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# **SCIENTIFIC PROJECTS ON IMPROVING THE ENVIRONMENT**

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## **IMPLEMENTATION OF EU REQUIREMENTS IN THE FIELD OF WASTE MANAGEMENT TO THE LEGISLATION OF UKRAINE**

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The integration of Ukraine into the European Community is a complex and long-term process, which was started long before the signing in 2017 of the Association Agreement between Ukraine, on the one hand, and the European Union and its member states, on the other hand (hereinafter the Agreement). Signing the Agreement obliged Ukraine to bring domestic legislation into compliance with European requirements. This created new opportunities for the adoption of new standards in various spheres of social life, including in the field of environmental protection.

The domestic reform of the legislative framework in one of the priority directions in the European Union (environmental protection) was carried out with the support of European institutions within the framework of the Sectoral Policy Support Program. The program was focused on specific goals defined by the National Environmental Strategy of Ukraine. Thus, Annex XXX to the Agreement stipulates that Ukraine must implement a number of legal acts of the European Union, thereby bringing national legislation closer to EU legislation. Regulations, Directives and Decisions of the European Union were to be reflected in the legal framework of Ukraine [1].

The implementation of European environmental legislation in Ukraine takes place in eight sectors regulated in the EU by 29 legal norms, namely Directives and Regulations. Waste and resource management occupies an important place among the selected sectors.

Unlike the nature protection legislation of Ukraine, which was in many respects declarative, the norms of EU law determine the quantitative and qualitative results that each country must achieve within a certain period.

After signing the Agreement, Ukraine continued the process of adapting domestic legislation in the field of waste management to European standards.

Regulation of activities in the field of waste management (and their separate streams) in the EU is carried out in accordance with a number of directives and regulations:

- Framework Directive No. 2008/98/EC of the European Parliament and the Council on waste and the repeal of certain directives [2];
- Regulation 1013/2006 on waste transportation [3],
- Regulation 2150/2002 on waste statistics [4],
- Directive 2004/35/EU on liability for environmental damage [5],

– EU Regulation 1272/2008 on classification, packaging and labelling of dangerous substances and mixtures [6].

Most directives contain specific targets.

Having analyzed and summarized the provisions and requirements of the listed standards, it can be concluded that most of the requirements are aimed at increasing the percentage of waste recycling and reducing the amount of waste entering landfills or disposal. The requirements of each directive are aimed at making waste management safer for the environment and people.

Let's consider some directives. Directive 2008/98/EU establishes the list of waste, classification of waste management operations, requirements for the management of hazardous waste, prohibition of mixing hazardous waste (Article 17), labelling of hazardous waste (Article 19), availability of necessary documents for transportation of hazardous waste through the territory of EU countries. Article 11 of the Directive obliges to ensure separate collection of glass, paper and cardboard, metal, polymers, until 2025 – textiles, as well as preparation for reuse and recycling. Article 22 establishes the need for separate collection of biological waste and ensuring its further treatment and processing. In addition, this Directive sets a number of target indicators. Thus, by 2025, EU member states should prepare for reuse and recycling 55-60% of waste as a whole, and by 2030 – 60-65%. The directive also defines the requirements for permit procedures for organizations and enterprises engaged in the collection and transportation of waste on a professional basis.

Another Directive 1999/31/EC [7] establishes requirements for waste to be sent to landfills only after they have been processed in order to reduce their volume and environmental hazards. That is, it is impossible to take a container with mixed waste to the landfill. The directive also defines the procedure for paying for waste disposal, which is taken into account during the construction, operation, closure of the landfill and its care during the next 30 years after its closure.

Directive 2006/21/EU approved Decision 2009/337/EU on determining the criteria for the classification of objects in accordance with the Annex to the Directive [8].

Directive 2010/75/EC on industrial emissions [9] concerns objects of industrial activity in case they cause pollution and does not apply to research and development centers. Chapter IV of this Directive lays down specific requirements for waste incineration plants and waste co-incineration plants. In particular, these are emission monitoring, emission limit values, operating conditions (carbon content in residues after incineration, temperature regime of the incineration process, etc.), use of the obtained energy, delivery and acceptance of waste and reporting.

