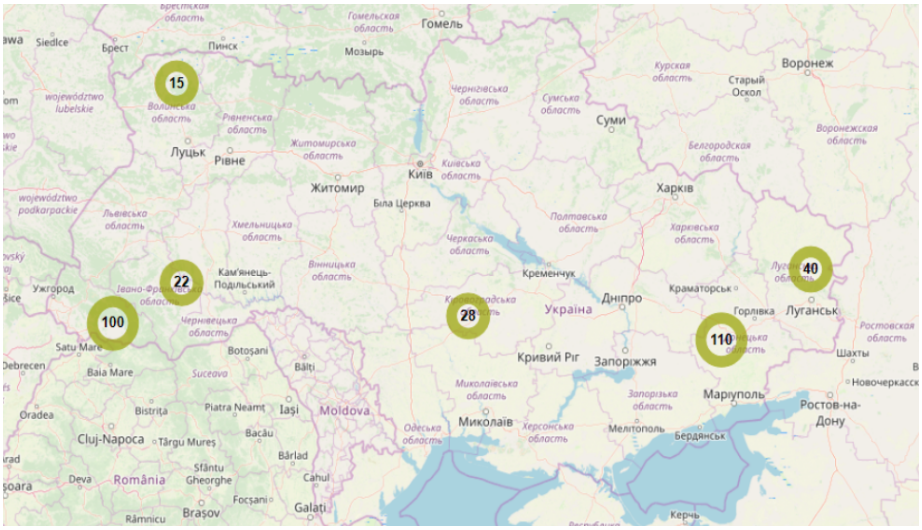


Source: SAI of Ukraine.

[5] The Ecology map is available at the link:< https://ecomapa.gov.ua/?layer=mss>.

In addition, hazardous wastes that are stored in the territories of bankrupt enterprises constitute a special danger to the environment and public health.

Figure 5. Register of sites of natural landfills on the Ministry of Ecology and Natural Resources of Ukraine Ecology map (interactive)



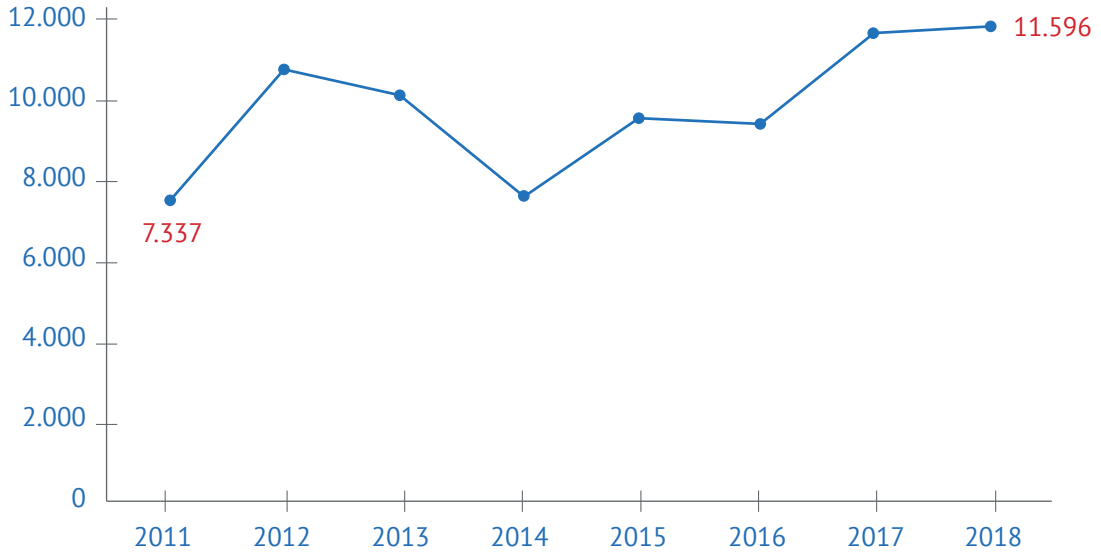
Source: SAI of Ukraine.

> ✓ ***Reference.***
>
> *In September 2016, the Ministry of Ecology and Natural Resources of Ukraine presented the electronic service Ecomapa.gov.ua - an interactive map of landfills in Ukraine.*
>
> *In addition to geolocation data on landfills, information on the status of their liquidation is added to the map. The map is constantly updated.*
>
> *An interactive map provides an opportunity for citizens to send an appeal with geo-referencing and photo materials about the identified places of natural dumps. The Ministry of Ecology and Natural Resources of Ukraine to ensure the prompt receipt of such information in local authorities responsible for their timely liquidation. Separate layers on the map show data from the register of waste disposal sites and places of natural dumps.*

The problem of unauthorized landfills and ecosystem pollution can be solved by raising public awareness of citizens and business entities of the requirements of legislation in the field of waste management and increased responsibility for non-compliance with such legislation (by amending administrative and criminal legislation).

In 2018, 11.6 million tons of waste was produced in the Republic of Serbia, and/or around 1.7 ton of waste per capita annually (Diagram 2).

Diagram 2. Quantity of produced waste in the period 2011-2018 in thousand tons

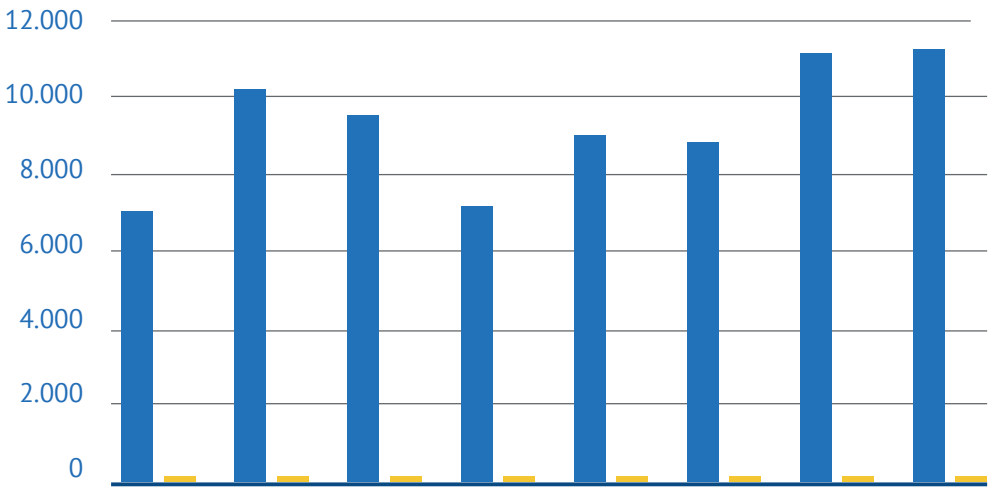


Source: SAI of the Republic of Serbia.

Out of the total waste produced in 2018, 92 thousand tons of waste is classified as hazardous waste, which is largely produced by the industry. Although it accounts for less than 1% of total waste, hazardous waste may represent serious danger for the health of people and environment, if such waste is not managed adequately, and there are no treatment facilities for such waste in the Republic of Serbia (Diagram 3).

Portion of the hazardous waste in the observed period fluctuated from 0.6 % to 1.3 % relative to overall produced waste. In 2018, portion of the hazardous waste in overall waste amounted to 0.8 %.

Diagram 3. Ratio of overall produced waste in the Republic of Serbia, in thousand tons



	2011	2012	2013	2014	2015	2016	2017	2018
Quantity of non-hazardous waste	7 242	10 524	9 754	7 369	9 301	9 123	11 400	11 504
Quantity of hazardous waste	95	77	127	55	53	74	78	92

Source: SAI of the Republic of Serbia.

✓ ***Reference.***

Here are many ways of classifying wastes: to its origins (which activities generate the waste?); composition (what is the waste made of?); toxicity (how dangerous is the waste?); or management (how is the waste handled?).

Classification of waste is based on the two main categories: non-hazardous and hazardous waste.

