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MANAGEMENT ENVIRONMENTAL ACTIVITIES EFFICIENCY IN THE RAILWAY ENTERPRISES

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Abstract. *The article describes the development trend of environmental management systems in railway transport and the importance of the impact of transport factors to ensure ecological and economic security of the society. Development management instrumentation of processing of environmental systems in railway transport is aimed at maintaining the global interest in reducing pollution and possible damage of the environment to ensure ecological and economic security of the country. The main objective of the development of environmental management systems in railway transport should be inextricably linked with the main goal of the human ecology. The basis of the human ecology is to maintain equilibrium within humanity and the outside world and its environment. Improving environmental activities of the company is achieved by applying a systematic approach. The proposed criteria for evaluating the best project options and directions of improvement of greening the economy are the basis for the establishment of a mechanism of transition to sustainable development of railway industry. The authors of the analysis of ecological and economic indicators of the enterprises of the railway industry and ecological and economic assessment of investment in the environmental management system in railway transport from In the article the formation of approaches to environmental management decisions at the enterprises of the railway industry was substantiated.*

Keywords: *the environmental management system, ecological and economic efficiency, management decisions, railway transport, strategy, environment.*

If since the beginning of 70s of this century in developed countries there is a tendency to strengthen the fight against environmental violations, and in this way achieved some success, in Russia and the CIS countries this process extremely slow.

Modern stage of socio-economic development of society is characterized by strengthening of processes of environmental violations. In scientific literature there is an active analysis of environmental violations and their consequences both for the environment and for the population as a whole However, the practical efforts being made to eliminate them inadequate scale of environmental problems, both at the level of individual countries, and at the level of the international community.

This provision was the result of several reasons, among which are the continued priority objectives for economic development to the detriment of the objectives of environmental security, as well as the low efficiency of the applied mechanism for the regulation of environmental activities. In the system of state regulation still prevails administrative-legal methods of influence, while the advanced experience of foreign countries has proved greater efficiency in the use of economic methods. In this regard, of particular urgency is the study of the regularities of creation of effective economic mechanism of nature use and develop on this basis recommendations for improvement of the existing mechanism.

Questions of formation and improvement of the economic mechanism of nature are considered in the works of modern scholars E. Kuzina, V. Bespalov, V. Makeev, S. Shahinian, N. Krupin, Y. Klishina, E.U.fon Weizsacker, G. Vagnera, L.Vike, G.Vintera, D.Deylsa, M.Demla, E.Zaydelya, H.Ziberta , F.Noymarka, M.Olsona, etc.

Investigations of many national and foreign economists on this issue, as well as increasing knowledge about the laws of nature and society are constantly require the development of new theoretical and methodological approaches to the substantiation and development of practical recommendations on the functioning of the environmental management system of the railway

industry.

Begun in developed countries greening process of economic development undoubtedly affect and Russia, which will inevitably exacerbate the problem of financing environmental investments.

The peculiarity of Russian companies is the fact that their low technological efficiency if we are not talking about the primary sector of the economy. Statistics using new technologies in Russia disappointing: according to the Federal State Statistics Service (Rosstat), depreciation of fixed assets at the end of 2013 amounted to an average of 48.2% across the country and in the area of transport and communication, this figure reaches 56.5% of the total funds. For comparison, the countries of the BRICS alliance wear this figure does not exceed an average of 35% [1]. While the coefficient of renewal of fixed assets in 2013 amounted to only 4.7% of the national average and 4.9% in transport and communication [2]. Intuitively, this statistic is represented in the diagram (Fig. 1).

