

# The object as the basis for the formation of mechanisms for the prevention of socially dangerous environmental threats

*E V Provodina*<sup>1\*</sup>, *A V Afanasyevskaya*<sup>1</sup>, *NA Ivanova*<sup>1</sup>, *E S Kurokhtina*<sup>1</sup>, and *E A Demkina*<sup>1</sup>

<sup>1</sup>Saratov State Law Academy, 1, Volskaya street, Saratov, 410056, Russia

**Abstract.** In conditions of rapidly changing social relations, any preventive mechanisms, and especially mechanisms for preventing emerging environmental threats, require regular review. The emerging social needs of society are the main driver of the emergence of new ways of harmful impacts on the environment. Therefore, it is the identification of social environmental needs that change at a specific stage of development of social relations that should be taken into account when forming objects of preventive influence. The results of the work are the formation of appropriate objects of preventive influence, as the basis of mechanisms for the prevention of socially dangerous environmental threats, the socially positive results of which meet the identified social needs of society, which corresponds to the achievement of the set goal.

## 1 Introduction

The current situation in the environmental sphere requires the prevention of environmental threats in various areas. Today it is necessary to find ways to solve modern problems of environmental safety [1]. An important point in its implementation is the formation of adequate ideas about the object of preventive influence. In the context of digitalization, which has become an integral part of the process of realizing human needs, the view of the object of prevention is characterized by a wide range of ideas proposed by scientific publications.

Is it worth talking about the importance and relevance of the stated problem? Despite the fact that the problem, at first glance, is theoretical in nature, it is difficult to overestimate its practical significance. Since the success of implemented preventive measures depends on the competent definition of the object of preventive action. The correct approach to determining the object of preventive action will allow us to develop and apply, adequate to the situation, a set of comprehensive measures necessary for implementation in a particular case. The social effectiveness of this mechanism depends on a correctly developed theoretical model of the mechanism for preventing socially dangerous environmental threats, i.e. its socially beneficial result in the field of prevention of environmental violations.

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\* Corresponding author: [Lysenko-elena12@yandex.ru](mailto:Lysenko-elena12@yandex.ru)

Mechanisms for preventing environmental pollution are widely discussed in science, for example, a mechanism aimed at reducing abnormal gas emissions: five aspects are proposed: strengthening ventilation control, improving the gas exhaust system, improving the monitoring and safety management system, strengthening power supply management and on-site emergency management [2]. Such mechanisms reduce the harmful impact on the environment through technological counteraction to emerging environmental threats, based on the achievements of scientific and technological progress. However, the presented innovative technological solutions do not reflect the object of its impact and the social danger in the field of environmental management caused by the use of new digitalization products.

It should be recognized that such a direction is being developed by science and, in order to avoid a one-sided and narrow vision of prevention, when forming prevention models, scientists undergo a thorough analysis of the causes of potential safety threats, on the basis of which innovative use of technologies is proposed: change generally accepted calculation rules, establish a new type of work, carry out assessment and training [3].

However, in our opinion, the study and formation of a mechanism for preventing environmental threats still requires a more detailed approach and should not be limited to aspects of technical solutions and analysis of social factors. The mechanism for preventing environmental threats must be systemic. Identifying the causes of the emergence of new socially dangerous environmental threats, as well as the development of specific technologies capable of blocking them, are undoubtedly integral elements of the mechanism for preventing these threats. However, between the identification of causes and methods of eliminating them, one very important link is missed - the object, the element that determines the direction and vector of the implementation of preventive measures and in connection with which environmental preventive social relations arise. Further analysis of the presented elements (technical aspects and social factors influencing the situation in the field of environmental protection) will provide a systematic approach and correctly formulate the objects of preventive models. The object, within the framework of preventive mechanisms of environmental threats, is formed depending on the expected socially positive result, which implies a change in the content (elements) of the entire preventive mechanism.

Environmental threats are classified into two types: global and regional and provide for appropriate sets of measures to prevent them in the form of active participation in various international environmental programs, as well as the development of mechanisms for systemic expert analysis of significant projects that affect the environment [4]. The implementation of these measures, first of all, is associated with the adoption of regulations establishing the rights and obligations of subjects of environmental relations. In general, the implementation of such programs has long-term prospects and is aimed at meeting the need for organizing environmental public relations. The formation of a broad environmental consciousness is the result of the implementation of this mechanism.

“... Environmental awareness is about their real action or choice in the local community towards the natural environment in daily life” [5]. Environmental consciousness creates a community of knowledgeable and empowered citizens who engage in positive environmental action to protect ecosystems. This creates a positive attitude towards environmental problems, while simultaneously restraining the negative role of human actions on the environment [6].

