

Assessment of environmental risks in the reflection of volunteer practices

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Abstract.

The paper sets out and actualizes research tasks related to the study of environmental risks and the establishment of a reflexive response to them in the practice of civic participation. The authors of the paper reviewed the results of sociological studies of environmental risks in the regions of the Russian Federation (expert survey, N = 120) and the involvement of Russian youth in volunteer practices under risk conditions (the study was conducted on a random sample, N = 1000). The study made it possible to answer questions about the main risks that exist in the Russian regions; about their localization in the socio-cultural, natural-ecological, technogenic and informational subsystem of the environment; on the adequacy of public response to environmental risks and threats. The results of the study made it possible to determine the representation of risks and the likelihood of their occurrence in the regions participating in the study, to identify patterns in the distribution of risks among regions with a high and low level of technosphere safety. An important result is the rating of the most probable risks of various subsystems of the environment and the level of youth involvement in volunteer practices that are complementary to environmental risks. The result and the scientific result of the paper is the conclusion that there is an imbalance in the existing map of risks and public response: the most adequate reflection of the risk landscape was obtained in volunteer practices aimed at the socio-cultural sphere. Technogenic, informational and natural-ecological subsystems receive only a small response in the processes of civil self-organization, which actualizes the need to search for support and regulation technologies.

Keywords: environmental risks, environmental risks, man-made risks, social risks, information risks, volunteering, volunteer practices

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INTRODUCTION

The riskiness of the environment is a multicomponent system of its assessments; this system is constantly replenished by new risks produced by man himself and the evolution of scientific and technological progress. The complex structure of the human environment generates difficult to predict processes of risk convergence, and it is no longer possible to uniquely identify their targeting. The everyday life and social communication field tends to evaluate the risks that have already occurred and to include a retrospective analysis of their preconditions and the possibilities of preventive action. We find reflection of this theme in the works of both foreign and Russian authors, and it is still relevant, although it differs in its research emphasis.

Thus, considering the social side of the interdisciplinary discourse on this issue in Russian science, we see the prevalence of studies in the field of environmental risks, which, in fact, reflect the visible, "superficial" causal links between environmental risks and consequences of their occurrence: as a rule, these are environmental risks and their impact on the environment [Yeprintsev, Kurolap, Komov, and Minnikov \(2013\)](#) and the health of citizens [\(L.I, 2009; Singh, Singh, & Mall, 2020\)](#). Much less often we find works where an attempt is made to establish more complex causal relations, for example, indicators of the quality of life with the characteristics of habitat; such an angle we find in the paper written by P.D. Kosinsky, although, still, it is only about the ecological subsystem of habitat [\(Kosinskiy, Bondarev, & Bondareva, 2017\)](#). It is impossible not to mention such a direction in the domestic science as "monetization of environmental risk"; as a rule, the works of economy scientists are presented here; as an example, it is worth mentioning the paper by I.L. Abalkina and the team of authors, which again touches upon the issue of public health [\(I.L, V.F, S.M, S.I, & B.N, 2005\)](#).

The interest in environmental risks on the part of foreign researchers is also high, but unlike our compatriots, they are interested in the transformation of these risks into social threats: so, we see that the practice of studying the impact of environmental risks on various forms of reality and possible social inequality is represented widely enough; we find this view in modern studies of [\(Givens, Huang, & Jorgenson, 2019; Harrison, 2017; Kennedy & Kmec, 2018; Muller, Sampson, & Winter, 2018\)](#)

Within the framework of Russian studies of man-made environmental risks, we can refer to the works of the composite authors headed by [I.S. \(2016\); Yu.A and V.I \(2015\)](#) (whose research data will be used in the paper): in the Russian sociological science, only they have attempted to assess these risks in the context of both expert and public reflection.

