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ECONOMIC METHODS OF ENVIRONMENTAL MANAGEMENT

Abstract. Economic methods of environmental management are among the most common in world practice. These are payments for resources and pollution, the provision of services in the taxation of enterprises, the provision of preferential terms for short and long-term loans for the implementation of projects regarding the rational use of natural resources and environmental protection, exemption from taxation of environmental funds; transfer of part of the funds of extrabudgetary funds for environmental protection on long-term contractual terms to enterprises, institutions, organizations and citizens for taking measures with guaranteed reduction of emissions and discharges of pollutants, for the development of environmentally friendly technologies and production, investments in environmental protection, the creation of state and regional environmental funds.

Keywords: methods, management, economics, environmental management, ecology, safety.

INTRODUCTION

Economic methods of environmental management are among the most common in world practice. These are payments for resources and pollution, provision of privileges in taxation of enterprises, provision of short-term and long-term loans on favorable terms for the implementation of projects to ensure the rational use of natural resources and environmental protection, exemption from taxation of environmental funds; transfer of part of the funds of extrabudgetary funds for environmental protection on long-term contractual terms to enterprises, institutions, organizations and citizens for taking measures to guarantee the reduction of emissions and discharges of pollutants, the development of environmentally friendly technologies and industries, investments in environmental protection, the creation of state and regional environmental funds.

A significant role is played by the Society for the Conservation of Nature, which conducts a lot of work (propaganda and educational) among the population on the protection of natural monuments, protected areas, flora and fauna. A successful solution to the problems of rational nature management is possible only under the condition of a sharp rise in ecological culture and knowledge of the population. Conscious and careful attitude to the nature of each person should become the law of society, the norm of everyday life.

MAIN PART

One of the most important economic methods is payment for resources. The scientific basis for determining the amount of such payment is their economic assessment, which is based on a differentiated rent.

In general, there are six types of payments for resources:

1. Payments for the right to use natural resources.
2. Payment for reproduction and protection of natural resources.
3. Rental payments for the exploitation of the best natural resources or for quality, or for their location relative to the market.
4. Penalties for exceeding the rate of use of natural resources.

5. Compensation payments for the extraction of natural resources from their intended use or deterioration of their quality caused by the activities of these enterprises.

6. Payment of enterprises for the use of the environment for the placement of production waste.

Regulatory payments for land are differentiated by type of agricultural land, by type of soil and are used in calculating the monetary value of objects that are built on lands taken from agricultural circulation.

The costs of compensation for losses, together with the losses themselves, constitute economic losses. These two forms of losses act one in relation to the other as a kind of alternative.

Economic losses are a complex value. Most often they are expressed by the sum of the main local losses:

a) from the deterioration of public health;

b) for utilities;

c) in agriculture and forestry;

d) for industry.

Economic losses are calculated in five ways:

1) actual losses, i.e. losses or negative changes that arise from environmental pollution and can be estimated in value form in the reporting period;

2) possible, which will be observed in the future through possible environmental pollution, i.e. have a conditionally theoretical character;

3) prevented, which make up the difference between actual and possible losses;

4) liquidated - that part of the losses by which they were reduced due to the implementation of environmental protection measures;

5) potential - losses that may be caused to society in the future through the current pollution of the environment.

At the expense of the state budget, mainly large-scale environmental measures of a general purpose are invested: state programs for eliminating the consequences of industrial accidents and natural disasters, state territorial, sectoral long-term and current plans for the protection and reproduction of natural resources, state plans and estimates for the conservation of nature reserves in nature reserves parks, natural monuments, nature reserves, etc. Investments in these measures were always insignificant, often allocated on a residual basis.

In environmental management, various methods are used to influence the teams of enterprises and organizations, individual workers and the country's population. Among them, the most widespread are administrative-legal, organizational, socio-psychological and economic management methods. All these methods in environmental management should be applied comprehensively, in the system, with the priority of economic management methods. Administrative and legal management methods consist in the development and • issuance of legal and administrative acts regulating the organization and management in the field of environmental management, the rights and obligations of managers, employees, officials and the country's population on the economical use and reproduction of natural resources and ensuring equilibrium in the natural environment. Administrative acts are binding and directly affect the teams of enterprises, organizations, individual workers and the population of the area.

A special place in the system of rational environmental management is occupied by organizational methods, covering the processes of preparation, adoption and implementation of decisions aimed at preventing and eliminating violations, environmental pollution, the organization of low-waste and non-waste technologies when using natural resources. Organizational methods provide the distribution of functions in the field of management, maintaining technological discipline, control, generalization of experience, rationalization of management based on the achievements of science and technology.

Socio-psychological management methods are a system of means of social and psychological impact on the teams of enterprises and organizations, individual workers and the population of the area in order to ensure favorable natural living conditions for the person, reduce the morbidity of the population, increase the life expectancy of people and their ability to work, preserve aesthetic values of natural landscapes, protected areas, etc.

