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PRINCIPLES OF WASTE MANAGEMENT UNDER THE LEGISLATION OF THE EU AND THEIR IMPLEMENTATION IN POLAND AND UKRAINE

***Summary.** The theoretical and legal bases of waste management according to the legislation of the European Union were investigated in the work. An analysis of waste classification in the EU has been carried out. The principles of EU activity in the field of waste management were studied. Directions for waste prevention have been established.*

***Key words:** legal regulation of waste management, waste classification, EU legislation.*

ПРИНЦИПИ ПОВОДЖЕННЯ З ВІДХОДАМИ ЗА ЗАКОНОДАВСТВОМ ЄС ТА ЇХ ІМПЛЕМЕНТАЦІЯ В ПОЛЬЩІ ТА УКРАЇНІ

***Анотація.** В роботі досліджено теоретико-правові засади поведження з відходами за законодавством Європейського Союзу. Здійснено аналіз класифікації відходів в ЄС. Досліджено принципи діяльності ЄС у сфері поведження з відходами. Встановлено напрямки попередження виникнення відходів.*

***Ключові слова:** правове регулювання поведження з відходами, класифікація відходів, законодавство ЄС.*

According to scientific research, during the decomposition of waste, viruses, bacteria, fungi, carboxylic acids, esters, alcohols and aldehydes are formed, which pose a direct threat to living organisms and significantly

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impair the quality of human life, adversely affecting the environment. In addition, this problem is common to the entire world community, and therefore each state should make every effort to address the issue of waste disposal and recycling⁴. The purpose of our scholarly work is to study the theoretical and legal foundations of waste management under European Union law, to analyze the classification of waste in the EU, to study the principles of EU activities in the field of waste management and their implementation in Poland and Ukraine.

In general, the principles of waste management cannot be interpreted from a single legal document. For example, conditionally by origin, they can be divided into three groups:

- 1) general principles of environmental law that can be indirectly applied to waste management policy issues;
- 2) the principles enshrined in the Waste Framework Directive;
- 3) the principles arising from the content of regulations governing the relations arising in the field of waste management.

The first group includes the basic principles enshrined in the Treaty on the Functioning of the European Union, such as:

- 1) polluter pays principle;
- 2) the principle of protection of life and health;
- 3) the principle of prevention;
- 4) planning principle;
- 5) the principle of sustainable development.

These principles are also expressed in other regulations in the field of environmental protection. The above principles are the guiding principles of all regulations concerning environmental protection, including waste management policy. Also, they are characterized by a high level of their generality, as their content is further developed and specified in other regulations.

In the EU legal system, along with the general principles, there are special ones that form the basis of legal regulation in certain spheres of public life. The second group consists of special principles that are directly

⁴ Knyzhnyk K.V. Problems and directions of waste utilization in Ukraine. URL: [file:///C:/Users/1/Downloads/molv_2018_5\(2\)_60%20\(2\).pdf](file:///C:/Users/1/Downloads/molv_2018_5(2)_60%20(2).pdf)

part of the EU Waste Framework Directive. Within its limits of the given group it is possible to distinguish the following principles:

- 1) the principle of proximity;
- 2) the principle of application of the waste management hierarchy;
- 3) the principle of producer responsibility;
- 4) the principle of selective collection.

The principle of proximity – a principle, according to which the waste should be recycled as close as possible to the place of its formation. In addition, the technological criterion must also be taken into account – processing is performed at the nearest suitable processing station. The above-mentioned principle is primarily due to the issue of waste transportation. Because limiting the shipment of waste for recycling reduces the risks to the environment and human health.

The principle of closeness is closely related to the principle of self-sufficiency. According to the content of Art. 16 of the Waste Framework Directive, for the development and operation of the European Union as a whole, a network of recycling plants should be set up. To this end, Member States should take appropriate measures, alone or in cooperation with other Member States, where this is desirable and necessary for them⁵. That is, not in every country it is required to have a full range of waste treatment plants on its territory.

But, on the other hand, in accordance with the principle of proximity, the network of processing plants must be built in such a way as to ensure a high level of environmental protection and public health.

Let's consider how the above principle works in practice in Poland. In Poland, the scope of the principle of proximity and self-sufficiency is wider than in the Waste Framework Directive. From the analysis of Polish national legislation, it is possible to derive a general rule according to which waste must first be handed over for treatment at the place of origin, and if this is not possible, it can be recycled elsewhere, taking into account

⁵ Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives. OJ L 312, 22.11.2008. P. 3–30.

technological criteria (best available recycling) and distance (the nearest place). The waste hierarchy should also be considered in each case.