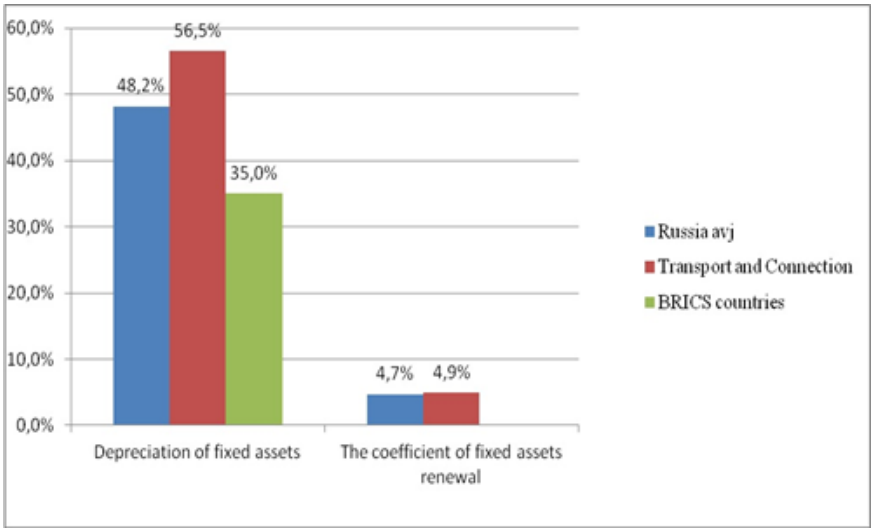

Fig. 1. The use of technology by the Russian enterprises

Unfortunately, the domestic use of natural resources has a high cost-effectiveness. This is due to, for example, the fact that in Russia, to release one cardboard or other paper product required forest raw material in 5-6 times more than required by modern developments and technologies. In any one of the end product, we spend energy 3 times greater than, for example, in Germany or Japan, and 2-fold higher than in the US. Therefore, we can conclude that our production is very prirodozatratno. Naturally there are proponents of the position that the harsh climatic conditions of our country require environmental capacity higher than in other countries, but not to the same degree. Economic efficiency generally means getting a strong financial performance for the same cost of resources or unchanged level of income while reducing the cost of provision of resources.

The system of environmental management in railway transport takes into account external and social effects, in this context, we consider this process from the perspective of business management of the transport industry.

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Features of the method of management, as well as establishing ownership of constructed objects have an impact on the nature of the driving forces behind the development of environmental management systems for rail transport. In the process of making management decisions conservation plays an important role steady the pursuit of material gain, income, profit, increasing of capital value.

To understand the issue, we can, by defining the concept of environmental management solutions as the most important form of administrative work, namely a set of interrelated, focused and coherent management actions aimed at the implementation of ecological and economic problems of the enterprise management and economic mechanisms to ensure compensation for damage to the environment.

To select options for the transition to sustainable development of railway industry, a variety of projects and directions of improvement of greening the economy, it is necessary to determine, at least in general terms, selection criteria (assessment) better project option or direction. You can talk about improving health, biodiversity conservation, but for the economic evaluation of this criterion is the concept of "economic efficiency" and to the environment in such a criterion would be the environmental efficiency. As a result, assessing the functioning of the enterprise system of the railway industry in terms of both ecology and economy primary criterion for selection (evaluation) of the draft better define the concept of "ecological and economic efficiency." However, for environmental and economic efficiency of environmental management decision-making, each includes its own criteria. These include:

– in the analysis of events and modeling of financial flows, they include the environmental costs and benefits;

– the time factor is taken into account as one of the tools and is reflected in the long-term environmental and social impacts of environmental management in railway transport;

– the valuation of natural goods, markets are absent or undeveloped;

– the risk of double counting of benefits and costs is excluded when making decisions; in the absence of data, possible difficulties in obtaining the analysis predicted and laid the likelihood of underestimating the benefits of natural and environmental benefits, and as an option reflect their qualitative indicators;

– the choice of methods and techniques for the calculation of highly flexible maneuvers using parameters suitable for the assessment of impacts of a particular type, parameters such as the time of the analysis, the presence / absence of the original information, available financial resources, etc.;

– in the early stages of decision-making in the analysis of the probability of eliminating the contradictions that arise to compare socially desirable results, and the private interests of each company and to analyze the distribution of costs and benefits and costs among the various parties.