***Non-hazardous** is often used as a synonym for «solid waste». Even though they are not always chemically hazardous, wastes consisting of powders, fluids and gasses are classified as hazardous as they need special handling in order to prevent unwanted dispersal. Common non-hazardous components are papers, plastics, glass, metals and beverage cans.*

***Hazardous waste** is any waste that poses a threat to human health and the environment. Five defining characteristics of hazardous waste are toxic, explosive, flammable, radioactive, Corrosive, Eco toxic etc.*

***Electronic and electrical equipment (E-waste)** is a generic term for waste originating from out of life electric and electronic equipment, such as computers, televisions and home appliances. E-waste is generally categorized as hazardous waste due to its toxic components, such as PCB, lead, quicksilver, cadmium, mercury and brominated flame-retardants.*

***Healthcare waste** is a form of hazardous waste and involves waste from the treatment of diseases in humans and animals. This type of waste usually consists of medicines, sharp objects, bandages, chemicals, pharmaceuticals, body fluids and body parts (from amputations and surgery).*

Source: Auditing of waste management. https://www.environmental-auditing.org/media/5375/wgea-waste-managemen_e.pdf

The industrial waste content in the total waste, in the observed period, is very high and accounts for 80 % of total waste, while communal and commercial waste amount to 20 % of total waste.

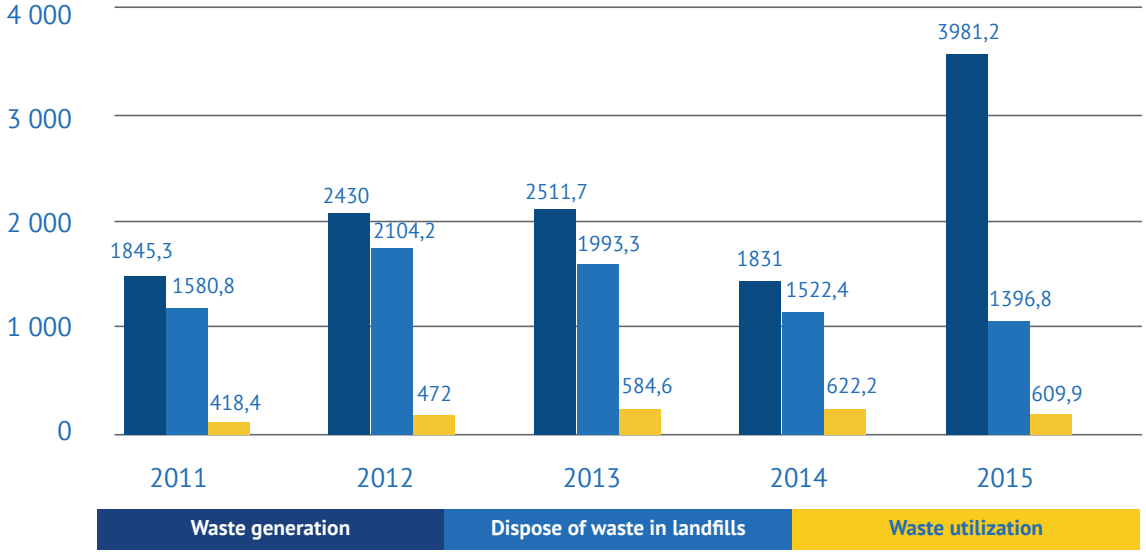
Industrial waste dump - ash dump from Nikola Tesla-B thermal power plant in Obrenovacu, Republic of Serbia.
Source: SAI of the Republic of Serbia.

The largest industrial waste landfill in Serbia is the ash dump of the Nikola Tesla-B thermal power plant in Obrenovak, which has been under construction since 1982 and has three cassettes. The landfill area is 600 hectares, it is located at a distance of 2 kilometers from the village, with a maximum embankment height of 107 meters above sea level. The current height of the embankment is 100 meters above sea level.

A large amount of accumulated hazardous waste is temporarily stored throughout the Republic of Serbia and poses a danger to human health and the environment.

The national audit of the SAI of the Republic of Moldova shows that in the year covered by the national audit, 3,98 million tons of waste were generated in the country, 40,0 % of the total amount of waste generated is stored in the territory of the enterprises producing this waste (Diagram 4).

Diagram 4. Waste generation, disposal and utilization in the Republic of Moldova (thousand tons)



Source: SAI of the Republic of Moldova.

The categories of hazardous waste in the Republic of Moldova, classified statistically and presented in separate reports, include all toxic waste (used oils, batteries and storage batteries, unused pesticides, chemical and medical waste, etc.). According to the statistics data, over the past five years up to conduct a national audit, the number of enterprises that generate waste and reflect the formation of toxic waste increased from 716 to 978, and the volume of accumulated waste amounted to 9 176,7 thousand tons, an increase of 3 089,7 thousand tons. Toxic wastes are divided into 4 grade. First grade waste, accounting for 4 355,9 thousand tons and containing cyanide compounds, is the most toxic waste.

Packaging of hazardous waste (unused pesticides) followed for disposal
Source: SAI of the Republic of Moldova.

In addition, audits revealed that in the Republic of Moldova and Ukraine *there are large amount of waste unsuitable pesticides stored in warehouses and buried at landfills.*

A large number of land contaminated with pesticides pose an increased danger to the environment and public health.

The audit of the SAI of the Republic of Moldova notes that by the end of the period covered by the national audit, 503 tons of unsuitable pesticides and plant protection products waste were stored at 6 central warehouses of the country.

✓ ***Reference.***

Pesticide wastes are classified as persistent organic pollutants that are extremely chemically stable substances with toxic and bioaccumulative properties that pose an increased risk to the environment and public health.

At the same time, about 4 thousand tons of pesticide waste are buried in 14 sarcophagi at a pesticide polygon, built in 1977, with an area of 2,4 hectares.

It was found that from 14 existing sarcophagi, only 3 are equipped in accordance with the requirements (concreted and wrapped in polyethylene), the remaining 11 sarcophagi are in a state of degradation, creating an environmentally dangerous situation.

According to analyzes and laboratory studies in the soil, water, silt and biological material on the territory of the landfill, wastes of 7 persistent organic pollutants were found in concentrations exceeding the maximum permissible value and pose a danger to the environment and public health.

On the territory of Ukraine, more than 8 thousand tons of unsuitable and prohibited for use chemical plant protection products are preserved.

At the same time, auditors outline that some measures are being taken by governments to reduce and remove waste from unsuitable pesticides and disinfect land from persistent organic pollutants, but the situation has not been completely resolved; effective chemical safety systems have not been created.

2. Circulation system and waste management system status

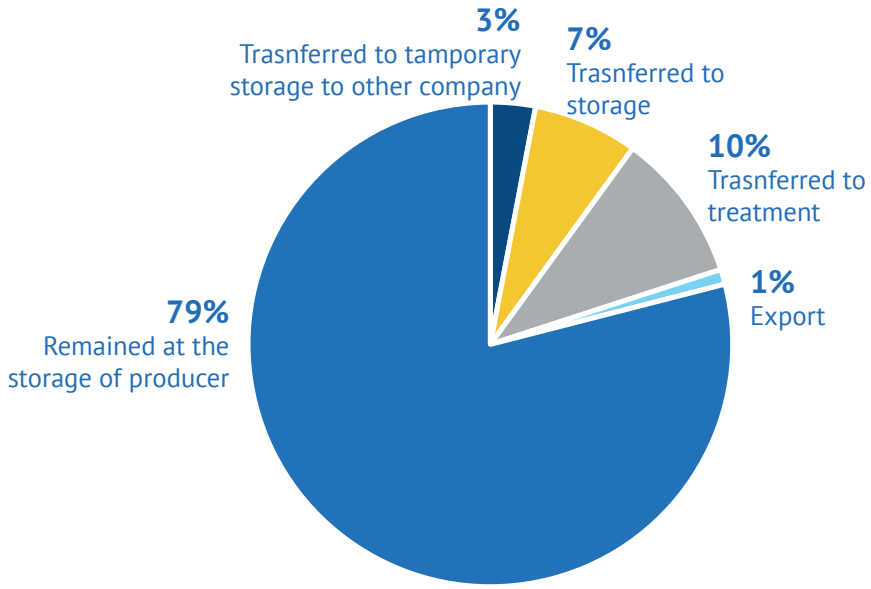
> *SAIs-international audit participants, note: the waste management system according to the waste management hierarchy which is based on the mechanism of the producer's expanded responsibility for generated waste managing has not been established in their countries: only 3–10 % of waste is recycled, the rest moved to landfills and rubbish dump. It can create significant risks to the environment.*

The audit shows that small amounts of waste are recycled, and it is common practice for countries participating in the international audit to remove waste to the landfill.