The study and analysis of social risks of the environment is presented in the Russian science from two points of view: as a rule, it is either the analysis of social environment risks (where all other types of risks can be presented, and where the social environment is the human environment), as for example in the papers of [M.P \(2005\); Tsikhonchik \(2017\)](#), or analysis of specific, "narrow" social risks, for example, socio-economic and political riskogenic

determinants [Noyanzina O.E. \(2011\)](#), risk of terrorism [E.V. \(2019\)](#), escapism [T.O and K.V. \(2018\)](#), suicide risks in youth environment ([E.O., 2014](#)), etc. ([A.V., 2017](#); [Shapovalova, 2015](#); [Shapovalova, Zakharov, Shmigirilova, Kisislenko, & Gozhenko, 2016](#); [Zubok & Chuprov, 2017](#)) present system analysis and studies of social risks.

With regard to the methodology of risk sociology, the most valuable are the works of systemic study and assessment of risks and riskiness of human environment: we find such a systemic assessment in the works of the team of authors led by [I.S. \(2015\)](#); [Kasyanov et al. \(2021\)](#); [Mozgovaya and Shlykova \(2016\)](#); both teams offer to look at risk not only from the perspective of its analysis, but also from the perspective of self-regulation of behaviour, adaptation, preventive and corrective actions by the subjects. We find a somewhat different perspective in the international scientific discourse [Bohr and Dunlap \(2018\)](#): it directly addresses the role of sociological science in the study and even in regulation of environmental risks; decision-making [Van Kerkhoff and Pilbeam \(2017\)](#) is also related to the search for a methodology of sociological research of the environment ([Boström, Lidskog, & Ugglå, 2017](#)).

In the situation of social risks, however, the everydayness of the situation often conceals a social disaster, a "catastrophe of a little man". Bureaucratic obstacles can become a barrier to preventive measures of state aid. And here we speak more and more often about public participation, inclusion of volunteers in the organization of actions of the help to victims in this or that situation.

Nowadays volunteer activity takes a special place in the system of public relations because it promotes not only the development of social competences of Russians, but also acts as a resource of riskogenic counteraction to environmental challenges. The already typical crisis picture of Russian reality with accumulated social, environmental, economic and other kinds of problems is complemented by new scale and complexity man-made, biogenic, socio-cultural threats (the so-called "big challenges") stimulating manifestations of civic activity more and more intensively. Moreover, we are talking not so much about activism sanctioned "from above" as about a surge in the number of citizens who are simply not indifferent and who implement the request to improve the quality of the environment, the conditions of human life "ad hoc" ("here and now"). Volunteer practices demonstrating more constructive forms of overcoming the arising contradictions and also operative decision of the problems causing public concern become widespread.

Potential riskiness becomes an attributive characteristic of volunteering activity regardless of its content and allows to refer volunteers to the category of vanguard social groups focused "on the development and implementation of fundamentally new models and strategies of behaviour as universal ways of solving life problems and achieving goals in high uncertainty conditions" ([P.A, 2015](#)).

The analysis of the scientific literature devoted to the problems of volunteer participation shows that sociology has formed certain prerequisites for the study of this phenomenon from the perspective of the riskological paradigm, although there is still no holistic methodological space. Today, Russian researchers are increasingly linking volunteering (albeit implicitly) with the category of risk. In scientific publications, sociologists pay attention to the viability and effectiveness of volunteer organizations in emergency situations [O.A. \(2019\)](#); [Richey and Klein \(2005\)](#); they consider volunteering as a "way of risk insurance" of professional choice ([Balashov, Pasichnik, & Kalamage, 2016](#)), identify contradictions and paradoxes associated with management processes that threaten the emasculation of volunteering ([Shubovich, Eremina, Bibikova, & Plohova, 2019](#)). Moreover, we do not mention here studies of volunteering practices under conditions of military

operations Zborovsky, Pevnaya, and Vedernikov (2017), climate change (Jorgensen, Krasny, & Baztan, 2021), fighting illness and its consequences (Nyenhuis, Greiwe, Zeiger, Nanda, & Cooke, 2020; Pevnaya, Kulminskaya, Shirokova, & Shuklina, 2021). A. Levinson defines such risky situations as "extraordinary circumstances that trigger latent programs of civic behavior that do not operate in the usual everyday life" (Hornby; Stolle & Hooghe, 2005). It is no coincidence that, according to the World Giving Index rating data published annually by the British charity foundation CAF, Russia has improved its position in terms of volunteering, helping strangers, cash donations, rising from 117th place in October 2019 to 67th in June 2021.

