

## Social Risks of Human Habitat

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**Abstract:** Change of modern habitat provokes emergence of the uncontrollable risk field and social risks are its important elements. The purpose researchers set in this research work was to carry out examination of the causal communications transformation in natural, sociocultural and technogenic sphere of personal habitat and the major social risks. The social risks emergence probability forecast and assessment of the environmental risks importance in formation of the general risk situation of the country's society become the result of work.

**Key words:** Social risks, habitat, technosphere, sociocultural sphere, nature and ecology sphere

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### INTRODUCTION

Research of habitat social risks is of scientific and practical interest, as to understanding of transformation vectors of the human environmental activity and to explanation of entire society development prospects.

The risk as object of interdisciplinary researches irrespective of origin (natural, technogenic, social) is characterized by multiple interpretation and can be defined or as an activity form under conditions of uncertainty or as a measure of the expected trouble in case of failure or as probability of dangerous event happening, infliction of harm or as the the personality (group, society), etc condition characteristic (Kenett, 2000; Flynn *et al.*, 2011; Luhmann, 1991) In social aspect specifics of risk are reveal themselves possible dangers connected with the public life order.

Risks of natural character (flood, volcano eruption, heavy rains, drought, etc.), regularities of their emergence, optimum behavior models of the person in the conditions of natural dangers concerned thinkers throughout the millennia, however the perspective of social risks was realized much later. Only in the 20th century expansion of technological hazards (mastering nuclear energy, genetic technologies, etc.) showed need of studying a so-called human factor. Discoveries, technical and technological innovations, growth of risk processes adverse effects scales allowed to realize "sociogenic" risks, their dependence on the person, promoted risk analysis as result of anthropogenous activity. V. Solovyov at the end of the 19th century wrote: "Natural productive forces are not boundless, the people devours the earth sooner or later, the come trouble is not the private and casual phenomenon, but a fatal consequence of the general

spontaneous process which will be undoubtedly accelerated by the careless and injurious attitude of the population towards nature".

At the present stage studying and practical realization of risk processes management models, formation of new risk understanding in general and social risk in particular, definition of influence factors as well as features of social risks manifestation in conditions of the transformed society (Bedford and Cooke, 2001; Kates, 2000) becomes an actual problem of risk sociology. It should be noted that in scientific literature today there is a set of definitions of the concept "social risk" (Machulskaya, 2012; Fedorov).

Among the classification bases for social risks the researchers name the risk action period, level of its manifestation, degree of danger to social environment, probability, character of consequences, etc. (Table 1).

Thus, in the middle of the 20th century the risk stops being a consequence of exclusively natural and technological disasters, and becomes obligatory integral attribute of social life while society even more often begins to be characterized as "the general risk society". According to O.N. Yanitsky, the main prerequisites of such type society formation are: first, absence in it, mostly in its professional culture and scientific knowledge, of risk reflection as continuous calculation and analysis of the social and natural price of own activity; secondly, an inattention and even neglect of institutionalization risk reflection; thirdly, erasing the border between the social norm and pathology, reconciliation with risk as an inevitable condition of human existence during the "transitional" period (Janicki, 1999).

The founder of the "risk society" concept W. Beck claims that unlike classical society in which elimination of need was a paramount task the risk society as key defines a problem of understanding and overcoming of fear by

Table 1: Bases of social risks classification

Classification basis	Types of social risks
Social risk action period	Term: short-, medium-, long-term; termless (constants)
Level of social risk manifestation (object type subjected to risk)	Group, national, global
Probability of social risk occurrence	Predicted (predictable), not predicted (unpredictable)
Degree of social risk danger	Risks with low degree of danger, risks with average degree of danger, risks with high degree of danger,
Frequency of social risk occurrence	Rare risks with a low occurrence frequency, risks of medium occurrence frequency frequent, risks with high occurrence, frequency
Character of social risk consequences	Favorable (positive)adverse (negative), neutral
Time of social risk manifestation	Pulse, shown instantlycumulative, taking during certain time to appear
Sphere of social risk manifestation	Social and economic socio, political welfare social and technological
Existence or absence of solution analogs	ordinary having solution analogs extraordinary having no solution analogs

social subjects (Beck, 1992, 2009). In the conditions of risk society, according to A.D. Shopenko, need of basic interaction changes for system “society factors operating it” increases (Shopenko, 2010). Special relevance is acquired by matters of stable development, risks forecasting, prevention or minimization of their consequences which are considered on the analysis basis of the sources and factors exerting impact on the personality and society functioning.