According to national audits, in the Republic of Moldova only 10 % of waste is recyclable and recoverable, the remaining 90 % is transferred to landfills, which can create significant risks to the environment.

Similarly, in the Republic of Serbia only 10 % was transferred to further treatment, 79 % or 7,427 thousand tons remained at locations where the waste was produced, which is mostly flying ash from coal.

Diagram 5. Ways of processing the produced waste in the Republic of Serbia



Source: SAI of the Republic of Serbia.

At the same time, in Ukraine, at the time of the national audit, only 2.6 % of the collected household waste was incinerated, 3 % went to the procurement points of secondary raw materials and waste processing enterprises, and 94.4 % transferred to disposal at landfills and rubbish dump. The landfill and rubbish dump area amounted to more than 9 thousand hectares (this is the area of the Ukrainian city of Kremenchug, Poltava Region or the city of Khmelnitsky). More than 5 % of landfills in Ukraine were overloaded, and 30 % did not meet environmental safety standards.

In addition, in Ukraine, almost 22 % of the population was not covered by household waste collection services, that is, more than 3 million tons of household waste littered the environment, forming unauthorized waste dumps.

In Ukraine, there are 460 cities, about 500 districts, 885 urban-type settlements and 28 385 rural settlements. Although the population in Ukraine has been steadily declining in recent years, the volume of household waste has increased. The general state of household waste generation and management, at the time of the national audit, in the context of the regions of Ukraine is shown on Figure 6.

✓ ***Example.***

In Sweden more than 80.0% of total waste is recycled, about 18.0% of the remaining waste is incinerated and only 2.0% of the waste is disposed on landfills.

Figure 6. The volumes of collection and transportation of household waste in regions of Ukraine and the availability of facilities for their disposal

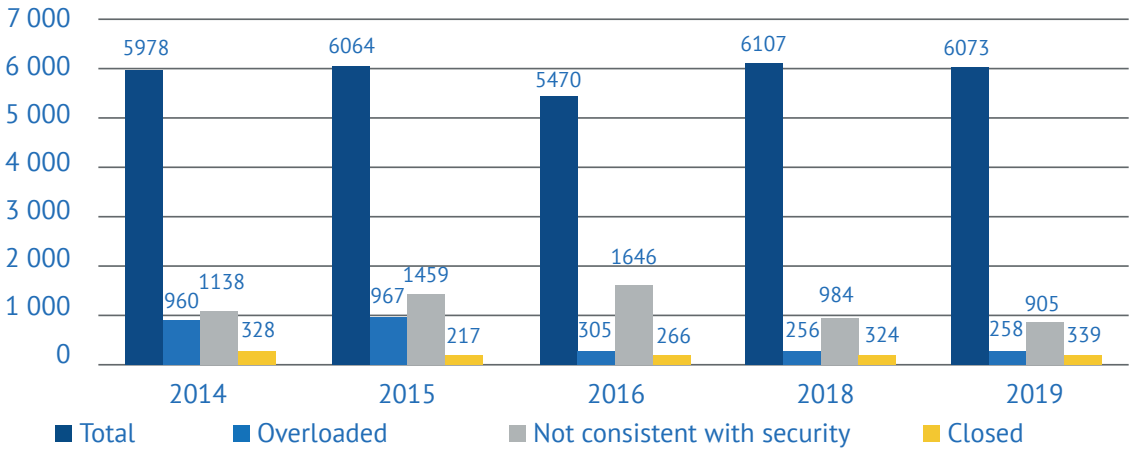
Source: SAI of Ukraine.

In Ukraine, at the time of the national audit (as of January 1, 2017), separate collection of household waste was introduced in only 575 settlements. The rest of the waste was transferred to disposal at landfills and rubbish dump. At the same time, the number of landfills increased annually that did not comply with environmental safety (Diagram 6).

✓ ***Reference.***

As of 01.01.2020 in Ukraine, separate collection of household waste was introduced in 1462 settlements.

Diagram 6. Status and number of landfills (units)



Source: SAI of Ukraine and data of the official web-site of the Ministry for Communities and Territories Development of Ukraine.

The filtrate collection system was present at 51 landfills, and the biogas extraction system operated at 7 landfills, of which flare biogas was burned at three landfills.

Also, in the Republic of Moldova, at the time of the national audit, coverage of cleaning services in urban

✓ ***Reference.***

As of 01.01.2020 in Ukraine, the filtrate collection system was present at 54 landfills, including the existing filtrate disinfection system at 41 landfills. The biogas extraction system was arranged at 19 landfills; cogeneration plants for the production of electrical and thermal electricity were operated.

areas amounted to 60–70 %, and in the countryside – 10 %. The lack of these services was registered in 1164 settlements or 80,2 % of the total number – 1451 settlements investigated by the audit. As a result, a significant number of the population did not use waste collection services. 99,7 % or 1147 landfills of the Republic of Moldova, located in urban and rural areas, did not meet the requirements of environmental legislation, namely: they were not authorized; functioned in the absence of state environmental and sanitary-epidemiological expertise; no infrastructure was created for the disposal of waste classified in accordance with the classes provided in Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste, namely: landfills for hazardous waste; landfill for non-hazardous waste and landfill for inert waste.

Under such circumstances, on the territory of municipalities: Chisinau operated 10 landfills with an area of 43,4 ha; Cahul – 45 landfills (48,6 ha) and Balti – 3 landfills (26,8 ha), and in the areas of Orhei – 72 landfills (82,6 ha) Felesht –71 landfills (52,2 ha) Telenesti – 47 landfills (63,5 ha) Soroca – 50 landfills (50,6 ha) Riscani – 43 landfills (66,0 ha) and others.

The audit showed that most of the country's economic agents had permission to manage municipal solid waste, operated storage facilities or landfills in violation of the legal framework. They allowed the burning of waste; mixing solid household waste with hazardous or prohibited waste; waste disposal in unauthorized places, at the same time they did not condense and periodically cover them with inert materials in order to prevent fires and spread unbearable odors, creating a negative impact on the environment and public health.

Landfills near the Purcell mines from the Bubueci commune, Republic of Moldova
Source: SAI of the Republic of Moldova.

Audit revealed, that recycling of packaging waste in the Republic of Moldova was about 5 % and could not be compared with the average level of about 75 % registered in the EU countries. The reason for this was the lack of an integrated system for the separate collection of packaging waste throughout the country.

> ***The audit notes the insufficiency in the countries of international audit participants the developed capacities for processing, treatment and disposal of hazardous industrial and other wastes that meet international standards. This does not contribute to the creation of an integrated waste management system. As a result, risks to the environment and public health are created, including the occurrence of environmental and man-made disasters.***

In Ukraine, waste sorting lines worked only in 17 settlements, out of 29 170. Waste sorting complexes were building in 18 settlements. Utilization of household waste was carried out at

✓ ***Reference.***

As of 01.01.2020 in Ukraine 34 waste sorting lines were operating in 28 settlements, waste sorting complexes were built in 17 settlements.

a waste incineration plant in the city of Kiev. An incinerator was also operated in the city of Lyubotin, Kharkiv Region, and two mobile incinerators in the city of Kharkov.

✓ ***Example:***

in Ukraine, May 28, 2016 in the city of Lviv at the territory of the Gribovitsky landfill, a big fire happened. Soon, a dump of solid household waste occurred in the landfill, as a result of which three rescuers died under the rubble.

The fire was liquidated on May 30, however, on June 8, the fire broke out again, they tried to extinguish it with the help of fire aircraft.

Fire fighting at the territory of the Gribovitsky landfill, Lviv, Ukraine, 2016
Source: Open Internet Resources.