The interaction between the phenomena of risk and volunteering is determined by the dialectics of the processes of their integration, due to the transformation of the human environment in the totality of its constituent elements (nature, technology, socio-cultural sphere). Techno-natural phenomena, the processes taking place in society, generate riskogenic objects and situations, actualizing in relation to them volunteer activity of various individuals and groups.

Emphasis on the study of volunteering in connection with risk has also etymological grounds. So one of the definitions of a volunteer interprets it "as a person who agrees to do something unpleasant or dangerous" (Hornby). At the same time, studies note that voluntary decisions are many times more risky compared to actions that are involuntary in nature (Starr, 1969).

RESEARCH METHODS

In 2015-2019 the International Center for Sociological Research of Belgorod State National Research University carried out a comprehensive sociological study to investigate the risks of habitat. An all-Russian expert survey was conducted. The survey was conducted in 2015, the total number of experts who participated in the study was 120 people. The purpose of the survey was to examine the influence of the environment on the configuration of the social situation, to determine the risks and the degree of violation of social security in the Russian regions. The criteria used to select experts were their area of expertise, experience in the field, ability (competence) to assess the situation and predict its development. The expert group included profile specialists of branch organizations, administrative employees and civil servants, employees of profile departments of higher educational institutions and research institutes, specialists of public organizations. Eight regions were selected as territorial affiliation, which were distributed into groups with different levels of riskogenicity ("level of technogenic safety") on the basis of data from the Russian Ministry of Emergency Situations. Russian regions with the maximum and minimum levels of technogenic risk were identified: Adygea, Amur region, Bryansk region, Karachay-Cherkessia, Kirov region, Kostroma region, Krasnodar region, Nizhny Novgorod region, Saratov region, Tver region.

In 2018-2019, a survey of young people by questionnaire was conducted. The purpose of the study was to determine the dispositions and involvement of young people in volunteering in a risky environment. The survey involved 1000 people; 5 Russian regions included in the Central Federal District (Kursk, Belgorod, Voronezh, Orel and Tula regions); the sample was spontaneous; young people from 18 to 30 years old participated in the study.

RESULTS

As part of the expert assessment of the Russian environment riskogenicity, risks in four spheres of the environment were identified: natural-environmental, technogenic, informational, and sociocultural. A general analysis of expert opinion on the probability of risks associated with natural-environmental emergencies (NEE) made it possible to construct their distribution across the territories under analysis: the most frequent risks are those associated with natural fires (66.7%), pollution of natural objects through human fault (60.0%), hazardous hydrological research (50.0%), and reduction of land resources (48.3%). The three most probable risks include natural fires, high waters in spring time and floods, and pollution of nature through human fault. The least probable situations according to experts are related to geophysical and geological phenomena, as well as quarantine and dangerous diseases and pests of wild and agricultural plants.

An analysis of expert opinion on the probability of risks associated with technogenic emergencies showed that the most frequent hazards and threats in the technosphere of the regions are transport accidents (70.0%), accidents in municipal life support systems (66.7%), fires and explosions (53.3%), and accidents in electric power systems (50.0%). The three most likely risks include accidents in municipal life support systems, accidents in electric power systems, and transportation accidents. According to experts, the least probable situations are associated with accidents involving the threat of a radioactive substance release, accidents involving the release of microorganisms pathogenic to humans, accidents involving the release of hazardous chemicals, and hydrodynamic accidents.

Expert opinion on the likelihood of risks associated with information emergencies shows that the most frequent dangers and threats arise from violations of intellectual property rights (50.0%), which reflects current trends of both the increasing importance of the intellectual product and legal literacy of the population. Experts consider incidents connected with the uncontrolled development of global information systems to be the rarest phenomenon in today's information environment (thus, 65% of experts pointed to the absence of such situations). The top three most likely information risks include technical failures in information transmission channels, intellectual property rights violations, and illegal intrusion into information systems, including via the Internet. The least probable situations, according to experts, are related to uncontrolled development of global information systems, accidents and failures in information storage systems.