Thus, taking into account existing threats caused by various factors, the presented measures, embodied in the system of regulatory legal acts, and implemented in the relevant areas, form a mechanism aimed at creating a broad environmental consciousness.

In this connection, in the conditions of such an approach, as the object of the mechanism for preventing possible socially dangerous environmental threats, one should

recognize social relations for the organization and formation of broad (public) environmental consciousness, and the subjects are a wide range of people to whom the rules of environmental behavior are addressed. The action of such a mechanism is subject to a socially positive result in the form of the formation of a broad environmental consciousness, formed by regulatory provisions at various levels that establish the order of environmental management, thereby ensuring the prevention of environmental threats.

However, environmental consciousness does not mean the obligation of responsible environmental behavior. [6]. Science traces chains of undesirable events generated by the influence of the human factor, presents mechanisms for the implementation of its negative impact on the environment [7], where "... the human factor is a specific design of a person's functioning in a system of social, economic, industrial, scientific, technical, organizational and managerial and other relations; everything that relates to a person as a subject of activity in different spheres of public life" [7].

"Dangerous actions - refers to the behavior of people, which puts themselves and, possibly, others at. This means that people do not behave in accordance with the accepted practice of safe work, which creates a dangerous situation and can lead to losses in any form" [7].

This factor actualizes not just the development of mechanisms for the prevention of socially dangerous environmental threats, but the study of the objects of their preventive impact, as the basis for the formation of such mechanisms. At the same time, the object does not directly mean the sources of pollution and threats themselves in their material understanding, i.e. large industrial and other facilities. From the point of view of the functioning of the mechanism under consideration, its result is important. In order to state its effectiveness (ineffectiveness), it is necessary to clearly present its content and basis.

To correctly identify the object, it is necessary to identify specific social environmental needs, the provision of which will correspond to the result of the formed preventive mechanism in the current environmental conditions.

The cause of harmful effects on the environment is human social activity in the form of careless or intentional acts, i.e. non-ecological socially dangerous behavior, including socially dangerous consequences [8]. In turn, "... the source of both socially useful and socially dangerous human behavior is natural intelligence. It can be assumed that the cause of both phenomena is the socio-biological properties of natural intelligence" [9]. It is logical to assume that the source of creating environmental threats in this regard is the socio-biological properties of the intellect of an individual who has neglected environmentally friendly behavior, and therefore the object of environmental preventive influence to prevent them is directly the intellect of a person, his (human) consciousness and will.

Thus, the prevention of socially dangerous environmental threats caused by the human factor requires the implementation of other methods. In cases where the mechanism for the formation of broad environmental consciousness has not ensured environmentally responsible behavior, the need to implement mechanisms for the prevention of socially dangerous environmental threats that ensure individual deterrence of persons who have committed unlawful environmental behavior is actualized. These types of mechanisms, requiring the prevention of the corresponding properties and qualities of individual consciousness, are usually implemented within the framework of various types of liability (criminal, civil, administrative, etc.)

## 2 Materials and methods

The object of the study is the relationship between the social environmental needs of society, existing at this stage of development of social relations, with the formation of

objects that require prevention in the context of the emergence of socially dangerous environmental threats.

The main goal of the study is the formation of objects of preventive influence, as the basis of mechanisms for the prevention of socially dangerous environmental threats, the socially positive results of which meet the identified social needs of society.

To achieve this goal, the following tasks were formulated:

- Justify the need to form objects for the prevention of socially dangerous environmental threats, taking into account existing environmental needs at this stage of development of social relations.
- Determine the objects of mechanisms for the prevention of socially dangerous environmental threats, depending on the identified environmental needs at this stage of the development of social relations.
- Identify the difficulties of forming mechanisms for the prevention of socially dangerous environmental threats, taking into account modern trends in social relations associated with the active process of digitalization.

The main methods used in the research process are dialectic methods. The method of analysis and synthesis, induction and deduction, analogy, generalization and systematization contributed to the achievement of the research goal and the implementation of the stated objectives.

### 3 Results

In order to increase the effectiveness of the prevention of socially dangerous environmental threats, the activities of mechanisms to ensure it should be organized on the basis of identified, objectively existing, social environmental needs of society in specific current conditions, since their adequate identification will make it possible to correctly formulate the results expected from prevention.

The formulation of a socially positive result will significantly narrow and specify the scope of social relations that are particularly susceptible to socially dangerous environmental threats, which corresponds to a competent definition of an object requiring preventive action.

To correctly identify the object, it is necessary to identify specific social environmental needs, the provision of which will correspond to the result of the formed preventive mechanism in the current environmental conditions.