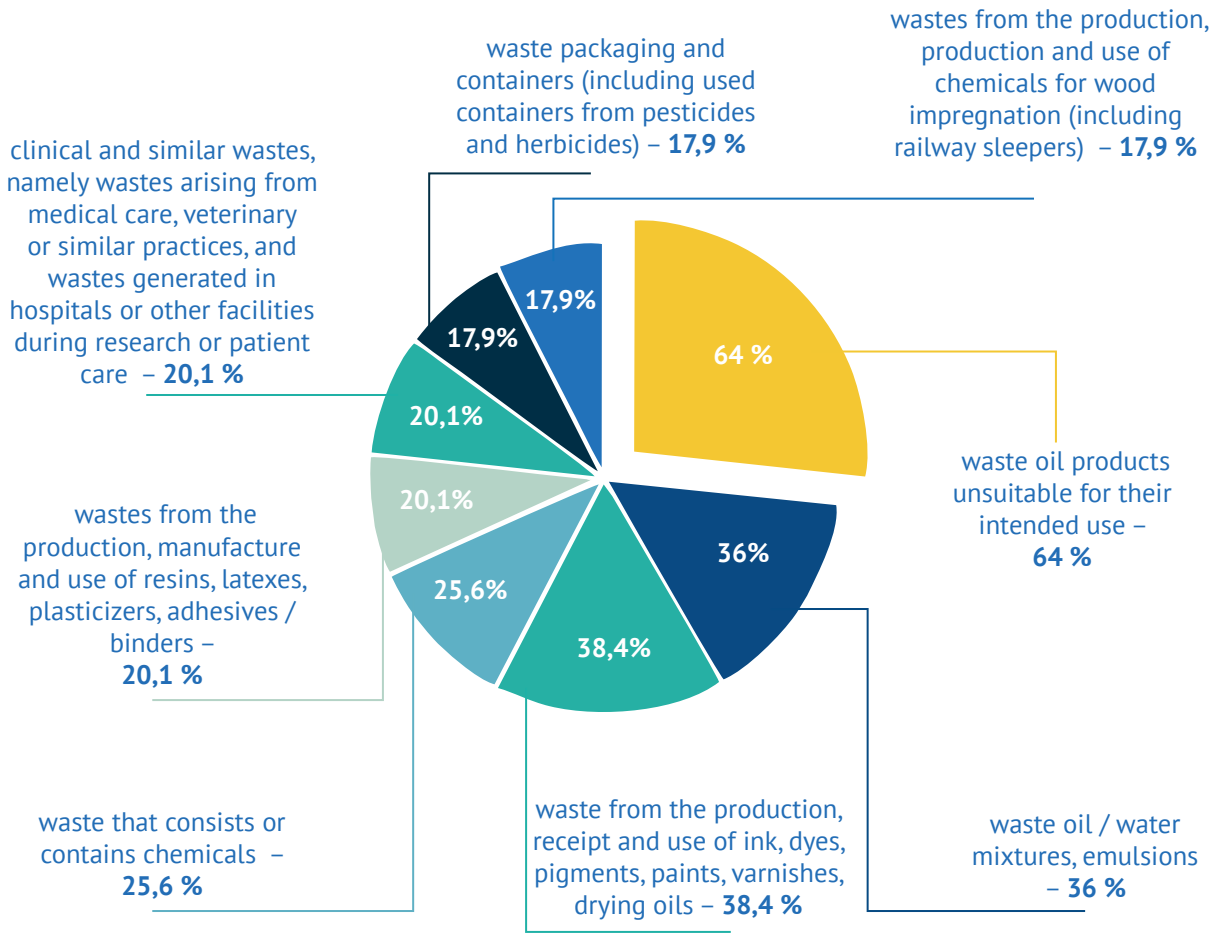
In accordance with the Licensees List for the Hazardous Wastes Management, as of November 15, 2019, only 218 business entities had licenses for operations in the field of handling hazardous wastes, of which 81 were authorized to dispose of hazardous wastes.

✓ ***Reference.***

According to research, ***80 % of household waste can be recycled if it is collected separately. Only 10–15 % can be removed from mixed waste for recycling.*** *In European countries such as Denmark, Sweden, Belgium, the Netherlands, Germany, and Austria,* ***less than 20 % of municipal solid waste is subject to burial,*** *and their residues (45–60 %) are processed either as secondary raw materials or for compost. An alternative to the disposal of mixed household waste is their incineration.* ***Most leading countries incinerate more than 25 % of household waste.*** *In particular, in the Netherlands, the share of household waste recycling at incinerators is 41 %, in France –45 %, Belgium – 47 %, Sweden – 56 %, Japan – 74 %, Switzerland –80 %.*

Among all licensees with the right to directly utilize hazardous waste, the vast majority had licenses for the disposal of waste oil products, waste oil/water mixtures, emulsions and dyes, pigments, paints and drying oils (Diagram 7).

Diagram 7. Structure of waste types for which licenses with the right to hazardous waste dispose have been issued (reflects the percentage of licenses for handling a certain type of waste, to their total number, one license contains a permit for several types of waste)



Source: SAI of Ukraine

The SAIs of the Republic of Moldova reported that the country has not developed capacities for the recovery, treatment and disposal of hazardous and industrial wastes that meet international standards (galvanic waste, with cyanide compounds containing vanadium, lead, mercury, oil sludge, etc.).

In the Republic of Moldova there was only one registered company authorized by the Ministry of the Environment, which, due to lack of capacity, refused to collect hazardous waste from economic entities.

Capacities for disposal of existing infectious wastes were insufficient and did not cover the collection of all infectious wastes generated by health facilities and their pre-treatment prior to disposal.

The process of creating waste collection systems in urban/rural areas by acquiring containers, building sites, equipping with specialized transport and arranging transmission stations, etc., was slow.

Although, according to the strategic goals defined by the Waste Management Strategy in the Republic of Moldova for 2013–2027, approved by Government Decision No. 248 of April 10, 2013, one collection point at the regional level should be created in the last 4 years before the audit period. However, no one system for the collection and transportation of hazardous waste was created on the territory of municipal and district councils.

Similarly, in the Republic of Serbia, industrial waste is not treated to a sufficient degree, unlike in the EU where waste is treated to large degree.

Short term goals, for the period 2010–2014 of the Waste Management Strategy stipulated the establishment of hazardous waste management system, and/or to start with construction of facility for physical and chemical treatment of hazardous material. During the audit it was determined that this goal was not realized, and/or construction of hazardous waste treatment facility did not commence.

In addition, proposal of measures from the National Program of Environmental Protection defines reduction of disposal of industrial waste through prohibition of disposing industrial waste with usage value at the landfill and through using 20 % of flying ashes from the thermal plants. Audit revealed that the mentioned measures were not implemented in stipulated percentage until 2014, and also until 2019.

Thermal plants of Public Enterprise EPS have produced total of 20,73 million tons of ach in the previous three years, and total sale of ash was 525 thousand tons which is 2,5 % of totally produced ash.

In the Republic of Serbia, regulations on waste, stipulated using flying ash from thermal plants as secondary raw material for cement factories, construction material for road construction, civil engineering and in industry of construction materials. However, these stated planned activities were not realized.

✓ ***Reference.***

Ash from the filter, as a by-product of coal combustion in thermal installations, has been used for more than 50 years in Europe as a building material, especially in the production of concrete and cement.

One of the audit objects of the SAI of the Republic of Serbia was review of waste management plans, within special measures in order to improve waste management in the branch, showed that construction of the shelter was planned for temporary storage of hazardous and non-hazardous waste at all locations, which would be technically equipped in compliance with the law and by laws defining planning and construction, as well as waste management. However, revealed that construction of storage was not done for temporary storage of hazardous and non-hazardous waste. In the previous period, auditees did not regularly store hazardous and non-hazardous waste, because temporary storage was done at the location not technically equipped for storing waste at the location of the producer, which may represent risk for putting lives and health of people in danger, along with environment.

Thus, lack of creating in our countries the appropriate infrastructure and facilities for the recycling, treatment and disposal of waste, including industrial and hazardous ones, as provided for by the waste management strategies, poses a threat to the environment and public health, including the occurrence of environmental and man-made disasters.