A general analysis of expert opinion on the likelihood of risks associated with sociocultural emergencies makes it possible to state that the most frequent dangers are associated with the loss of historical memory by certain groups of the population (26.7%). It is worth noting that, more often experts noted only individual manifestations of the identified socio-cultural threats to the region: we can identify the most frequently recorded threats in the area of various manifestations of vandalism (70%) and the destruction of moral norms among the population (63.3%). The three most likely risks include the destruction of moral values among the population, the loss of historical memory and the loss of cultural traditions. The least likely situations, according to the experts, are related to the unauthorized demolition of historical monuments. Thus, according to expert estimates, the greatest likelihood of socio-cultural violations comes from the mental orientations of Russian citizens, rather than from effective positions, such as vandalism, the destruction of cultural objects, the creation of informal associations, etc.

DISCUSSION

Risk as an indicator of the environmental condition allows us to evaluate individuals and groups from the position of their capabilities as self-organized subjects of volunteering, which is what the second study of the planned research complex showed.

In general, having formed a subjective image of social reality, the volunteers represent the external environment as corresponding to the average level of danger, i.e. having an aggregate score of 3.7 on a seven-point scale. Natural-environmental, man-made, and sociocultural threats, as reflected in the minds of participants in volunteer activities, also influence their perception of their own lives, which 58.5% of the respondents assessed as rather uncertain and risky, thus demonstrating a willingness to engage in real practices of mutual aid, service, and civic participation under conditions of escalating instability and change.

The risky specificity of the external environment determines not just the readiness for self-organization in general, but also the type of the most frequently implemented forms of volunteer activity. According to the results of the online survey, volunteers, on average, are much more often involved in the implementation of practices related to the elimination of the consequences caused by changes in the sociocultural subcultural locus. Social (75%) and cultural (64.8%) areas are the most popular one for the application for volunteer labour. Among volunteers, the awareness of importance of threats concerning the destruction of historical and cultural objects is increasing; 19.3% of respondents have the experience of preservation and reproduction of them. However, the riskiness of the socio-cultural environment is associated not only with the destruction of the tangible (infrastructural) component, but also intangible values. Thus, 27% of participants in volunteer activities (which is a relative majority) have experience in preventing countercultural phenomena, extremism, terrorism, xenophobia, and discrimination - which reflects the identified riskogenic contour of Russian reality (see table given below).

The natural sub-environmental locus more often causes volunteers to respond to threats caused by anthropogenic rather than natural factors, forming a deficit of public participation in the rating risks of this subsystem. 23.3% of volunteers had to eliminate the consequences of incidents related to pollution of natural objects provoked by human actions. They fight against the damage caused by natural disasters many times less often: no more than 6% have experience of volunteer activities of this nature.

Table Risky Volunteering Practices

Which of the following have you already done voluntarily and for free and/or are you willing to do? <i>(closed-ended question, any number of answers)</i>	I have the necessary experience	Ready to perform
	%	
Elimination of the consequences of natural disasters and catastrophes (earthquakes, landslides, floods, hurricanes, etc.)	6,6	45,3
Elimination of the consequences of natural fires	5,3	41,9
Handling the spread of infectious, quarantine, and other especially dangerous diseases in humans, animals, plants	5,9	32,0
Prevention and liquidation of consequences of incidents connected with pollution of natural objects through human fault	23,3	43,8

Elimination of consequences of transport accidents, explosions, fires, collapses, etc., accidents at treatment facilities, municipal and electric power systems, etc.	3,9	39,0
Elimination of consequences of man-caused accidents and catastrophes with discharge (threat of discharge) of dangerous substances (radioactive, chemical, microorganisms pathogenic for people, etc.)	2,4	30,1
Prevention and liquidation of consequences of destruction of historical and cultural objects	19,3	55,4
Preventing extremism, terrorism, xenophobia and discrimination	27,0	49,0