For example, as a general rule, the treatment of sludge from municipal wastewater and the disposal of infectious medical waste or infectious veterinary waste may take place only in the voivodship area where it was generated. However, processing may take place in a different voivodeship than the one in which they were formed, provided that the distance from the place of origin to the place of processing in another voivodeship is less than the distance from the place of formation to the place of processing in the same voivodship⁶.

The principle of hierarchy of waste management priorities. This principle is to establish a coherent five-element waste management system that, from an environmental point of view, provides the least negative impact on the environment and public health.

In order to implement the waste hierarchy of Directive 2008/98 / EC, Member States were required to adopt and implement waste prevention programs. The national programs were to be adopted no later than December 12, 2013. In addition, states should evaluate and review these programs at least every six years.

National waste prevention programs should include: waste prevention objectives; description of existing measures to prevent waste and assess the effectiveness of measures; quantitative or qualitative standards and objectives of waste prevention measures.

Today, the waste hierarchy is presented in five successive stages:

- 1) prevention of waste generation;
- 2) preparation for reuse;
- 3) processing;
- 4) other types of recovery;
- 5) disposal.

New waste prevention policies pay close attention to encouraging the development of products that have the most justified negative impact on the environment and public health. In particular, measures are being

⁶ W sprawie ogłoszenia jednolitego tekstu ustawy o odpadach: obwieszczenie marszałka sejmu Rzeczypospolitej Polskiej od 20.04.2020. ULR: <https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000797>

implemented to stimulate the development and promotion of technologies for the production of reusable products that are subject to safe processing after its conversion into waste.

In practice, the Member States of the European Union use not only the latest technologies, but also economic incentives (special tax system, or benefits). For example, in Denmark, a tax on the free distribution of plastic bags in commercial establishments has been in place for more than 20 years. After the introduction of payment for packages, their popularity among customers decreased by 90%. Or, for example, 10 years ago, biodegradable bread bags were launched in the UK, which decompose into carbon dioxide and water in four years. New waste prevention policies are closely linked to product reuse. The meaning of preparation for reuse is the activities that prolong the life of certain things and allow to use such a thing more than once after its manufacture. Examples of such measures are the collection of containers and packaging for reuse, the transfer of used clothing to the poor, the use of worn tires and plastic bottles, for example, to build household items, etc.⁷

When a product loses its consumer value, it becomes a secondary raw material and must be recycled. This approach reduces the negative impact on the environment and human health, as well as saves on raw materials. In particular, paper, plastic, metals, glass, etc. are subject to recycling.

If recycling or composting is economically impractical or impossible, the waste must be recovered in another way, in particular, in the form of energy recovery. For example, in European countries 20–25% of municipal waste is recycled, in Japan – about 65%, in the US – about 15%. The most active “incinerator” is Germany, which has 60 plants, burns more than 16 million tons of waste annually⁸.

The last link in the process of waste management is their disposal, i.e. disposal in the landfill. This process is used only when all other possible ways of waste processing are exhausted. However, the Waste Framework Directive

⁷ Tevkun T. European rules of waste. Website. ULR: <https://iser.org.ua/analitika/analiz-derzhavnoi-politiki/evropeiski-pravila-smittia>.

⁸ Tevkun T. Litter in a European way: what Ukraine needs to change. ULR: <https://www.eurointegration.com.ua/experts/2015/11/16/7040585/>

states that when applying the waste hierarchy, Member States must take into account the general principles of environmental protection, technical and economic feasibility, and therefore in some cases deviations from the waste management sequence are possible. For example, the recovery of polychlorinated biphenyls, medical and veterinary waste is prohibited.

The principle of extended producer responsibility. This principle is widely related to the principle of prevention and the principle of "polluter pays".

In the 1990s, faced with increasing waste, a number of countries reviewed existing policy options and concluded that imposing producer responsibility for products after they lost their consumer value could be a successful practice to reduce the negative impact of waste on the environment and public health. This concept was first officially presented in Sweden in 1990 at a report by Thomas Lindhqvist to the Ministry of the Environment. A little later, in one of the reports, the definition of the principle of extended liability appeared, according to which the content of the above principle was revealed as a strategy of environmental protection by making responsible for the entire life cycle of the product, including collection, processing and final disposal.