3. Harmonization of national legislation on waste management in line with EU legislation and standards

> ***The SAI-participants of international audit on waste management and utilization reported that the Republic of Moldova, the Republic of Serbia and Ukraine, in their economic development, have taken the course of accession to the European Union and signed the relevant Association Agreements with the EU. However, as the conducted national audits have shown, not all measures relating to the sphere of waste management, envisaged by the action plans for the implementation of agreements, have been completed. National regulations on waste are not brought into line with European legislation and the standards.***

The audit notes: the states of the international audit participants are taking measures for harmonization waste management national legislation in line with European legislation and standards in this area.

Thus, the Republic of Moldova, by Law No. 121, ratified the Association Agreement between the European Union and the European Atomic Energy Community and Government Decree No. 808 approved the National Action Plan for the implementation of the Association Agreement between the Republic of Moldova and the European Union.

The audit notes that, from 65 measures envisaged for implementation in the period that was subject to the national audit, under section 16 "Environment", the Ministry of Environment of the Republic of Moldova implemented 34 measures, or 52,0 %. At the same time, out of a total of 18 approved measures in the field of waste, resources, chemicals and industrial pollution, industrial hazards, 7 were implemented and 11 remained unrealized, as a result of which the level of implementation was only 39,0 %.

At the same time, the Law of the Republic of Moldova No. 209 «On Waste» was adopted, however, it did not transfer some of the requirements of the EU Waste Directive, which could generate risks of a significant increase in the volume of stored hazardous and industrial waste.

The national audit of the SAI of Ukraine showed following. In order to solve existing problematic issues and improve state policy on waste management, including household waste, as well as pursuant to paragraphs of the Action Plan for the implementation of the Association Agreement between Ukraine and the European Union, the European Atomic Energy Community and their member states, approved by decree of the Cabinet of Ministers of Ukraine No. 847-r, the draft law «On Waste», the draft Resolution of the Cabinet of Ministers of Ukraine «On Approving the National Waste List» and the draft Order of the Cabinet of Ministers of Ukraine «On Approving the National Waste Management Strategy in Ukraine until 2030» were developed.

The national audit of the SAI of Ukraine showed following. In order to solve existing problematic issues and improve state policy on waste management, including household waste, as well as pursuant to paragraphs of the Action Plan for the implementation of the Association Agreement between Ukraine and the European Union, the European Atomic Energy Community and their member states, approved by decree of the Cabinet of Ministers of Ukraine No. 847-r, the draft law «On Waste» in the new edition, the draft Resolution of the Cabinet of Ministers of Ukraine «On Approving the National Waste List» and the draft Order of the Cabinet of Ministers of Ukraine «On Approving the National Waste Management Strategy in Ukraine until 2030»[6] were developed.

[6] Approved by the order of the Cabinet of Ministers of Ukraine dated November 8, 2017 No. 820-r

The National Waste Management Plan until 2030 was approved only in 2019 by the order of the Cabinet of Ministers of Ukraine dated February 20, 2019 No. 117-r. The Ministry of Ecology and Natural Resources of Ukraine approved by order No. 142 dated 12.04.2019 «Methodological recommendations for the development of regional waste management plans» in order to unify approaches to the development of regional waste management plans.

✓ ***Reference.***

In accordance with the recommendations of the SAI of Ukraine, the Ministry of Energy and Environmental Policy of Ukraine has developed a draft law of Ukraine «On Waste Management», which aims to implement into the national legislation the fundamental concepts, principles and approaches of the European community on waste management. This bill was approved by the Cabinet of Ministers of Ukraine and registered in the Verkhovna Rada of Ukraine on July 2, 2019, No. 10411.

The Verkhovna Rada of Ukraine Committee on Environmental Policy and Environmental Management has submitted a draft law «On Waste Management» No. 2207-1 dated October 16, 2019.

At the time of drafting the Joint Report, the relevant law has not been adopted.

So, in Ukraine, the measures of the Implementation Plans were not carried out within the deadlines stipulated by them.

The national audit of the **SAIs of the Republic of Serbia** showed that for the purpose of waste management they are determined by the general commitment of the Republic of Serbia to EU membership. Relevant strategic documents and regulations that are consistent with (or should be consistent with) EU policies and regulations are define specific goals and timelines for achievement.

Besides regulation defining industrial waste, EU regulations in this field include Council's Directives, representing legal instructions of EU and link all member states and must be implemented via legislation of the member states within prescribed deadlines.

The Law of the Republic of Serbia «On Waste Management» was adopted in 2009, and amendments to this law were provided in 2010, 2016 and 2018. The auditors note that amendments to the Law «On Waste Management» cannot fully comply with all existing and current EU directives. The current implementation status is more than 70 %, and full implementation is planned to be completed by 2022.

The audit revealed that in the Republic of Serbia new Waste Management Strategy have not been adopted. Also, National Waste Management Plan was not adopted nor the Program of preventions regarding waste production, not all plans are adopted at regional and local levels, which means that activities were not taken in order to efficiently plan waste management process.

Thus, that the consequence of the lack of adoption of the above-mentioned planning documents, the strategic goals and directions in the field of waste management are not defined/updated in order to establish priorities for the implementation of urgent projects and ensure better control over their implementation.

4. The organizational support status and state environmental control on waste management

> ***National audits indicate that in countries of the international audit participants, there is a wide range of authorities that are responsible for waste management. However, auditors note their insufficient effectiveness and actions coordination.***

It was found that, despite the results of national audits in the areas of handling various types of waste, the problems in the waste management system in the countries participating in the international audit are common.

So, the SAIs-participants reported that in their countries measures to create a waste management system are taken. However, the auditors note a lack of effective actions coordination, as a result of which risks of inefficient use of both human and financial resources are created.

The powers of the Parliament, the Government and executive bodies are defined in laws on the protection of the environment, on waste, on production and consumption waste and other legal acts. However, the auditors' conclusions based on the national audits results indicate the lack of effective waste management supervision and control.

In the Republic of Serbia there is no efficient supervision and control over industrial waste management, which is reflected in insufficient coordination between entities in charge of waste management, improper inspection supervision and not reliable system of issuing and revocation of permits for waste management.

In the Republic of Moldova, the existing system of state environmental supervision and control has not been reformed in order to increase its effectiveness. So, in violation of the requirements of the law, the State Environmental Inspectorate does not describe operational processes and does not develop a risk register. Thus, the system of financial management and internal control, which would guarantee that the entity effectively and efficiently fulfills its strategic and operational goals, has not been fully implemented.

A classification of enterprises according to hazard categories depending on the volume and composition of pollutants generated or released into the environment has not been developed and is necessary for planning/conducting controls in the field of risk-based waste management.

Auditors of the SAI of Moldova outlined that the inefficiency of state environmental control in the country consists in the fact that, on the one hand, state environmental inspectors conduct environmental reviews of programs, schemes, projects for transportation, placement, processing, disposal, recovery, utilization and disposal of waste presented economic agents. On the other hand, it exercises state control over compliance by individuals and legal entities with legislation in the field of waste management, applying fines, and also issues or cancels permits to carry out waste management activities.

At the same time, in Ukraine, the task of ensuring the formation of a state policy in the field of waste management, in particular household waste, was entrusted to two executive bodies (the Ministry of Ecology and Natural Resources of Ukraine and the Ministry of Regional Development, Building and Housing and Communal Services of Ukraine)[7], which not consistent with the Law of Ukraine «On Waste». This posed risks of poor-quality

[7] Since September 2, 2019, the Ministry of Energy and Environmental Policy of Ukraine and the Ministry for Communities and Territories Development of Ukraine.

coordination of the activities of these executive bodies, untimely fulfillment of tasks and inefficient use of human and financial resources.

All these powers are concentrated in the State Environmental Inspectorate. Thus, the performed actions audit analysis of state controls on waste management system indicates the inefficiency of the existing environmental control system through the concentration of a number of powers that lead to the State Environmental Inspectorate finding a large number of violations of environmental legislation annually, which led to exceeding the standards for spills and polluting emissions substances.

