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**METHODOLOGY OF MONITORING AND EVALUATION OF THE  
EFFECTIVENESS OF STATE POLICY IN THE SPHERE OF  
ENVIRONMENTAL SAFETY IN UKRAINE**

*The current environmental legislation of Ukraine is analyzed to determine the monitoring and assessment system of the state environmental policy. It has been established that when forming this system, one should use the methodological foundations of public administration, which define it as a function of such management. The ways of improving the state environmental management are proposed.*

**Keywords:** *methodology of monitoring and evaluation; effectiveness of state policy; sphere of environmental safety.*

**Problem setting.** Conceptual principles of environmental policy of Ukraine are formulated in the Law of Ukraine "On Basic Principles (Strategy) of State Environmental Policy of Ukraine for the period up to 2030" № 2697-VIII of 28.02.2019 (hereinafter - the Main Directions) [3]. This law was preceded by another, the effect of which was designed for the period up to 2020. In developing the current Main Directions, it was assumed that the current environmental situation in Ukraine is defined as a crisis. As a result of the implementation of the Main Directions, it is envisaged to create a system of ecologically balanced management of society

development, which will help restore the natural properties of the environment, competently regulate the use of natural resources and the development of productive forces.

According to Section II, the main tools for implementing state environmental policy are the following: strategic environmental assessment and environmental impact assessment; environmental management systems, environmental audit; comprehensive monitoring of the state of the environment and supervision (control) in the field of environmental protection, rational use; environmental legislation, etc. [only]. It is planned that by 2025 the environmental situation should be stabilized by consolidating changes in the public administration system, which took place by reforming the public environmental management system, implementation of European environmental norms and standards, improving environmental accounting and control systems [ibid., Section IV "Stages of implementation state environmental policy "]. Thus, the urgent task is to study the peculiarities of the use of these instruments of state environmental policy from the standpoint of forming a methodology for monitoring and evaluating its effectiveness in the field of environmental safety.

**Recent research and publication analysis.** Scientific developments of scientists V. Andronov, L. Antonova, S. Dombrovskaya, I. Dragan, A. Kryukov, A. Omarov and others are devoted to the study of the problems of state policy in the field of environmental safety of Ukraine and other countries of the world [1; 4; 5]. At the same time, there is a need for a systematic study of the methodology for monitoring and evaluating state policy in the field of environmental safety, including from the standpoint of the updated system of its public administration (as indicated in the existing environmental legislation of Ukraine). All this constitutes the purpose of our research.

**Paper main body.** The analysis of the Main Directions allows us to state that they may be subject to significant criticism after the official approval of the document. The document could be criticized for the lack of clearly defined goals of environmental policy, declarativeness, as well as the generality of recommendations

and measures for monitoring and evaluation of state environmental policy. This may be due to an erroneous methodological approach to the development of such documents, primarily due to the lack of a systematic approach to determining the priorities of state environmental policy.

Taking into account the systemic nature of environmental problems, their organic correlation with all political, social and economic factors, the strategy of environmental security of Ukraine is seen as one of the fundamental components of national security. Such a policy must be based on the principle of the priority of human rights, which is generally accepted in the civilized world. One of them is the right of citizens to environmental safety. It is guaranteed by a set of political, legal, economic, technological and humanitarian factors [4].

According to system studies [5], quantitative assessments of the priorities of environmental safety mechanisms of Ukraine (Fig. 1) were distributed as follows:

- economic mechanisms and assessment of environmental safety (0,321),
- state environmental safety management system (0,273),
- industrial safety and technological foundations of environmentally safe industrial development, energy and transport (0,237),
- normative-legal activity in the field of ecological safety (0,142),
- scientific bases of ecological safety (0,113),
- public organizations in the field of ecological safety (0,006).

It is in this order that we consider them.