Shifting responsibility to the manufacturer is not only a component of environmental policy, but also the most effective way to achieve higher environmental standards in product design. At the same time, the extended responsibility of the producer is only indirectly aimed at reducing the amount of waste generated, as the main goal is to reduce the amount of waste to be disposed of by incineration or landfill.

In general, there are several models for implementing the principle of extended producer responsibility. Let's consider them in more detail.

As we have already mentioned, extended producer responsibility means that the producer is responsible for the entire life cycle of the product he produces. However, according to the analysis of the Waste Framework Directive, the producer may transfer his responsibility to another entity.

According to this model, special organizations are created, which, at the expense of financing by producers, organize the selective collection of packaging waste with its subsequent disposal.

Model 2. Implementation of the principle of extended liability is carried out through the imposition of environmental tax. Mandatory payment

is levied on each package produced. Collected funds from producers are directed to the development of infrastructure which main task is the collection, processing and disposal of waste. That is, unlike the previous model, the responsibility for the management of packaging waste is assumed by the state. The tax system is less common due to the presence of corruption factors, and therefore not efficiency (Ministry of Regional Development, 2020).

Model 3. Deposit system. The deposit system ensures the return of packaging waste through special automated points. In this case, the packaging is marked accordingly (for example, laser engraving), which helps to obtain the information needed to organize a system for returning certain types of packaging through special equipment and automated points. In exchange for returned waste, appropriate coupons are often issued for cash in the amount of the package, which can be used to pay in retail chains.

The deposit system is less common due to the high cost of implementing and maintaining such a system, as well as low efficiency. With this system, only some types of packaging are returned (glass bottles, polyethylene, aluminum cans).

Model 4. Mixed system. A mixed system can have several system functions or allow several systems to coexist. An example of a mixed system is a pilot project involving 5 UKRPEK companies: Tetra Pak, Coca-Cola Beverages, Sandora, Elopak, and Ken Pak.

The objectives of the project were to perform such tasks as:

- 1) introduction of a practical model of the system of collection and use of packaging waste;
- 2) assessment of the real cost of infrastructure and services in the field of packaging and packaging waste management;
- 3) development of relations with local governments and professional organizations – service providers;
- 4) organization of informational and educational activities among the population and raising the level of environmental education;
- 5) organization of regular monitoring, transfer of its results to the main stakeholders for development and decision-making.

To implement the set tasks, the city installed 240 yellow-green containers for packaging waste, which allowed 85% of the city's population to cover

a separate collection. Over 700 tons of processed raw materials were collected, sorted and processed in two years.

As a result, they managed to improve the environmental situation, reduce the burden on the environment, create new jobs and improve the situation of workers due to the legalization of their work. The main benefit of the project for importers and manufacturers can be considered the creation of a cost-effective, transparent and controlled structure for the implementation of extended producer responsibility through various options and tasks⁹.

The principle of selective waste collection. Selective collection means that waste should be collected separately, if possible taking into account technical, economic and environmental factors.

Waste segregation is one way to reduce waste by removing raw materials for reuse or recycling and using new materials. Waste segregation can be implemented in two ways – sorting into bags, or in the container department. Bag segregation is the collection of waste in plastic bags, which are specially provided by the municipality and are carried out mainly on the property of single-family homes. Container segregation mainly affects people living in residential buildings and apartment buildings where the container complex is located.

The third group of principles is interpreted from a number of legislative acts that regulate relations arising from waste management policy. These include principles such as:

- 1) principle of planning;
- 2) principle of diversification of waste norms;
- 3) the principle of enhanced rationing.

The principle of waste management planning is an important policy tool of the European Union. According to Art. 28 of the Waste Framework Directive, Member States are required to develop at least one waste management plan that, alone or in combination with others, covers the entire geographical area of the country. The responsibility for developing

⁹ On the extended responsibility of the producer of marketable products in the management of household waste – explanation of the Ministry of Regional Development. URL: <https://www.minregion.gov.ua/press/news/pro-rozshirenu-vidpovidalnist-virobnika-tovar-noyi-produktsiyi-u-povodzhenni-z-pobutovimi-vidhodami-roz-yasnennya-minregionu/>

a plan or several plans rests with the competent authorities of the Member States.

