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## THE ROLE OF ECONOMIC INSTITUTIONS IN EMERGENCIES

Arifullin, Evgeny Zaudyatovich<sup>1</sup>, Ovchinnikova, Tatyana Valentinovna<sup>2</sup>,  
Kalach, Elena Vladimirovna<sup>3</sup>, Pavlenko, Anastasia Anatolievna<sup>4</sup>

<sup>1</sup>Candidate of Technical Sciences, Associate Professor, Voronezh State Technical University,  
84, 20-letiya Oktyabrya Street, Voronezh, Russia, E-mail: arif-vrn@mail.ru

<sup>2</sup>Candidate of Biological Sciences, Associate Professor, Voronezh State Technical University,  
84, 20-letiya Oktyabrya Street, Voronezh, Russia, E-mail: tvo0104@mail.ru

<sup>3</sup>Candidate of Technical Sciences, Associate Professor, Voronezh State Technical University,  
84, 20-letiya Oktyabrya Street, Voronezh, Russia, E-mail: evkalach@gmail.com

<sup>4</sup>Candidate of Chemical Sciences, Associate Professor, Voronezh State Technical University,  
84, 20-letiya Oktyabrya Street, Voronezh, Russia, E-mail: nastcat@mail.ru

### Abstract

This article discusses the mechanism for implementing measures to prevent emergencies and overcome their consequences, which is possible only on the basis of territorial and economic approaches implemented through regional management. It is the regional authorities who have the most information about local conditions, are close to emergency zones and have the local resources necessary to solve the tasks of effectively responding to the negative change in the socio-economic system, its parameters and institutional conditions in result of emergency disasters. The authorities, in turn, can use an economic mechanism to prevent and overcome the consequences of emergencies.

**Keywords:** economy, region, emergency, society, country.

### I. INTRODUCTION

The modern period of development of society is characterized by increasingly increasing contradictions between man and his natural environment. The technosphere created by him and the way of management have become powerful factors of influence on nature. Demographic explosion, industrial production, which is becoming obsolete every year, agriculture, which is in deep crisis, urbanization of territories are a kind of challenges thrown by man to nature and caused a high degree of aggravation of contradictions between society and the natural environment. They are exacerbated by natural disasters and catastrophes. A sharp increase in the population increases anthropogenic pressures and poses a serious threat to environmental safety.



The vulnerability of the world community to natural disasters is growing: the number of victims of them increases by 6% annually. According to the data of the Scientific Center for Epidemiological Disasters over the past 30 years, about 5 million people. Statistics presented by various countries at the World Conference on Natural Disasters indicate that their number has increased 4 times over the past ten years, the victims have increased 3.5 times, and the dead - 2.1 times.

## II. METHODOLOGY AND RESULTS

The theoretical and methodological basis for solving the scientific problems of the article was the dialectical principles of research within the framework of a systematic approach. The authors applied general scientific and specific methods of substantiation: abstraction and concretization, subject-object and structural-functional, historical-logical, comparative and simulation analysis, deduction and induction, as well as methods of graphic and mathematical modeling.

Emergencies can affect the economy both on a national scale and at the level of regions, as well as individual business entities. The impact of an emergency on the economy is manifested in changes in the main indicators of economic categories. It is advisable to consider the impact of typical emergencies on economic categories at the macro and micro levels. At the macro level, the economy is affected by natural, bio-social, social and environmental emergencies, if their scale is regional or global. They affect the value of the gross national product, the balance of aggregate supply and demand in the market, the income of the population, the value of exports and imports, the financial system of the country, aggregate consumption, business activity, fiscal policy of the state, savings and investments, the labor market, the cyclical nature of economic growth, etc. At the micro level, the impact of all emergencies is manifested, including local, object, private, regional and global scales. At the same time, emergencies strongly affect the operation of production facilities and on economic categories as the quantity and quality of products, supply and demand in the market, profitability of the enterprise, turnover, replacement of needs, production costs, profit from products, wages, competitiveness of products, etc.

The assessment of the sustainability of the functioning of economic facilities in emergency situations is carried out in advance (in peacetime) and, in case of its insufficiency, measures are developed and implemented to improve sustainability. This work is also carried out in advance, with the exception of those activities, the execution of which is provided for in the emergency mode. They are planned in the mode of daily activities, and are carried out under conditions of threat and after the introduction of the state of emergency (enemy attack).

Basic principles of activities to improve the sustainability of economic facilities in emergencies.

1. Improving the stability of the facility should be a necessary component of the activities of design, construction, installation organizations, management and all production personnel of the facility during its operation from commissioning to withdrawal. The requirements for increasing sustainability should be a priority when making managerial, design, construction, economic and social decisions.

2. Improving the stability of functioning should be carried out at all facilities, regardless of the form of ownership and profile of the facility.