As in Ukraine, in particular, state control over the transboundary movement of hazardous waste, including at checkpoints across the Ukrainian customs border, during the audited period, was not effectively implemented by the involved government bodies; in the absence of a specific list of documents required to obtain an opinion on waste safety; in the absence of a specific procedure for a separate review and approved quotas for the import into Ukraine of waste as secondary raw materials for their further utilization; with inadequate organizational and materially technical support.

After the entry into force on September 6, 2018 of the Law of Ukraine No. 2530-VIII «On Amendments to the Customs Code of Ukraine and some other laws of Ukraine regarding the implementation of the single window mechanism and streamlining the implementation of control procedures for the movement of goods across the customs border of Ukraine», from October 04, 2018 mandatory state environmental control at checkpoints across the Ukrainian state border and in the area of internal customs of the State Environmental Inspectorate of Ukraine does not implemented at all.

There is no obligation to seal a container with hazardous waste at a checkpoint across the state border at the entrance to Ukraine, as well as to check the safety of the seal at the checkpoint across the state border at the exit from Ukraine. As a result, significant risks are created for violating the conditions of transboundary movement of hazardous wastes, failure to ensure the safety of cargo with hazardous waste during their transit through Ukraine and harming the environment and the health of the population of Ukraine.

Also, auditors of the SAI of Ukraine noted the failure to coordinate the local executive authorities' activities in the field of household waste management.

Thus, the lack of effective coordination between all entities in the field of waste management and proper state environmental control, necessitates the implementation of risk-based control, increased institutional and technical capacity in the field of environmental protection, as well as increased efficiency in the use of funds in the field of waste management waste.

5. Planning and expenditures for the implementation of waste management investment projects

> ***National audits indicate: the government spending on waste management investment projects were insignificant. The planned measures were not implemented; as a result, the problems of waste management and disposal were not resolved. And also did not affect the improvement of the implementation of state policy in this area.***

The National Ecological Fund was created in **the Republic of Moldova** with the aim of raising additional funds to finance projects aimed at protecting the environment and restoring ecosystems, including on waste management.

At the same time, the audit showed that the costs incurred from the National Ecological Fund for financing waste management projects are insignificant and amount to only 31,6 million lei (4,8 %) of the total income accumulated over the past three years and earmarked for this purpose.

The remaining funds in the amount of 623,0 million lei (94,1 %) were utilized mainly to finance projects of water supply and sewage systems, strengthening dams, including 82,5 million lei, approved in the budget for the waste management program that was used in violation of the law on the financing of other projects.

In the Republic of Serbia was established Green Fund as a budget fund, in order to record funds earmarked for financing preparation, implementation and development of programs, projects and other activities in the field of maintenance, sustainable usage, protection and improvement of environment.

Law on the Budget of the Republic of Serbia for 2017 allocated for the first time funds for financing Green Fund of the Republic of Serbia.

In the period covered by national audit, within the Program «Integrated management of waste, chemicals and biocide products» 2,2 billion dinars were allocated to program activity «Incentives for re-usage of waste», appropriation «Subsidies to private companies».

In Ukraine, during the period covered by the national audit, the implementation of environmental measures in the field of household waste management was carried out under the budget programs «Implementation of environmental measures» and «Implementation of measures directed at the development of priorities in the environmental protection sphere» as well as the «State Regional Development Fund» with the aim of co-financing investment projects of regional development for the household waste management.

✓ ***Reference.***

Euro cross-rates to the national currencies of the audit participating countries as of March 1, 2020
to the Moldovan lei -19,52
to the Serbian dinar - 120,46
to the Ukrainian hryvnia - 27,71

The audit found that neither the Ministry of Ecology and Natural Resources of Ukraine, nor the Ministry of Regional Development, Building and Housing and Communal Services of Ukraine provided for the efficient use of state budget funds aimed at implementing measures in the field of household waste management and their effective management of budget programs.

Out of 24 planned measures by these main managers of budget funds, 8 measures were completed by their customers and contractors, 6 measures were partly completed, the

rest were not completed at all. That is, the Ministry of Ecology and Natural Resources of Ukraine and the Ministry of Regional Development, Building and Housing and Communal Services of Ukraine did not achieve the planned indicators for the budget funds utilization.

As a result, of the approved (UAH 324.1 million) allocations for the implementation of measures and projects in the field of household waste management for three budget programs were not utilized and almost 50 % of expenses (UAH 152,3 million), were returned to the state budget, which indicates the ineffective management of state funds the budget.

The results of carried out measures and projects did not solve the problems of household waste management and did not affect the improvement of the implementation of state policy in this area.

The main reason for this situation is the untimely adoption of managerial decisions at the planning and approval stage of relevant activities and projects, as well as poor-quality preparation of planning documents.

Amendments related to the preparation, evaluation and selection of investment programs and regional development projects were made to the Decree of the Ministry of Regional Development, Building and Housing and Communal Services of Ukraine dated April 24, 2015 No. 80 «The issues of preparation, evaluation and selection of investment programs and regional development projects implemented at the expense of the State Regional Development Fund» in 2018 for the implementation of the Accounts Chamber of Ukraine recommendations.

In addition, pursuant to the provisions of the Law of Ukraine «On Environmental Impact Assessment» adopted on May 23, 2017, by Resolutions of the Cabinet of Ministers of Ukraine dated January 23, 2019 No. 95 and No. 128, were made amendments to the Procedure for approving construction projects and conducting their examination, approved by the Resolution of the Cabinet of Ministers of Ukraine dated May 11, 2011 No. 560, namely: before construction projects approval and examination of design documentation for the construction of facilities that are subject to an assessment of their environmental impact, the results of such assessment are attached and a report on the environmental impact assessment is developed.

Thus, poor planning and the lack and/or inadequate financing of investment projects on waste management does not contribute to enhancing the ability of the state to solve existing problems on waste management, in particular, to ensure the complete collection of hazardous and other wastes, their maximum processing and reduction of burial volumes in landfills and rubbish dumps.

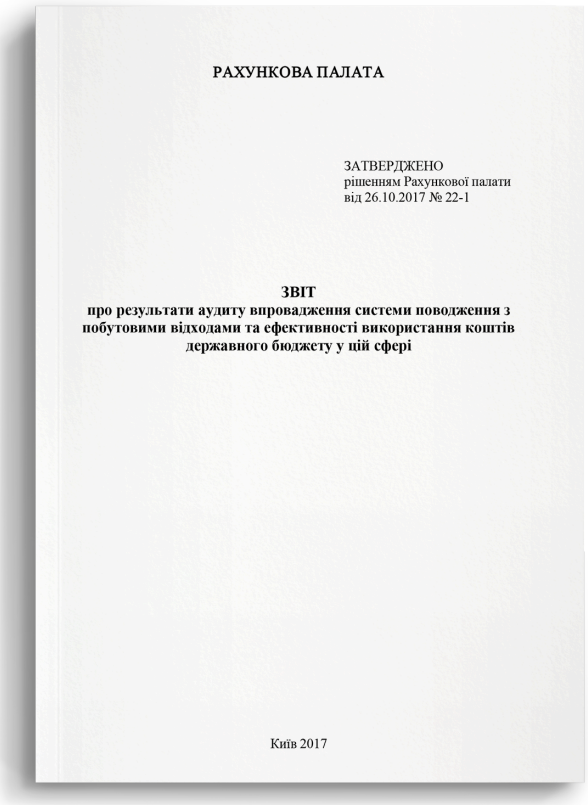
The state of waste management in our countries requires attracting investments to create facilities for the processing, treatment and disposal of hazardous, industrial and other wastes that meet international standards. In order to ensure the transformation from the existing linear economy to a circular economy based on maximum waste processing, it will preserve the environment of our countries for future generations.