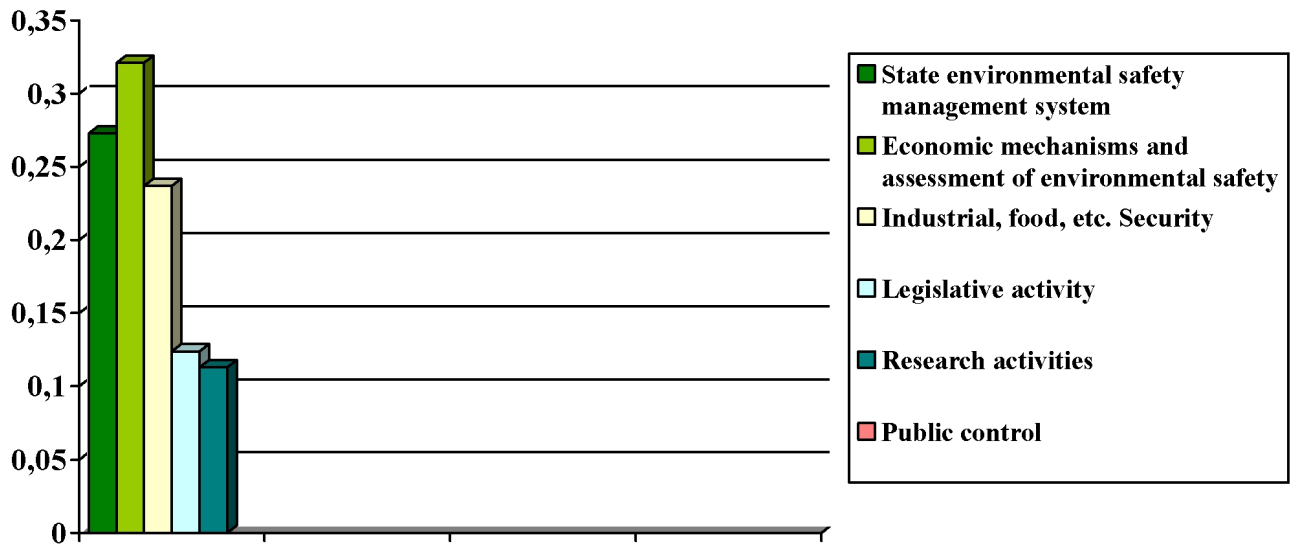


Fig. 1. Global priorities of mechanisms for neutralizing threats to Ukraine's environmental security

Source: compiled on the basis [5]

*Economic aspect of environmental safety.* Issues of environmental safety cannot be considered separately from the economy - they are inextricably linked [5]. The priorities of the economic mechanism in relation to the risks of threats to the environmental security of Ukraine are shown in Fig. 2.