3. Improving the stability of the functioning of facilities should be carried out by the forces and means of facilities, ministries and departments, local governments, executive authorities of the constituent entities of the Russian Federation. If they are insufficient, the forces and means of federal bodies are involved.

4. Increasing sustainability must meet the requirements of efficiency and economic feasibility. Measures to improve sustainability will be considered effective and economically justified if they are maximally related to the tasks of improving the production process, ensuring trouble-free operation of the facility, and improving working conditions that are solved during the safe period.



5. Activities to improve the sustainability of OE in emergencies should be preventive. Priority in this work should be given to measures aimed at reducing the likelihood of occurrence of causes of loss of stability. The main of these activities are: safe placement of the OE and its structural elements in relation to potential sources of emergency situations; ensuring the highest possible reliability of engineering systems and process equipment; ergonomics; the use of simulation models and simulators for the training of production personnel in the direction of their main activities and activities in the event of a threat and the occurrence of emergencies; increasing the psychophysical stability, discipline and high professional training of personnel, their ability to quickly make decisions and act in emergency situations.

One of the main tasks of increasing the stability of the operation of facilities in emergency situations is the early adoption of measures to ensure the protection of workers, employees and members of their families. Personnel protection measures provide for timely detection, notification and exclusion or mitigation of damaging factors. Mainly, they refer to radiation and chemically dangerous objects.

The following main ways and methods of protection can be distinguished.

1. Early construction of shelters at enterprises with explosive, radioactive and chemically hazardous substances.
2. Planning and preparation for the evacuation of the population from areas prone to catastrophic flooding, earthquakes, mudflows, radioactive and chemical contamination.
3. Development of regimes for the protection of workers and employees in conditions of contamination of the area with radioactive and chemically hazardous substances.
4. Training of the personnel of the facility to perform work on the elimination of foci of radioactive and chemical contamination.
5. Accumulation of personal protective equipment to provide all workers and employees of the facility, organization of their storage and maintenance in readiness for use.

The above measures to improve the stability of the operation of the object differ from each other in terms of efficiency, material costs, and labor intensity. Therefore, the task is to determine and justify their rational structure. The effectiveness of the measures taken to improve the sustainability of the functioning of the OE in emergency situations is understood as the degree of compliance of their results with the interests of achieving the goal. Evaluation of the effectiveness of the measures taken is carried out according to quantitative indicators (criteria) characterizing the decisions under consideration.

One of the criteria for the effectiveness of the application of a particular measure to improve sustainability can be (Formula 1):

$$\mathfrak{C} = \frac{\Delta C}{\Delta P}$$

where is the cost of the measure to improve the sustainability of the functioning of the OE in emergency situations, rub.; - the probabilities of the functioning of the object, respectively, before and after the implementation of measures to improve the stability of the functioning of the object of the economy in emergency situations, are determined experimentally or calculated theoretically.

Of the activities under consideration, characterized by the criteria , the optimal activity will be the one for which this indicator will be minimal.



This approach is valid when choosing only one optimal measure to increase sustainability. If a set of measures is implemented, then their economic feasibility can be assessed by comparing the damage to the facility from emergency situations before and after the implementation of measures to increase sustainability:

$$\Delta C_k < Y_1 - Y_2$$

where is the cost of the entire set of measures to improve the sustainability of the functioning of the OE in emergency situations; - the amount of damage to the object of the economy (in rubles) from emergency situations, respectively, before and after the implementation of measures to improve the sustainability of functioning.

If condition (4.8) is satisfied, then the estimated set of measures to improve sustainability is economically justified. Considering various sets of cost measures, we will obtain the corresponding differences; the most efficient is the set of measures for which the right side of condition (Formula 2) is maximum and the left side is minimum. The choice of one or another set of measures in this case will also depend on the amount of funds allocated to improve the sustainability of functioning.

It should be noted that in a number of cases (for example, enterprises that ensure the country's defense capability), economic feasibility is not the only (main) criterion for taking measures to improve the stability of the operation of the OE in emergency situations.

Since over time, on the one hand, the threat of emergency situations may change, and on the other hand, the production conditions, the characteristics of individual elements of economic objects, it is necessary to periodically, according to the plans of ministries and departments, conduct studies of the stability of the functioning of the OE in emergency situations. This work is carried out by the engineering and technical personnel of the enterprise with the involvement (if necessary) of specialists from research and design organizations.