Appendix

National Audits Information

Ukraine

The Accounting Chamber
Supreme Audit Institution of Ukraine



РАХУНКОВА ПАЛАТА

ЗАТВЕРДЖЕНО
рішенням Рахункової палати
від 26.10.2017 № 22-1

ЗВІТ
про результати аудиту впровадження системи поводження з побутовими відходами та ефективності використання коштів державного бюджету у цій сфері

Київ 2017

Audit topic: *Audit of Household Waste Management System Implementation and the Effectiveness of State Budget Fund Utilization for this Area.*

Audit period: *2015-2016 and the first half of 2017.*

Date of publication: *October 26, 2017.*

Audit link (in the original language): *https://rp.gov.ua/upload-files/Activity/Collegium/2017/22-1_2017/Zvit_22-1_2017.pdf*

Audit purpose: assessment of the efficiency of the household waste management system implementation, as well as the budgetary funds utilization allocated to these goals.

Abstract:

According to the audit findings, it is note that the responsible bodies of the executive power are not ensured the effective utilization of the state budget funds aimed at implementing measures on household waste management. The main reason for this situation is the untimely adoption of managerial decisions at the planning and approval stage of relevant activities and projects, as well as poor-quality preparation of planning documents. The results of carried out measures and projects did not solve the problems of household waste management and did not affect the improvement of the implementation of state policy in this area.

The system of household waste management in Ukraine is inefficient; resource-intensive and does not prevent the negative impact of waste on the environment and public health; does not meet the legislatively defined goals and directions of state policy in this area.

The main tasks of waste legislation, such as the legal regulation of relations and

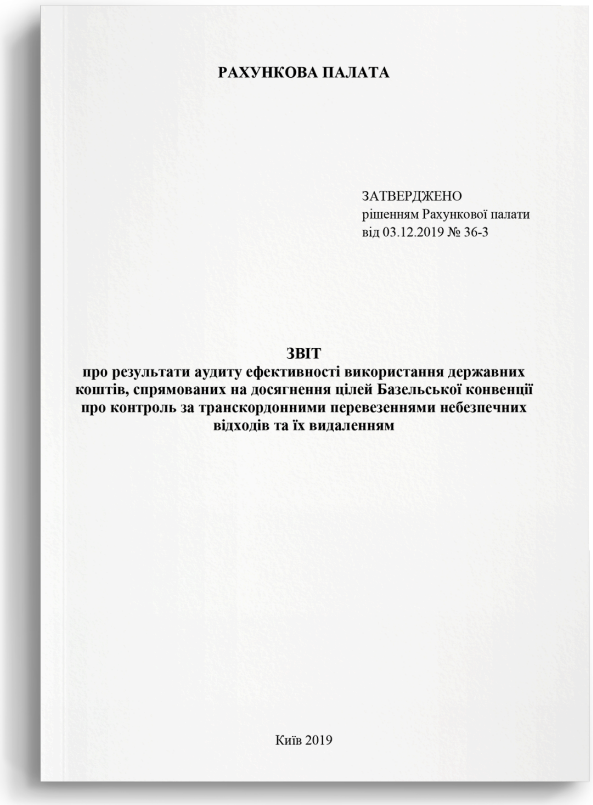
the determination of the basic conditions, requirements and rules for the safe waste management, are not fulfilled. As well as ensuring the minimum waste generation, its utilization in economic activities in the field of household waste management.

This is due to the imperfection and inconsistency of the legislative and regulatory support of the sphere of household waste management, as well as the lack of interest of the authorities at all levels in solving the existing problems. As a result, today the territory of Ukraine is clogged with household waste, which can lead to garbage collapse at both the regional and state levels.

Furthermore, additional costs for the elimination of emergency situations caused by environmentally hazardous waste management are necessary. As well, there are risks of social tension in society and the international concern of neighboring countries as a result of the transboundary movement of household waste, in particular by waterways.

At the same time, delaying the development and adoption of regulatory acts deepens existing problems in the field of household waste management and increases the risks of the inevitability of their harmful effects on the health of citizens of Ukraine and the environment.

The report offers a number of recommendations to executive authorities aimed at improving the efficiency of the use of budgetary funds in order to introduce modern methods and technologies in the field of household waste management.



РАХУНКОВА ПАЛАТА

ЗАТВЕРДЖЕНО
рішенням Рахункової палати
від 03.12.2019 № 36-3

ЗВІТ
про результати аудиту ефективності використання державних коштів, спрямованих на досягнення цілей Базельської конвенції про контроль за транскордонними перевезеннями небезпечних відходів та їх видаленням

Київ 2019

Audit topic: *Performance Audit on Public Funds Aimed at Achieving the Objectives of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.*

Audit period: *2017-2018 and the first half of 2019. For some issues during the audit, data were analyzed as of October 1, 2019 and as of November 15, 2019.*

Date of publication: *December 03, 2019.*

Audit link (in the original language): *https://rp.gov.ua/upload-files/Activity/Collegium/2019/36-3_2019/Zvit_36-3_2019.pdf*

Audit purpose: determining the actual situation of affairs and providing an assessment of: implementation of the Accounting Chamber of Ukraine recommendations on the results of the previous audit; Ukraine's compliance with the requirements and goals of the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal; legality, timeliness and completeness of management decisions in this area; productivity, efficiency and effectiveness of the budget funds utilization.

Abstract:

The audit notes that the requirements of the Basel Convention on regulatory support for the Ukraine implementation as a whole have been met. At the same time, the adopted legislative and by-laws require further improvement and coordination among themselves, in particular, with regard to proper control of transboundary movement of waste, its identification and disposal.

The responsible public authorities took measures to comply with the requirements of the Convention, however, they were not effective enough for the proper implementation of state policy in this area.

Since October 2018, the State Environmental Inspectorate of Ukraine has not been empowered to carry out environmental control at checkpoints across the customs border of Ukraine. The issues of binding both the sealing of a container with hazardous waste imported to Ukraine, the verification of the safety of the seal at the destination in Ukraine as well as when exporting from the state, require regulatory settlement. In addition, there is a need for a regulatory settlement of issues of control of the actual weight of hazardous and other wastes at customs posts.

Control over the transboundary movement of hazardous wastes and compliance by business entities with licensing conditions are need to strengthen. By carrying out such activities, the Ministry of Ecology and Nature Resources and the State Fiscal Service, including increasing licensing requirements for the material and technical base of business entities and its pre-licensing verification.

This will help to eliminate risks, in particular regarding the occurrence of unauthorized dumps of hazardous waste. Since the regulations in this area provide an opportunity for business entities to send extremely hazardous waste for burial in the ground or dumping it on the ground (for example, landfill) and other storage.

There are high risks of uncontrolled import of waste into Ukraine as secondary raw materials for storage or burial due to the fact that the Cabinet of Ministers of Ukraine has not established quotas for the import of such waste into Ukraine.

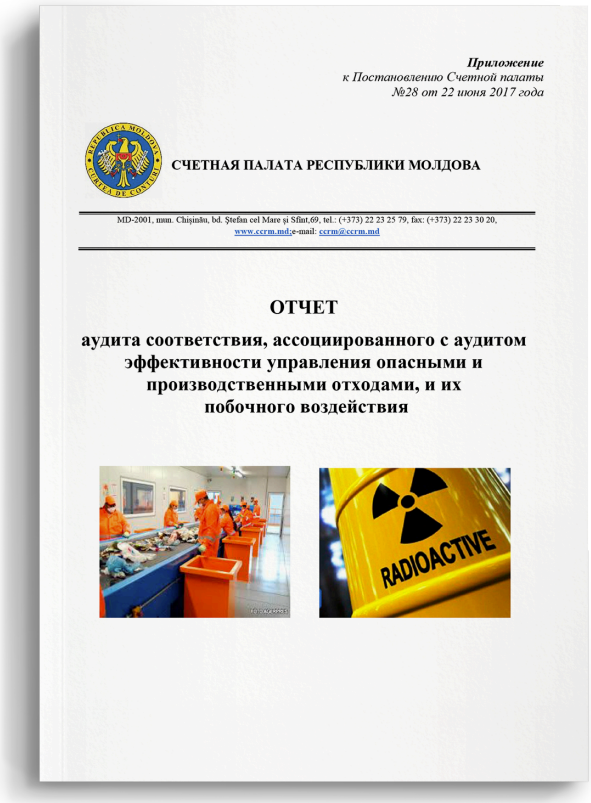
The exchange of data between government bodies authorized to exercise control in this area, in particular on the volumes of import, export and transit of hazardous waste, is also insufficient.