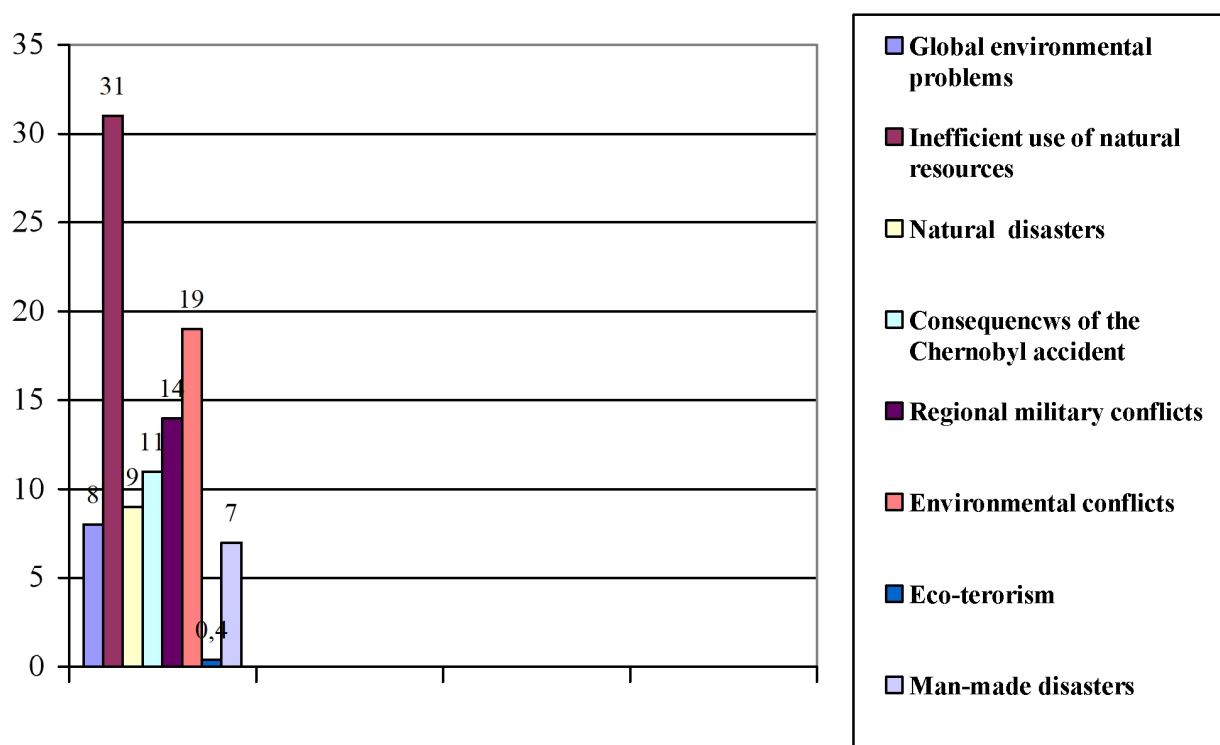


Fig. 2. Priorities of the economic mechanism for neutralization of risks to threats to Ukraine's environmental security, %

The cause of the ecological crisis in Ukraine is mainly economic factors, namely:

- structural deformation of the economy with the dominance of raw materials and resource-intensive production;

- extensive development of agricultural production, which is not able to provide the population of the state with a sufficient number of environmentally friendly food products;

- lack of environmental justification of plans and projects of economic development, developed by the relevant departments of ministries and departments on the basis of departmental methods and instructions, regulatory and technical documentation for placement, construction and operation of facilities and complexes, to create new equipment, technologies and materials;

- there are almost no effective administrative and economic mechanisms for environmental protection; low moral level of society and lack of environmental

thinking of the management.

Currently in Ukraine the main source of funding for environmental measures is the state budget, from which funds are allocated in the form of capital investment limits. The actual amount of investment is set in accordance with the plans of environmental activities of ministries and departments and the calculation of economic opportunities of the state budget.

An effective way to regulate security are economic mechanisms [29], which are conditionally combined into two groups: mechanisms for compensation and mechanisms to prevent them. Damage compensation mechanisms for man-made and natural disasters should provide for the assessment of losses, the need for compensatory resources and the reimbursement of costs. At the same time it is necessary to distinguish two forms of damage - inflicted and compensated. It is almost impossible to fully estimate the losses. However, it is possible to fully determine the damage caused:

- a person, taking into account the additional costs of restoring his health and material well-being;
- nature, based on the amount of additional costs necessary to restore ecological balance;
- the national economy, taking into account the costs of compensation for product losses and losses to enterprises.

An important means of compensation - an insurance system, the effective operation of which involves the implementation of a number of principles:

- close connection of insurance with risk cards and distribution of insurance premiums between objects depending on expected losses;
- compulsory insurance of high-risk facilities and their employees; at the same time, as a supplement to the mandatory one, a system of voluntary insurance (for the population, enterprises) should be created;
- transformation of the insurance system into one of the most important elements of security control in the region.

Insurance authorities must respond quickly to changes in the situation by

reducing or increasing insurance premiums depending on the likelihood of an accident or catastrophe. The compensation system is obliged to compensate the losses of the uninsured part of the population and enterprises, to compensate for the loss of health, housing, work, products, etc. It is necessary to create additional capacity and significant reserves of funds to compensate for losses of industrial and non-industrial nature, to expand the capabilities of the health care system, to have a reserve of housing for refugees. The system of compensations also includes long-term investment activities, which will allow to restore housing, objects of the economy and lost ecological balance at the expense of special reserve funds.

*Damage prevention mechanisms.* These mechanisms should provide: legal and economic protection of damage prevention activities; legal and economic responsibility for increasing the amount of risk; interest of business entities and management in risk prevention. This mechanism has measures of both economic and administrative nature. Its components can be conditionally combined into five groups.

The first group of mechanisms is associated with a change in the structure of the national economy in favor of industries that would meet human needs with a significant reduction in the share of the military-industrial complex. The economic feasibility of the conversion, the refusal to replicate obsolete military equipment, the transition to the production of civilian products will integrate the military-industrial complex into the economy, work for man, will free up significant resources and technical re-equipment of backward industries. An important direction to increase the level of safety is also the elimination of structural imbalances in favor of processing industries, in particular the production of secondary waste.