Organizes and manages the studies of the stability of the operation of the object, the chairman of the commission for emergency situations - the head of the object. By his order, working groups are appointed to conduct research, as a rule, this is a management group headed by the chief engineer and calculation and research groups in the areas of activity of the main specialists of the enterprise (groups of chief specialists: head of the capital construction department, chief power engineer, chief mechanic, chief technologist, head of the production department, etc.). The groups evaluate the sustainability in the areas of activity of their services and develop measures to increase it, if necessary. Financial and material support for emergency situations is carried out on the basis of federal laws "On the protection of the population and territories from natural and man-made emergencies" (1994), "On the state material reserve" (1998), as well as the Government Decree "On the procedure for allocating funds from the reserve fund Government of the Russian Federation for the Prevention and Elimination of Emergency Situations and the Consequences of Natural Disasters" (1997). The organization of financial and logistical support for emergency situations takes into account two modes of its functioning - warnings and actions in emergency situations. Most preventive measures are of a long-term nature, require significant capital investments, do not give a quick return, and therefore, in a market economy, they cannot be financed from sources other than the budget. The most acceptable way of targeted budget financing is the development and implementation of state targeted programs, for which funds are annually allocated in the expenditure side of the budgets of the federal and (or) subjects of the Federation. Actions in emergency situations include carrying out rescue and other urgent work, restoring life support facilities and providing priority assistance to the affected population. These activities are of an urgent nature and cannot be carried out without promptly attracting the necessary resources to the affected areas. This is achieved only through the advance creation of emergency reserve funds (federal and constituent entities of the Federation), which are not directly related to the functioning and state of the country's economy.



The process of their formation is based on socio-economic mechanisms. Measures to improve the stability of the functioning of the national economy and its links are developed and implemented mainly in advance, and also taking into account the prospects for the development and improvement of methods and means of defeating the economy in wartime, the possible consequences of major industrial accidents, catastrophes and natural disasters in peacetime.

Activities that by their nature cannot be carried out in advance are carried out as soon as possible in emergency situations (for example, evacuation activities, changes in technological modes of operation, production relations, management structures, etc.).

Proposals for improving the sustainability of the functioning of the national economy and its links are developed on the basis of the results of scientific research, generalization and analysis of the experience of mobilization preparation and fulfillment of the tasks of the RSChS.

If measures are taken to improve the stability of facilities, then it is possible to prevent dangerous consequences or reduce the damage caused by accidents. To do this, it is necessary to identify and evaluate the weakest, unstable objects and elements.

### III. CONCLUSION

Thus, the development and application of economic mechanisms, combined with the opportunities arising from the requirements of the regulatory legal system, will significantly increase the level of protection of economic objects, the population and territories from accidents, disasters, environmental disasters and their consequences.

Knowledge of the possible economic consequences (in monetary units) of the impact of emergencies contributes to the correct formation and timely implementation of economic mechanisms for protecting economic objects, the population and territories from their consequences, which can significantly reduce socio-economic damage and effectively use limited financial and material and technical resources to increase the level of security of objects and territories.

The statistics of man-made and natural accidents and catastrophes that have occurred in Russia over the past 10-15 years show that their consequences are becoming more and more dangerous for economic facilities, the population and the environment. Already at present, direct and indirect damages from them amount to 4-5% of the gross national product.

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## РОЛЬ ЭКОНОМИЧЕСКИХ ИНСТИТУТОВ В ЧРЕЗВЫЧАЙНЫХ СИТУАЦИЯХ

**Арифуллин Евгений Заудятович<sup>1</sup>, Овчинникова Татьяна Валентиновна<sup>2</sup>,  
Калач Елена Владимировна<sup>3</sup>, Павленко Анастасия Анатольевна<sup>4</sup>**

<sup>1</sup>Кандидат технических наук, доцент, Воронежский государственный технический университет, ул. 20-летия Октября 84, Воронеж, Россия, E-mail: arif-vrn@mail.ru

<sup>2</sup>Кандидат биологических наук, доцент, Воронежский государственный технический университет, ул. 20-летия Октября 84, Воронеж, Россия, E-mail: tvo0104@mail.ru

<sup>3</sup>Кандидат технических наук, доцент, Воронежский государственный технический университет, ул. 20-летия Октября 84, Воронеж, Россия, E-mail: evkalach@gmail.com

<sup>4</sup>Кандидат химических наук, доцент, Воронежский государственный технический университет, ул. 20-летия Октября 84, Воронеж, Россия, E-mail: nastcat@mail.ru

### Аннотация

В данной статье рассматривается механизм реализации мероприятий по предупреждению чрезвычайных ситуаций и преодолению их последствий, что возможно только на основе территориально-экономических подходов, реализуемых через региональное управление. Именно региональные органы власти обладают наибольшей информацией о местных условиях, находятся вблизи зон ЧС и обладают локальными ресурсами, необходимыми для решения задач эффективного реагирования на негативные изменения социально-экономической системы, ее параметров и институциональных условий в результате аварийных ситуаций. Власти, в свою очередь, могут использовать экономический механизм для предотвращения и преодоления последствий чрезвычайных ситуаций.

**Ключевые слова:** экономика, регион, чрезвычайная ситуация, общество, страна.

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