Economic methods of environmental management are the widespread use of the system of prices, tariffs, payments, fines, premiums, economic incentive funds, loans, etc. They are designed to ensure the rational and integrated use of mineral and other resources, the protection and reproduction of the natural

environment. When using economic methods, there is no need to force collectives and individual workers of enterprises to reduce mineral losses during mining and processing, to restore disturbed lands, and to clean water discharged into water bodies and air emissions. These tasks are solved through the use of the system of economic incentives for rational environmental management. The final results of the work of enterprises should be closely linked with the effectiveness of their environmental protection measures, so that every labor collective and every employee is interested in observing the requirements of environmental legislation.

An increasingly important role in ensuring the protection of the environment and the rational use of natural resources is played by methods for optimizing management decisions. They are based on the wide use of economic and mathematical methods, network models, automated control systems and computers in the development, optimization and management decision-making. With their help, environmental protection models are developed in the area of industrial enterprises, regions of the country and water basins. Such models allow you to observe future situations, analyze the impact of various projects and decisions on the state of the environment, make adjustments and suggestions to prevent consequences.

Enterprises and associations pay a fee for natural resources in accordance with established standards, which provide for a fee for the right to use, for the reproduction and protection of natural resources, for emissions of pollutants, etc. If the maximum permissible emissions of pollutants are exceeded, payments are levied in a multiple amount, based on the costs of eliminating pollution.

The funds levied from enterprises and organizations for environmental pollution and wasteful use of natural resources are allocated for environmental protection measures.

Total payments of any subject of the federation are calculated by the formula:

$$П_c^{\text{б}} = П_{\text{пр}}^{\text{б}} + П_{\text{з}}^{\text{б}}, \quad (1.1)$$

where $П_{\text{пр}}^{\text{б}}$ and $П_{\text{з}}^{\text{б}}$ - payments for natural resources and for pollution of environmental components.

In accordance with the Decree of the Government of the Russian Federation of October 28, 1992 No. 828, the Regulation on the Procedure and Conditions for Mutual Payments for the Right to Use Subsoil, Water Area and Seabed Sites was approved. By the Decree of the Government of the Russian Federation of June 9, 1992 No. 478 "On Temporary Minimum Rates of Payments for the Right to Use Subsoil", payments were approved and put into effect on June 1, 1992 for all enterprises and organizations regardless of their form of ownership, including joint ventures and foreign firms, engaged in mining in the Russian Federation, its continental and economic zones. The indicated payments are calculated according to the formula:

$$П_{\text{пр}}^{\text{б}} = \sum_{1}^{n} П_{\text{пр}}^{\text{р}} = \sum_{1}^{n} П_{\text{п}}^{\text{р}} + \sum_{1}^{n} П_{\text{з}}^{\text{р}} + \sum_{1}^{n} П_{\text{з}}^{\text{р}}, \quad (1.2)$$

where $П_{\text{пр}}^{\text{б}}, П_{\text{пр}}^{\text{р}}$ - payments for natural resources in the territory and regions, rubles / year; $П_{\text{п}}^{\text{р}}, П_{\text{з}}^{\text{р}}, П_{\text{з}}^{\text{р}}$ - payments charged for the use of subsoil, water and land, rubles / year.

Financial revenues from the natural sector take the form of profits from state-owned enterprises in the environmentally exploiting sector or deductions from the income of private enterprises. Revenues to the state budget for the use of natural resources take the form of payments, rents, dynamic rents, fixed in tax legislation, and taxes (direct and indirect), fixed in laws on taxes and investments.

Economic damage to the environment means the actual and departmental losses expressed in value form caused to the economy of the region by environmental pollution, or the additional costs of compensating for these losses.

For a long time in economic science, various approaches have been applied to the economic assessment of natural resources and the establishment of fees for their use. They can be classified into the following groups:

Costly approach. In accordance with it, the assessment of natural resources is determined by the value of the costs of their extraction, development or use. The establishment of fees for water withdrawal by

industrial enterprises, which is currently in force, is based on this principle. The main disadvantage of this approach is that a resource of better quality, located in a place convenient for development, receives less cost, while its consumer value will be higher than worse in quality. Thus, this approach does not contribute to environmental management and further sustainable development.

Productive approach. In accordance with this approach, only those natural resources that are profitable have an economic valuation (cost). In other words, the cost of a resource is determined by the monetary expression of the primary production received from the exploitation of a natural resource, the difference between the income earned and current costs. This approach also has many drawbacks in terms of environmental management. Firstly, it is not possible for each natural resource to determine the cost of primary production. Secondly, the income from the use of the resource can be either direct or indirect, which is very difficult to adequately assess. This applies, in particular, to the use of natural objects for recreational purposes, to the climatic resources of the territory and the like. Thirdly, this approach does not take into account the time factor. An unused resource that does not have a cost in accordance with this approach can be used and even become scarce in the process of developing the territory, developing new technologies and production as a whole. Therefore, assessments of the potential effect on the future are necessary when planning environmental management.