The second group consists of mechanisms that should help reduce accidents. These primarily include paid risk quotas, which allows you to create a quota market and maintain a minimum level of risk in the region as a whole. Acquisition of risk quotas by some enterprises in others allows subsidizing security measures.

Such a purely economic mechanism can be supplemented by administrative and economic measures. First of all, it is a system of fines for exceeding the established risk quotas in the region. To interest companies in reducing the amount of

risk, it is necessary to create special regional funds and provide for regular payments of premiums for risk reduction.

The third group of mechanisms requires replacement and improvement of the technical base, restoration of equipment, introduction of new technologies and information systems.

The fourth group is designed to expand the market for skilled workers and reorganize the system of retraining.

The fifth group of mechanisms is aimed at stimulating investments that would prevent losses through tax policy.

The solution to this problem depends primarily on improving the economic situation in the country. Let's define the priority tasks existing in an economic problem of ecological safety of Ukraine:

- development of methods for determining the economic consequences of accidents;
- development of effective economic mechanisms of responsibility and stimulation of increase of level of industrial safety;
- creation of a holistic system of methods and normative documents that should regulate the economic consequences of accidents.

The system of public administration in Ukraine has not yet created the conditions for significant investments in the implementation of environmental measures aimed at reducing threats of man-made or natural origin.

Consider the prerequisites and analyze the application of the main effective economic mechanisms for environmental security of Ukraine [1].

*Pollution taxes.* There are two models of environmental regulation. The first is based on the principle of "incentive tax". In this case, the level of payment should be of interest to the polluter in the treatment of industrial waste to the rules established by law. The second model uses the principle of "redistribution of taxes". Their level does not depend on current environmental regulations. The function of these taxes is to mobilize funds to finance environmental programs. In addition, they help reduce the total cost of nearby businesses to clean up emissions.



*Creating a system of benefits aimed at the development of environmentally friendly industries.* Tax benefits are on a par with direct subsidies for environmental protection measures and give, as experience shows, a very significant incentive effect. Among them are of particular importance:

- direct investment subsidies, which cover part of the costs of developing new technologies to combat pollution;
- loans for the installation of equipment that provides for the cleanup of the polluted environment and its restoration, subsidies for the payment of interest to facilitate the implementation of loans;
- subsidies for investments in energy-saving technologies in order to reduce the volume of combustible fossil fuels;
- tax benefits due to lower tax base, tax rates and accelerated depreciation;
- a system of tax benefits for manufacturers of environmental equipment and machinery, which are given an important place in solving specific environmental problems in the development of a market economy.

*Standards and specific emissions.* Today, payments for environmental pollution are not based on specific emissions standards, as these standards are not legalized. They are only partially related to the technological level of production. Moreover, these payments are included in the cost of production. Emission charges under such conditions are converted into the transfer of multibillion-dollar amounts from one pocket to another with a fairly low degree of environmental use.

Environmental standards, taking into account economic criteria, can be divided into three groups [1; 4]: territorial standards of specific loads; industry standards; post-resource standards of nature management. Bringing nature management in the country in line with the requirements of environmental safety in the current economic environment is a very distant prospect, but now it is vital to ensure progressive and purposeful development in this direction. The system of ecological rationing should be subordinated to this purpose.

*Organizational and managerial aspect of environmental safety.* Various ministries, departments, agencies and organizations of the state should be involved in

the implementation of measures aimed at achieving, supporting and monitoring compliance with environmental safety requirements. Components of compliance with the requirements of environmental safety of Ukraine are the provision of chemical, physical (ionizing and electromagnetic radiation, noise), biological, industrial safety and prevention of natural disasters.

The result of such measures can be obtained only with their comprehensive application, which in turn requires the introduction of a well-established mechanism of organizational management of all actors in this process. To implement such a mechanism, a state system of ecological security of Ukraine must be formed.

The state system of ecological safety of Ukraine is a set of state measures (legal, economic, technical, humanitarian and medical) aimed at maintaining the balance between its ecosystems and anthropogenic and natural pressures. The structure of this system should consist of governing bodies, forces and means to ensure its functioning [1; 2].