– if impractical or impossible to use the traditional approach "cost-benefit" approach to use "cost - effectiveness", for example, when it is impossible to imagine the benefits in monetary terms. [3]

The effectiveness of environmental management involves an assessment of the results (effects) and a comparison of these results with the cost of achieving them. The main criterion for environmental and economic efficiency of nature is to minimize the cost of operation (production) and reproduction of resources obligatory inclusion of environmental costs (environmental damage) and to maximize the total ecological and economic benefits.

Ecological and economic efficiency of environmental management in enterprises of railway transport estimates the cumulative losses of environmental protection measures and overall economic benefits. Environmental externalities and the associated social and economic consequences are an integral part of the losses of the business of environmental protection measures.

To determine the environmental and economic efficiency of environmental activities carried out analysis of the current environmental situation, the analysis carried out environmental protection measures and improvement of the existing urbanized areas. Estimation of economic efficiency of nature management in rail transport is necessary and includes an assessment of the results already obtained; selection of the most appropriate version of the system of nature as a whole and each individual environmental protection measures; determination of the amount of expenditure required to achieve optimal ecological and economic effects.

In order to address environmental management system efficiency in railway transport characterize it as a system to provide environmental and economic security of the country by a railway

enterprises. The system of environmental management in railway transport is a set of interrelated and mutually influence each other railway facilities and the environment. All activity of this system may be represented as a relationship of industrial processes, elements, their components, and the components of the environment [4]. Thus, railway transport and environmental components are the constituent parts. Railway transport affects the environment, but it depends on that impact. It depends on a number of factors, among which are the direct factors (nature-destroying) factors and reverse impact (environmentally friendly). Factors will include the direct impact of those factors that increase the negative impact on the environment by increasing the volume of production of JSC "Russian Railways", namely, the economic activity of railway transport; the use of outdated technologies not harmless; lack of infrastructure, nature conservation. Among the factors distinguish the impact of the return, such as investments in environmentally sound technologies; reduction of harmful emissions during the activity; intensification of the neutralization of pollution; increase investment in environmentally friendly infrastructure; tightening controls over wildlife.

That is, the composite components of the process of nature can be represented as a chain of activity - Investment - Technology - Infrastructure - measures taken - impact on the environment (Fig. 2).