So, this indicates that the authorized body of the requirements of the Basel Convention is not sufficiently informed about the implementation of operations on waste management.

The Accounting Chamber emphasizes that the inadequate state of control over the hazardous waste management can be harmful to the environment and the health of the population of Ukraine.

The Report proposes a number of recommendations aimed at ensuring more effective implementation of the Basel Convention activities in order to achieve its objectives for the control of transboundary movements of hazardous wastes and their disposal.

Republic of Moldova



Приложение
к Постановлению Счетной палаты
№28 от 22 июня 2017 года

СЧЕТНАЯ ПАЛАТА РЕСПУБЛИКИ МОЛДОВА

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ОТЧЕТ

аудита соответствия, ассоциированного с аудитом эффективности управления опасными и производственными отходами, и их побочного воздействия

Audit topic: *Compliance Audit Associated with the Performance Audit on Hazardous and Industrial Waste Management and Their Side Effects.*

Audit period: *2015-2017.*

Date of publication: *June 22, 2017.*

Audit link (in the original language): *http://www.ccrm.md/ru/hotariri-si-rapoarte-2-95?idh=856*

Audit purpose: answer mainly the following general questions: Is there an integrated hazardous and industrial waste management system in the Republic of Moldova? Does the hazardous and industrial waste management system minimize potential threats to the environment and the public? If not, what changes are needed?

To achieve this goal, as well as based on the identified risks, the following tasks were identified, formulated as audit questions:

1. Have the legislative, regulatory and institutional frameworks applicable to waste management, including hazardous and industrial, been adopted and harmonized with the policies and requirements of European Union law? Do they cover the development of integrated waste management systems and the potential threats posed by waste to the environment and the public?

2. Has a waste stream collection and treatment system, including hazardous and industrial waste, been developed? Does it provide for the recycling, disposal and complete recycling of waste?

3. Has the regional infrastructure for managing hazardous and industrial wastes been properly created and equipped at all levels?

4. Do the organizations involved in the system of hazardous and industrial waste management comply with the existing regulatory framework?

5. Do the specific objectives of the waste management activities ensure that the results obtained are consistent with the policy objectives, financial support for projects in this field funded through the National Environmental Fund and from external sources, and existing regulatory tools / mechanisms?

6. Are fees and charges on environmental pollution calculated and charged within the limits set by the regulatory framework?

Abstract:

It is noted that the current waste management system of the Republic of Moldova, including hazardous and production waste, is not integrated and is not based on measures in accordance with the waste management hierarchy and with the mechanism of the producer's expanded responsibility for waste management.

In this regard, it is necessary to harmonize the national legal framework in the field of waste with the requirements of international standards and legislation with the development of state policy, and measures to protect the environment and public health. This measures should ensure the prevention or reduction of adverse effects arising from the generation and waste management, as well as by reducing the overall impact of resource consumption and increasing the efficiency of their use.

Thus, the SAI of Moldova notes in recent years the deadlines for approving the regulatory framework on waste management to create an integrated system have been delayed. Insufficient financial resources were allocated and utilized, from special funds. This negatively affected the achievement of goals in accordance with national policies and strategies in this area.

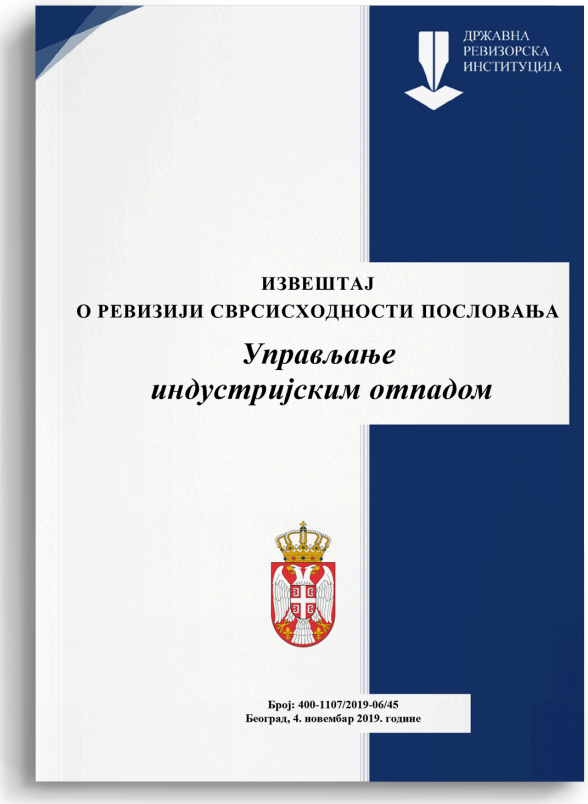
In such circumstances, the audit conclusion indicates the need to strengthen the transition from a linear economy existing in the Republic of Moldova to a circular economy based on processing. It is advisable to accelerate the implementation of the European Union legislation in national legislation, as well as to strengthen and allocate sufficient financial resources to create an integrated waste management system, to reduce the harmful effects on the environment and public health.

Based on the results of this audit, 18 recommendations were sent to 45 entities participating in the waste management system of the Republic of Moldova, including hazardous and industrial waste.

The recommendations are aimed at developing and implementing a regulatory framework, identifying and allocating financial resources, creating a waste management infrastructure, strengthening the system of state environmental supervision and control, and healthcare.

Republic of Serbia

Република Србија
Државна ревизорска институција



Audit topic: *Performance Audit «Management of Industrial Waste».*

Audit period: 2016-2018.

Date of publication:
December 13, 2019.

Audit link (in the original language):
https://www.dri.rs/php/document/download/2383/1

Audit purpose: determine the efficiency of industrial waste management by business entities in order to protect and improve the environment.

Abstract:

In the Republic of Serbia, 11.6 million tons of waste, or 1.7 tons of waste per capita, were produced in 2018. Of the total amount of waste, over 9 million tons is industrial waste. Compared to EU countries, Serbia is among the countries with the lowest percentage of treated waste.

The audit showed following. Not all planning document on waste management were adopted, nor the reports on realization of existing ones, which indicated that not all activities were taken in order to improve industrial waste management planning more efficiently.

According to the data of the Environmental Protection Agency, around 80 % of produced industrial waste in the Republic of Serbia remains at the location of producer itself, which points to low percentage of industrial waste treatment and to insufficient usage of waste as raw material. The above-mentioned, along with the fact that there are no hazardous waste treatment facilities, points to the fact that industrial waste is not managed efficiently and sufficiently, which represents risk for environment and health of people.

PE «Elektroprivreda Srbije» did not act upon main project of rehabilitation, closing down and re-cultivation of Landfill of ash and slag «Srednje kostolačko ostrvo», because the Landfill was not closed down until July 2015, as it was planned by the main project. The above-mentioned resulted in the fact that two clusters are active at the same time, and the ash is transmitted via air into the neighboring settlements, and it leads to emission of polluting materials from the ash landfill, which presents risk for environment and health of people.

In the Republic of Serbia there is no sufficiently efficient supervision and control over industrial waste management, which is reflected in insufficient coordination between entities in charge of waste management, insufficient inspection supervision and insufficiently reliable system of issuing and revocation of permits for waste management.

Due to lack of efficient supervision and control, revenues of the budget of the Republic of Serbia in period 2014–2018, were reduced by 6,7 billion dinars only on import of vehicles as a product which becomes waste after usage. Environmental Protection Agency did not perform efficient control over submitting data for the National Register of Environment Polluters and control of accuracy of submitted data.

Principle of reporting oneself, without efficient control and supervision by competent authorities, presents a risk that business companies may not submit data or may submit inaccurate data, because in such way they reduce their obligation to pay charges, thus creating less income from charges in the field on environmental protection.

Work of the Inspection for Environmental Protection has not contributed sufficiently to efficient management of industrial waste. Efficient supervision has not been sufficiently established over industrial waste management through system of issuing and revocation of permits for waste management.

Having completed Performance Audit «Management of Industrial Waste», in order to establish more efficient industrial waste management system, State Audit Institution issued recommendations to 5 auditees.

Accounting Chamber

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