Among the main tendencies of social risk transformation in conditions of modern Russia the researchers note globalization, institutionalization, convergence of risks as well as their latent, inadvertent nature.

Thereby, globalization of social risks is shown in change of the social threats scale bringing up an issue of the entire mankind survival; social risks gain universal scope, overcoming frontiers and affect the increasing mass of people. Development of this tendency leads to emergence of the “world” general dependence on risks. “The fear community” becomes a driving force of the new world development in which individual choice opportunities have no special value, the question of the world community role in regulation of escalating risks thereby is staticized.

The institutionalization of social risks is connected, first, with increase in number of social institutes the activity of which is connected with forecasting and risk management, secondly, with expansion of the organizations number perceiving risk as the natural principle and an own activity condition. It is possible to carry the sphere of insurance, broker's board, investment markets, etc., to those.

Latent nature of social risks does not allow the person to perceive various dangers on time in order to minimize risk expenses; many risks cannot be calculated mathematically, this inaccessibility, “invisibility” of risks often forms illusion of danger lack per se.

Unintentionalness of social risks is that unpremeditated actions of various social actors promote emergence of negative consequences, in certain cases it leads to their strengthening.

Convergence of social, natural and technological hazards consequences of risks become multiplicative, risk processes interconnected, there is a mutual and repeated strengthening of negative effects when the risk of any origin is capable to strike objects of various nature; thus, the impulse of initial risk gets into all levels of habitat of the person, generating additional risks.

The effect of habitat risks convergence is reflected in reaction of the social risk field, emergence of constant vulnerability situation. Need of regulation and forecasting of possible transformations and modulations of a risk situation brings the researcher to necessity of carrying out habitat social examination and to the search of regulatory or controlling mechanism, for increasing social safety of the territory (Shapovalova and Gozhenko, 2015).

## MATERIALS AND METHODS

In 2015. the center of social researches of NIU “BELGU” within implementation of the Russian scientific fund project “Social Risks Forecasting and Management of Technogenic Human Systems Development in Dynamics of Habitat Transformation Processes of the Person” conducted the All-Russian expert survey. Research is realized by the staff of joint research laboratory of trans-disciplinary researches (Belgorod State University, Institute of Socio-Political Research RAS, Southwest State University). Examination of habitat influence on configuration of a social situation, definition of social safety violation extent in the Russian regions became the purpose of expert poll.

Survey was conducted during the period from April 30 to June 1, 2015, the total of the experts participating in research made 120 people. As selection criteria of experts the sphere of action, experience in the sphere, ability (competence) to assess situation and to predict its development were used. The characteristic of expert group: profile specialists of the branch organizations, administrative workers and civil officers, the staff of

profile departments of higher educational institutions and scientific research institute, specialists of public organizations. By territorial criteria 8 regions which were distributed on groups with various level of risks ("level of technogenic safety") on the basis of data of the Ministry of Emergency Situations of Russia were selected (The Ministry of the Russian Federation for Civil Defense, Emergencies and Elimination of Natural Disasters Consequences). Regions of the Russian Federation with the maximum and minimum level of technogenic risk were allocated: Adygea, Amur region, Bryansk region, Karachay-Cherkessia, Kirov region, Kostroma region, Krasnodar Krai, Nizhny Novgorod Region, Saratov region, Tver region (Zubok and Chuprov, 2016).

Following the results of theoretical modeling, to number of the main social risks were referred: deterioration in demographic situation (decrease in birth rate, incidence growth, decrease in life expectancy); unemployment; marginalization of the population; compelled migration; stratification on the level of income; disadaptation; decline in life quality; crime rise; growth of social tension; growth of protest activity; large acts of terrorism. These risks were defined in four primary groups: decline in life quality, growth of social tension, growth of the compelled migration, growth of social uncertainty in the region (Zubok and Chuprov, 2016).

## RESULTS AND DISCUSSION

Each group of the designated risks was investigated together with threats, risks and factors of each of four habitat spheres: natural and ecological, sociocultural, information and technogenic (Zubok and Chuprov, 2016). Therefore, connection between emergence of social risk and the risks produced by habitat was established. Natural and ecological sphere of habitat.

Calculation of social influence index allows to define the most powerful threats of the natural and ecological sphere, those, which most possibly would cause realization of social risks (Table 2).