Risks characteristic for a technogenic sub-environmental locus, are shown less often, than in other subsystems, that defines much less degree of their reflection by volunteer community. So, 2.4% of participants of volunteer activity have experience of elimination of technological accidents and catastrophes; indicators of volunteer help at transport accidents, explosions, collapses and other are characterized a little higher - 3.9%. At the same time, being aware of the force of riskogenic influence from technogenic threats, volunteers show greater readiness to make their contribution to the fight against them or their consequences in the future: the readiness indicators are 30.1 and 39.0% respectively.

In general, whichever sub-environmental locus concentrates riskogenic potential, prospective volunteer response to hazards of any nature tends to fluctuate within average values. Though it is necessary to note, that the highest indicators of the future self-organization are connected with reproduction of threats of sociocultural safety, each second participant of volunteer activity is ready to prevent destruction of material and moral values (see the table above).

CONCLUSION

Speaking of the scientific significance of the problem raised, it is worth saying that the application of the methodology concerning the riskological approach to the study of volunteer activity has high heuristic potential, as it makes it possible to consider volunteering as a specific form of self-organization characterized by the lack of coercion and conscious choice, gratuitousness and willingness to bring practical benefit, social and individual value, potential riskogenicity, and allows an effective response to the challenges and threats to social realities, and also adapt to changes in the dynamically transforming environment, while demonstrating freedom, responsibility, and reflexivity in solving life problems and achieving certain goals (Kisilenko, 2018).

From the perspective of the riskological approach, the essence of volunteering is manifested in the implementation of social change, strengthening of integration processes, harmonization of contradictions arising in society, and is revealed in the following aspects:

- in the function of preventing negative trends in the social environment. Volunteerism as a meaningful standard and sample of socially approved behaviour contributes to the elimination, minimization of social deviations, manifestations of the phenomenon of anomie discovered by E. Durkheim. It is the volunteers who can act as "a positive attracting structure that reveals the very channels along which the social system can develop" (Meshcheryakova, 2015);

- in the diagnostic function. Volunteer activity as a form of self-organization makes it possible to identify the problems and contradictions that cause risks in the living conditions of individuals and groups and, based on the available experience, to determine the resources needed to solve them. It is such "social players" as volunteers who can actualize "problems that have not previously received an institutional solution, or change the institutionalized ways of solving them through their influence (Nevsky, 2020);

- in the worldview function, which is expressed in the ability of volunteering specifically reflect the surrounding reality and, accordingly, motivate the behaviour of volunteers, their orientation in the world;

- in mobilization function connected with presence of ideology of the social responsibility, promoting overcoming of inertness, formation of motivation of volunteering action at considerable layers of the population at the expense of translation of successful experience of personal participation and/or collective practices;

- in the adaptive function. The mechanism of adaptation of society to the risks of transforming environment of habitat can be carried out thanks to internal orderliness, consistency of social structure which are reached at the expense of development of processes of self-regulation and self-organization, including in the form of volunteering.

As the results of the research have shown, civil self-organization has a sufficiently high potential in the socio-cultural sphere (this, by the way, is proved by a long list of volunteer practices in this area), which is adequate to the demand of the environment and serves as a decent response to the risks presented in it.

Risks produced by other subsystems of habitat often remain without a proper response of volunteer movements. In our opinion, this situation is connected not only with the avoidance of resource-consuming volunteer practices by citizens in general and young people in particular - in our opinion, there is a serious problem in administrative assistance and public regulation of self-organizing aspirations. The answer to challenges of natural, ecological and technogenic (and the more so information) character, demand not only getting certain competences, but also competent management, equipping of activity (material, financial resources). Undoubtedly, volunteer activity is an exemplary example of self-organized initiatives, but, given the importance of providing a public response to all environmental risks, they must be supported by the subjects of territorial administration. And they must not just be supported, but rather organized according to the risk map of the territory.

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