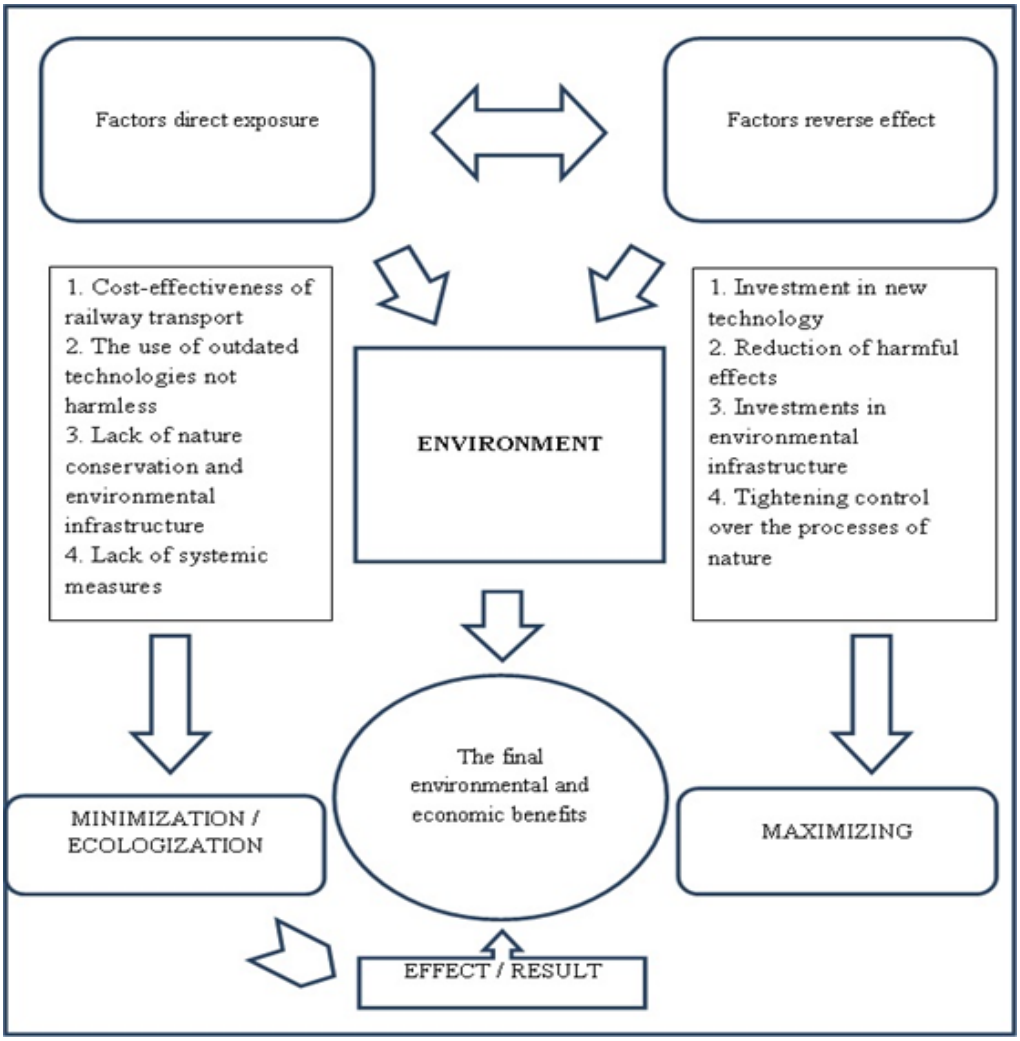

Fig. 2. Effect of transport on the environment factors

Thus, as an important component of the mechanism of nature on the railways 4 types of real environmental investment: aimed at creating new production facilities used for the expansion of existing enterprises, aimed at maintaining the reproduction process and innovative environmental protection [5]. Based on the specifics of the Russian railways, obsolete fixed assets and problems of environmental and economic efficiency, should be given priority in the investment activity is

innovation, simultaneously investing in the creation of a modern infrastructure for their application, retraining, creation of a new paradigm of nature. Environmental investments do not work only when they are engaged in effective managers. It occupies an important place of psycho-social aspect: of natural resources need to understand that the environment should not be considered in isolation from the system of its relationship with the railway undertakings. To do this, you need to invest in human capital - to train and retrain staff to work in the new paradigm of nature, to create conditions for work in new conditions, regulatory changes to regulate the most important nuances of creating a set of instructions and programs for effective environmental regulations.

An important part of an effective system of environmental management in enterprises is a systematic approach to planning and development of performance plans, which will be based planning. Such indices are determined based on the structure of the system of nature, in which the plan is carried out. [6] Each section highlights areas of planning each production unit and of railway transport, in conjunction manufacturing processes and elements of their constituents.

Thus, the achievements of scientific and technical ideas without investment funds cannot be realized and reflect the interrelationship and interdependence of environmental innovation and investment in the environmental management system in railway transport. The strategy of investment of environmental activities should be aimed at obtaining ecological and economic effect of reducing damage to the environment and the growth of environmental and economic efficiency, the definition of which is proposed to conduct, based on the absolute economic indicator of environmental security of nature, using the criterion of the economic evaluation of the environmental safety of the railway facilities.

In this context, improving the management of environmental performance we believe it appropriate to make in the system of environmental management in enterprises of the railway industry in the environmental decision-making, taking into account the functions of transport infrastructure. [7]

The practical significance of the proposed mechanisms for effective environmental management at the enterprises of the railway sector is to use it contains theoretical and methodological developments, findings and recommendations for the adoption of environmentally sound and cost-effective administrative decisions in any of the territorial levels of government. Each level of the solution is different, characterized by a certain set of constraints, opportunities and methods to achieve the goal.

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