The result of the study in the field of prevention of socially dangerous environmental threats was the identification, along with the need for technological solutions in the field of environmental management, of the following basic social environmental needs:

- Normative organization of environmental public relations.
- Ensuring deterrence in the area of social behavior that creates a threat of harm to natural resources.

The need to implement the identified needs made it possible to form objects of mechanisms, the results of the functioning of which correspond to the content (provision) of the specified socio-ecological needs.

As was established during the study, the result of the functioning of the mechanism that ensures the formation and regulation of environmental social relations is the formation of a broad environmental consciousness, due to the adoption and communication of relevant social and legal norms that establish the procedure for regulating environmental relations and bringing them to the consciousness of a wide range of people, participating in public relations.

In this regard:

- The object of the mechanism for the prevention of socially dangerous environmental threats, which ensures the social need for organizing environmental relations, is social relations for the organization and formation of broad (public) environmental consciousness, which corresponds to the first element of the mechanism; the second element is the subjects - a wide range of people who are addressed by the rules of environmental behavior and are obliged to comply with them.

The result of the mechanism formed in connection with ensuring retention in the area of antisocial environmental behavior that creates a threat of harm to natural resources (second need) is to ensure individual retention of persons who have committed unlawful environmental behavior. In this regard:

- The object of the mechanism for the prevention of socially dangerous environmental threats, which ensures the social need in the form of retention in the sphere of socially dangerous non-ecological behavior that creates a threat of harm to natural resources, is the socio-biological properties of a person's natural intelligence: his consciousness and will, and the subjects are persons who have violated environmental prohibitions.

Thus, depending on the socio-ecological needs of society for the regulation and safe use of natural resources, at this stage of the development of social relations, the content of the object in need of preventive action changes, the prevention of which is the reason for the formation of various kinds of mechanisms, due to the need to apply a rational set of measures.

## 4 Discussion

Undoubtedly, a constructive approach to the formation of mechanisms for the prevention of socially dangerous environmental threats, based on the formation of objects that determine the methods of its implementation, will ensure their work in the future, with the possibility of timely response to changes in specific groups of environmental relations that are subject to prevention. However, when implementing such mechanisms, difficulties of a different nature arise that should not be ignored. We are talking about the continuous digitalization of all spheres of social reality. New calculation methods are being introduced in the energy sector [10]. The construction industry has enormous opportunities to improve productivity and efficiency through digitalization, innovative technologies and new construction methods. The accelerated emergence of augmented reality, building information modeling (BIM), autonomous equipment and modern building materials is analyzed. Using these innovations, construction companies increase productivity, optimize project management procedures, improve quality and safety [11]. Issues of information support for decision-making in industrial design using virtual modeling technology are raised [12]. Achieving a qualitatively new level of agricultural development is possible only with the use of modern digital and intelligent technologies, since traditional resources for increasing efficiency do not lead to results [13].

The processes through which digital technologies influence the development of high-tech products, intelligent automation with artificial intelligence (AI), in-depth analytics and big data (Deep Learning and Big Data), new business modeling tools [14], determine the emergence of new social relations. Therefore, the assessment of risks that inevitably accompany the digitalization process [15] should be integrated into mechanisms for ensuring the prevention of environmental threats.

“The new scientific knowledge of this kind obtained will update the formation of legal mechanisms for the prevention of socially dangerous threats at each stage of the development and use of artificial intelligence” [9]. The need to protect individuals and society is continuously growing, developing protection mechanisms at various levels: from social to strict imperative [15], especially becoming relevant in the context of digitalization.

Therefore, the emergence of a new type of threats arising in connection with the active implementation of the digitalization process in the sphere of environmental management, and accompanying it, determines the emergence of a new social environmental need in the form of prevention of risks that create the danger of harm to protected natural benefits. In the context of the emergence of new types of relationships that are products of digitalization, it is especially important to correctly represent the scope of the object of prevention.

However, the continuous emergence of new digitalization products, without their regulation at the legal level, complicates the formation of prevention objects and protection mechanisms.

## 5 Conclusion

In order to ensure an effective impact in the field of prevention of socially dangerous environmental threats, the mechanisms implementing it must take into account the identified factor of digitalization and automation of processes in the field of environmental management and formulate models of prevention, focusing not only on the formation of environmental consciousness in the narrow and broad sense, as objects formed mechanisms, but also take into account the social need in the form of environmental prevention of risks that create the danger of harm to protected natural benefits, in connection with the active digitalization of society. In view of this, the emergence of new social relations caused by active digitalization in the field of environmental management should be considered as independent objects requiring prevention.

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