The waste management plan should include an analysis of the current environmental situation in the relevant geographical area, as well as further action to be taken to improve environmental performance.

The waste management plan shall include at least the following data:

1) the type, quantity and source of waste generated in the territory of the Member State, as well as an assessment of the forecast of future waste generation;

2) existing waste collection schemes and basic mechanisms for their disposal or recovery, including any special guidelines for the management of waste such as waste oils, hazardous waste, or waste streams covered by special European Union legislation.

3) assessment of the need to develop new schemes for the collection, construction of additional or closure of existing institutions specializing in waste disposal;

4) a description of the division of responsibilities between public and private entities implementing waste management policies;

5) assessment of the usefulness and suitability of the use of certain tools to solve various problems that arise in the implementation of waste policy.

The principle of enhanced rationing plays an important role in the implementation of legislation on environmental protection because rationing tools are ancillary elements in the implementation of additional state control in the field of waste management^{10, 11, 12, 13}. For example, in order to carry out

¹⁰ Gulac O., Goshovska V., Goshovskyi V., Dubchak L. (2019) New Approaches to Providing of Environmental Management in Ukraine on the Way to Euro Integration. *European Journal of Sustainable Development*. Volume 8, № 2, pp. 45–56. URL: <http://ecsdev.org/ojs/index.php/ejsd/article/view/793/788>

¹¹ Ladychenko, V., Golovko, L., Kapplová, O. (2019). Municipality as Regulator of Household waste Management. *Scientific Papers of the Legislation Institute of the Verkhovna Rada of Ukraine*, 5, 38–45.

¹² Kutsevych, M., Yara, O., Golovko, L., Terpeliuk, V. (2020). Sustainable Approaches to Waste Management: Regulatory and Financial Instruments. *European Journal of sustainable development*, Volume 9, № 2, 163–171.

¹³ Kidalov, S., Vitiv, V., Golovko, L., Ladychenko, V. (2020). Legal Regulation of Waste Management in Ukraine on the Way to European Inregration. *European Journal of sustainable development*, Volume 9, № 2, 422–430.

certain activities in the field of waste management, it is necessary to obtain numerous permits – in particular, for the collection and recycling of waste.

The principle of diversification of waste regulations provides for the possibility of deviating from the general provisions of the legislation. The departure from the basic model can be justified primarily by the requirements of human health and the environment. For example, some types of waste do not use a waste hierarchy (in particular, a ban on the recovery of medical and veterinary waste) or a ban on neutralizing polychlorinated biphenyls by incineration at a waste incineration plant. This approach indicates the need to take into account the specifics of some waste streams.

The main normative legal acts currently regulating solid waste management at the municipal level in Poland include are as follows: Law on waste of December 14, 2012; Law of January 25, 2013 amending the Law of September 13, 1996 on maintaining cleanliness and order in municipalities; Law of January 23, 2020 on amendments to the law on waste and some other acts; The Law on Waste, which entered into force on January 23, 2013, defines measures to protect the environment, human life and health, prevent and reduce the negative impact on the environment and human health due to the generation and management of waste, and limit the overall consequences of the use of resources and increase the efficiency of such use (Article 1). According to the law, the responsibility for waste management in Poland was assigned to local governments, which were obliged to establish local municipal waste collection systems. Moreover, conditions must be created for separate waste collection.

From January 1, 2018, according to the Law of Ukraine "On Waste", Ukrainians must sort waste and throw it in the appropriate containers. In the same year, it was decided to get rid of garbage disposals in multi-storied buildings and made changes to state building norms: mandatory design of garbage disposals for new construction and reconstruction of buildings was canceled. Laws and new containers should help to reduce the level of waste that is taken to the landfill annually from 95 % (2016) to 30 % (2030) in 14 years. In fact, by 2018 it was possible to reduce volumes by only 1.2 %.

Conclusions

In the EU legal system, along with general principles (polluter pays principle, life and health principle, prevention principle, planning principle,

sustainable development principle), there are special ones that form the basis of legal regulation in certain spheres of public life (proximity principle, the principle of application of the hierarchy of waste management, the principle of producer responsibility, the principle of selective collection).

The novelty is that the above principles provide for preparation for reuse and recycling. These two groups of processes fall under the concept of recovery, but at the legislative level are considered as its form. This is due to the desire to eliminate the generation of new waste and use existing waste as a resource.

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