In addition to the directives: Directive 2006/66/EC of the European Parliament and the Council of September 6, 2006 on batteries and accumulators and used batteries and accumulators [10], Directive 2012/19/EC on waste electrical and electronic equipment [11], Directive 94/62/EC of the European Parliament and the Council of December 20, 1994 on packaging and packaging waste [12] ensure the functioning of the "Extended producer responsibility" system [13].

In order to expand and establish stricter rules for those types of products and packaging that are among the ten items that are most common and pollute European

beaches, on May 21, 2019, the Council of the European Union adopted the relevant Directive on limiting the use of certain single-use plastic products. The ban entered into force on July 3, 2021 and affected a number of goods of daily demand. Some of them will be banned completely; others will have to be labelled accordingly to inform consumers about how to properly dispose of such products and what consequences they may have if they get into the wild.

In order to bring national legislation closer to European legislation, Ukraine is obliged to implement basic directives, also including Directive 2010/75/EC on industrial emissions (comprehensive pollution prevention and control).

The problem of the accumulation of production and consumption waste is one of the main threats to environmental safety in Ukraine, as the volume of waste generation, including chemically hazardous waste, is increasing, and the area of unauthorized landfills is expanding. The consequences of military operations only deepen this problem.

In order to solve this problem and to fulfil the obligations that Ukraine assumed upon signing the Agreement, the Cabinet of Ministers of Ukraine approved the National Waste Management Strategy in Ukraine until 2030 [14]. The strategy defines the main directions of state regulation in the field of waste management in the coming decades, taking into account European approaches to waste management, based on the provisions of the framework and basic directives [2, 7, 8, 10–12]:

Moreover, all legal documents that will be developed and adopted for the implementation of the Strategy must be based exclusively on the principles and provisions of the relevant acts of European legislation.

In December 2022, the Ministry of Environmental Protection and Natural Resources of Ukraine presented a roadmap for the implementation of the waste management reform. Among the expected results are defined:

- covering 100% of the country's population with the separate waste collection system;
- more than 50% of household waste is recycled and recovered;
- less than 30% of waste must be landfilled;
- burn only what cannot be recycled;
- closing and reclamation of landfills that do not meet the requirements of the law;
- creation of at least 200 new modern plants for processing household waste, etc.

The next step in reforming the waste management system was the entry into force of the Law of Ukraine on Waste Management on July 9, 2023 [15]. The law was adopted to replace the Law of Ukraine On Waste No. 187/98 dated March 5, 1998. According to the current Law [16] in Ukraine:

- a hierarchy of waste management is implemented, the priority directions of which are the prevention of waste generation, its reuse and recovery (recycling), and only then – removal, including disposal at landfills that meet the requirements of environmental safety,
- planning of the waste management system at the national, regional and local levels,
- introduction of the extended producer responsibility system,



- gradual creation of modern infrastructure and waste collection and processing facilities,
- improvement of waste management processes, including license and permit system, information support in the field of waste management.

The current law is aimed at introducing legal regulation in the field of waste management that meets the requirements of the relevant EU directives.

During the last few months, a number of Resolutions of the Cabinet of Ministers of Ukraine were adopted, which were developed to implement certain provisions of the Law. Thus, in accordance with Article 51 of the Law [15], Cabinet Resolution No. 667 of June 30, 2023 approved the Procedure for the development and approval of regional waste management plans. The regulations of the Law on the Procedure for Handling Household Waste in Special Conditions [17] have been brought into line, as well as the issue of handling waste generated in connection with the damage (destruction) of buildings and structures as a result of hostilities, acts of terrorism, sabotage or carrying out works to eliminate their consequences.

According to the new Law, waste must be collected separately and must not be mixed with other waste or materials with different properties. Separate collection of waste in settlements should be carried out for such types of waste as paper and cardboard, plastic, glass, metal. Conditions should also be created to ensure separate collection of biological waste, textiles and other types of waste subject to separate collection. Large-sized, repair, hazardous waste in the composition of household waste, green waste is collected separately from other household waste. Housing estates and other facilities should be equipped with container sites for separate collection of household waste.