The territorial organization of society, taking into account the safety of life, should be relevant articles of the Constitution of Ukraine, laws governing relations in this area: the territorial structure of Ukraine is based on its state integrity, separation of powers between local and state authorities, the right of its citizens to life and healthy environment. It is believed that the organization of safety regulation and protection of the population and regions from emergencies, natural disasters and environmental catastrophes is based on new information technologies, automation of safety management, the results of mathematical modeling.

The activities of administrative bodies dealing with issues of natural and man-made and environmental safety are based on laws and by-laws issued by the relevant state bodies. They also use various standards and norms developed on the basis of practice in their activities. The common features of all these mechanisms are the restriction (within the relevant laws) of hazardous industrial and other activities, which can lead to negative social or environmental consequences.

Licensing procedures play an important role here, the absence or insufficient development of which in the field of security at the national and supranational levels

can seriously affect the level of security of the population [2; 4].

Currently, the work of public authorities is of particular importance, which must take an active part in solving many legal problems related to ensuring the safety of the population and territories from emergencies of man-made and natural nature, environmental disasters. The competence of these bodies includes:

- to deal with the systematization of regulations in this area;
- to initiate the development of new normative legal acts by public authorities;
- to carry out, within the limits of its competence, supervision, control and inspection over the observance of normative legal acts in everyday life and during liquidation of emergency situations.

Among the priority organizational and managerial problems of man-made safety of Ukraine are the following:

- development of national policy and legislation in this area;
- creation of an integrated system of state security management;
- strengthening of control functions on the part of the state on observance of technogenic safety;
- creation of a system of state reserves;
- introduction of a new system of training and certification of specialists in the field of industrial and natural safety.

As accidents cannot be avoided by any measures to improve safety, it is necessary to provide for measures in case of accidents. These measures should be based on the analysis of emergency scenarios, to involve a wide range of issues related to the organization of emergency works both on the site and in the surrounding areas, the territory and population of which have been adversely affected.

The idea of the Concept of the “Unified State System of Prevention and Elimination of Emergencies”, which would unite state governing bodies, forces and means of state executive bodies with local executive bodies, self-government and organizations whose powers include, has not yet found its practical implementation. solving issues on protection of the population and territories from emergencies, natural disasters and ecological catastrophes.

Measures to ensure the environmental security of Ukraine, which are currently carried out by the state, are mostly uncoordinated, not always materially and financially secure and therefore do not give the desired result in improving the environment. Here, obviously, one cannot do without an appropriate system of monitoring and evaluation of the state environmental policy. However, the analysis of the Law of Ukraine "On Basic Principles (Strategy) of the State Environmental Policy of Ukraine until 2030" [3] Allows us to insist on the following: this legal document outlines only the declarative main goals and directions of state environmental policy; the system of its monitoring and evaluation is defined as an instrument of influence, although it essentially constitutes a managerial functional; requires clarification of the peculiarities of this system of monitoring and evaluation in the context of digitalization and improving environmental safety. After all, "the implementation of the Basic Principles (strategy) of state environmental policy will allow to move to a system of integrated state monitoring of the environment and improve the information system of management decisions" [3, Section VI "Expected results"].

Therefore, the main mechanisms of implementation of the state system of ecological safety of Ukraine, which require development, should be the following:

- organization, management and control over compliance with environmental safety requirements;
- planning and coordination of complex programs of environmental protection and rational use of nature;
- control over the observance of the unified state policy, which guarantees the reliability and sustainable functioning of national security facilities;
- prevention and elimination of environmental consequences of industrial accidents, natural disasters and natural disasters;
- assessment of the state of ecological safety on the whole territory of Ukraine and in its separate administrative-territorial formations, forecasting of its dynamics.

**Conclusions of the research.** Thus, the process of ensuring environmental safety involves not only the formation of appropriate legislative and regulatory

framework, but also the ability to monitor and evaluate public policy. In this regard, its corresponding monitoring and evaluation system serves as an organizational and functional basis. At the same time, the special environmental legislation of Ukraine does not define the system of state environmental policy by the functionality of the latter. This contradicts the methodological basis for defining the functions of public administration. In addition, the system of monitoring and evaluation in the environmental sphere is defined quite declaratively by law. This situation requires change as environmental legislation identifies the need to improve public environmental management. So, the study of prospects of improvement and development of such ecological management can be considered as perspective further scientific developments.

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