Cost-resource approach. According to this approach, when determining the value of a natural resource, the costs of its development and income from use are combined. This concept has the advantage that the assessment of the natural resource obtained in this way will be higher than in previous cases, which creates an opportunity to stimulate the rational use of natural resources. However, it also has the disadvantages of previous approaches.

Rental approach. The use of rent theory in assessing natural resources is recognized as more reasonable:

– with rental appraisals, the best resource (the use of which brings more income at the same cost) receives a greater value;

– the development costs of the resource are oriented to a certain average level and, therefore, their assessment is more objective;

– the necessity of distinguishing between the owner of the resource and its user for the emergence of the category of rental payments is justified;

– rental estimates take into account the factor of limited natural resources.

Reproduction approach. This approach is relatively new because it is associated with an environmental crisis. Its essence lies in the fact that the totality of medium-sized utilitarian (renewable and non-renewable) natural resources in a certain territory and the state of the environment close to the natural (predetermined) level are considered as a certain standard, a starting level. In this case, the use of any natural resource should imply its restoration in the previous quality (for renewable resources) and the amount or (for non-renewable) compensation, taking into account the non-deterioration of the environmental quality standard in this place. The cost of a natural resource will in this case be defined as the aggregate of the costs necessary for the reproduction (or compensation of losses) of a resource in a particular territory. This approach implies a potential scarcity of natural resources and, in many cases, can lead to their overvaluation. However, taking into account the fact that the reserves of extensive exploitation of natural resources have been exhausted in the main commodity regions, and the environment is close to catastrophic, this approach seems most appropriate.

Monopoly departmental approach. This approach is a form of costly. Its essence is that the size of payments for the use of natural resources should correspond to the needs of financial support for the activities of specialized public services, which currently carry out monopoly disposition (management) of natural resources. In the Law of Ukraine "On Environmental Protection" this approach is reflected in the division of fees for the use of natural resources into two types - fees for the right to use and fees for the reproduction and protection of natural resources. The second type is the cost compensation of special departments that carry out the reproduction and protection of natural resources.

CONCLUSION

Thus, when determining the size of this type of board, two circumstances must be taken into account. First, these payments should include part of the differential rent, since the cost of restoring resources in better conditions will be less than in worse ones. Therefore, the size of payments should be differentiated

depending on the conditions of use. Secondly, in determining the costs of specialized services, it is necessary to take into account the economic efficiency of these costs in order to minimize subjective factors in determining the size of payments. None of these circumstances are taken into account when introducing payment for the use of natural resources in accordance with those regulatory documents developed by resource departments.

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ЭКОНОМИЧЕСКИЕ МЕТОДЫ УПРАВЛЕНИЯ ПРИРОДОПОЛЬЗОВАНИЕМ

Аннотация. Экономические методы управления процессом природопользования принадлежат к наиболее распространенным в мировой практике. Это – платежи за ресурсы и загрязнения, предоставление услуг в налогообложении предприятий, предоставление на льготных условиях кратко- и долгосрочных кредитов для реализации проектов относительно обеспечения рационального использования природных ресурсов и охраны окружающей природной среды, освобождение от налогообложения фондов охраны окружающей среды; передача части средств внебюджетных фондов охраны окружающей природной среды на долгосрочных договорных условиях предприятиям, учреждениям, организациям и гражданам для принятия мер с гарантированным снижением выбросов и сбросов загрязняющих веществ, на развитие экологически безопасных технологий и производства, инвестиции на охрану природы, создание государственного и региональных экологических фондов.

Ключевые слова: методы, управление, экономика, природопользование, экология, безопасность.

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ТАБИҒАТТЫ ПАЙДАЛАНУДЫ БАСҚАРУДЫҢ ЭКОНОМИКАЛЫҚ ӘДІСТЕРІ

Аннотация. Қоршаған ортаны басқарудың экономикалық әдістері әлемдік тәжірибеде кең таралған. Бұл ресурстар мен ластануға төлемдер, кәсіпорындарға салық салу кезінде қызметтер көрсету, табиғи ресурстарды тиімді пайдалану және қоршаған ортаны қорғау жобаларын іске асыру үшін қысқа мерзімді және ұзақ мерзімді несиелер бойынша жеңілдіктер беру, экологиялық қорларға салық салудан босату; қоршаған ортаны қорғауға арналған бюджеттен тыс қорлардың бір бөлігін ұзақ мерзімді шарттармен ластаушы заттардың шығарындылары мен төгінділерін азайту, экологиялық таза технологиялар мен өндірістерді дамыту, қоршаған ортаны қорғауға инвестициялар салу, мемлекеттік және аймақтық қоршаған ортаны құру үшін шартты түрде қабылдау үшін кәсіпорындарға, мекемелерге, ұйымдарға және азаматтарға беру қаражат.

Түйін сөздер: әдістер, менеджмент, экономика, экологиялық менеджмент, экология, қауіпсіздік.

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