The next stage was the publication of a number of draft legislative and by-laws:

- Law of Ukraine on packaging and packaging waste;
- Order of the Ministry of Environmental Protection and Natural Resources of Ukraine on approval of the Rules for technical operation of landfills, termination of operation, reclamation and maintenance of landfills after termination of their operation;
- Resolution of the Cabinet of Ministers on approval of the Procedure for the formation of a weighted average tariff for the service of household waste management, as well as tariffs for the collection, transportation, recovery and removal of household waste;
- Resolution of the CMU regarding some issues of announcing the termination of the status of waste;
- Resolution of the Cabinet of Ministers of Ukraine on the approval of Licensing conditions for the implementation of economic activities for the management of hazardous waste;
- Decision of the Cabinet of Ministers of Ukraine Regarding some issues of classifying substances or objects as by-products.

Adoption and implementation of the listed documents in the near future will provide clear guidelines for further activities in the field of waste management.

There are already certain positive changes in this area. Thus, after the Law of Ukraine on Limiting the Circulation of Plastic Bags in Ukraine came into effect, many

large retail chains switched to alternative options for packaging goods, for example, biodegradable bags.

The process of implementation of European Union law is associated with significant changes in the Ukraine's legislative field. First of all, Ukraine faces the task of changing the concept of economic development. The vector of priority goals in the field of waste management is directed in the direction of a "circular" economy with minimization of residual products and cascading use of resources. The deadline for implementing a number of directives into domestic legislation is set to 5-6 years. However, objective reasons, including a full-scale military invasion of the territory of Ukraine, may affect on the terms. However, the main principles of the waste management reform are unchanged.

#### 1. Compliance with the principles of the circular economy

Closed-loop economy or circular economy is a model of economic development based on recovery and rational consumption of resources and is an alternative to the traditional economy. It is based on economic approaches, the goal of which is to minimize the negative impact on the environment, to implement waste-free production in order to achieve the goals of sustainable development.

#### 2. Clear hierarchy of waste management

The hierarchy of waste management consists of five stages, the implementation of which is based on the achievement of priority goals for the prevention of waste generation. If it is impossible to avoid the generation of waste, efforts are made to reuse. If reuse is impossible, recycling is carried out (waste materials are processed into products, materials or substances). Organic materials can be recycled. But, with the help of recycling, it is impossible to restore energy or process materials for their further use as fuel.

If recycling is not possible, other types of utilization are used, including technological operations performed for the purpose of energy recovery or processing into materials for their further use as fuel.

If it is impossible to perform all the operations listed above, waste is removed by burying it in specially equipped places and destroying or neutralizing it using equipment that does not meet environmental standards.

#### 3. Integrated waste management information system

An information system should be developed with convenient access to data (licenses, permits, location of landfills and landfills, current information on pollutants, processing facilities). Moreover, this system should provide an opportunity for effective waste management both at the state and regional levels.

#### 4. Systematic and planning

The reform is carried out at all levels, namely: state, regional, local. For this, using the main provisions of the National Waste Management Plan, Regional Waste Management Plans are being developed. The methodological approaches are the same.

#### 5. Extended producer responsibility (EPR)

This principle provides for the application of financial and organizational mechanisms that contribute to the development and production of products with efficient use of resources throughout the life cycle of products, including their

recovery, reuse, and disposal. The purpose of this principle is to increase the volume and degree of product recovery, thereby minimizing the impact of waste on the environment.

For the first time, this policy was applied in the early 90s of the last century in some European countries. This was especially true of packaging waste. In the following years, it spread to all EU countries and beyond. The extended responsibility of the producer contributed to the acceleration of the pace of waste processing, which provided an opportunity to save public costs for waste management.

6. Integration into the EU waste market and the European waste management system

The reform not only complies with European legislation, but also takes into account Ukrainian realities and market peculiarities. At the same time, such basic things as requirements for participants in the waste management system and waste classification must fully comply with EU standards. This is necessary to make it easier for Ukrainian business entities and state institutions to integrate into the EU system and communicate with partners using the same legal language.

Waste management reform is an important stage in the implementation of Ukraine's environmental policy. After all, it involves bringing the principles of work closer to European standards, the use of modern approaches to the collection, sorting, processing and disposal of waste. Its successful implementation will help preserve natural resources, reduce environmental pollution, development the economy.

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