According to the calculations given above, the emergency situations connected with the dangerous geophysical phenomena (0.62) dangers by diseases of farm animals and plants have the greatest influence on emergence of social risks (0.55, respectively). The smallest impact is exerted by the incidents connected with pollution of natural objects because of the human activity (0.36). The general index of the natural and ecological environment influence on social risks can be characterized as average (0.47).

**Technogenic sphere:** Calculation of social influence index allows to define the most powerful threats of technosphere, those which most possibly would cause realization of social risks (Table 3).

According to the calculations given above, the greatest influence on emergence of social risks have the emergency situations connected with accidents with emission of dangerous chemical and radioactive materials (on 0.78, respectively) and hydrodynamic accidents (0.67, respectively). The smallest impact is exerted by the incidents connected with sudden building collapse (0.17). The general index of technosphere influence on social risks can be characterized as above average (0.55).

**Information sphere:** Calculation of social influence index allows to define the most powerful threats of informational sphere, those which most possibly would cause realization of social risks (Table 4).

According to the calculations given above, the emergency situations connected with uncontrollable development of global information systems (0.78) have the greatest influence on emergence of social risks. The smallest impact is exerted by the incidents connected with illegal penetration into information systems including by means of the internet (0.17). The general index of datasphere influence on social risks can be characterized as below average (0.46). Sociocultural sphere.

Calculation of social influence index allows to define the most powerful threats of the sociocultural sphere those which most possibly would cause realization of social risks (Table 5).

The emergency situations connected with destruction threats of the cultural bases of national, ethnic and religious identity of the population (0.78) and threats of cultural identity crisis in various national groups (0.73) have the greatest influence on emergence of social risks. The smallest impact is exerted by the incidents connected with manifestation of vandalism, violation of historical monuments (0.0). The general index of the sociocultural environment influence on social risks can be characterized as above average (0.60).

Comparing indexes of social influence of spheres (influence on emergence of social risks), it becomes possible to draw a conclusion on the greatest ponderability of the sociocultural sphere (index of social influence 0.63). And even when calculating an arithmetic-mean index for the techno and information sphere, the received value does not block an indicator of habitat sociocultural subsystem influence (Table 6).

Table 2: Index of social influence of natural and ecological emergency situations

Natural and ecological emergency situations	Index of social influence
Dangerous geophysical phenomena	0.62
Dangerous geological phenomena	0.47
Dangerous meteorological phenomena	0.46
Dangerous hydrological phenomena	0.45
Natural fires	0.41
Infectious, parasitic diseases and poisonings of people	0.46
Dangerous diseases of farm animals	0.55
Quarantine and especially dangerous diseases and wreckers of agricultural plants, woods	0.55
Reduction of land resources (exhaustion, aeration, inefficient use)	0.46
The incidents connected with pollution of natural objects because of the human activity	0.36
Cumulative index of the natural and ecological sphere influence on emergence of habitat social risks	0.47

Table 3: Index of technogenic emergency situations social influence

Technogenic emergency situations	Index of social influence
Accidents with emission of dangerous chemicals	0.78
Accidents with emission of microorganisms, pathogenic for people	0.64
Accidents with emission of radioactive materials	0.78
Accidents on municipal life support systems	0.47
Transport accident	0.50
Fires and explosions	0.45
Hydrodynamic accidents	0.67
Accidents on electrical power systems	0.49
Accidents on treatment facilities	0.58
Sudden building and construction collapse	0.17
Cumulative index of technosphere influence on emergence of habitat social risks	0.55

Table 4: Index of information emergency situations social influence

Information emergency situations	Index of social influence
Technical failures in work of communication channels	0.43
Accidents and violations in systems of information storage	0.49
Deliberate distortion (concealment/disclosure) of important information	0.35
Unauthorized use of information systems	0.33
Illegal penetration into information systems, including by means of the internet (hacker attacks)	0.17
Causing damage to information systems	0.57
The theft of information which entailed monetary losses	0.45
Violation of intellectual property rights	0.55
Violation of information confidentiality	0.44
The incidents connected with virtualization of the population consciousness	0.38
The incidents connected with uncontrollable development of global information systems	0.78
The incidents connected with deficiency of information for adoption of administrative decisions	0.57
Cumulative index of influence infosfer on emergence of habitat social risks	0.46

Table 5: Index of sociocultural emergency situations social influence

Sociocultural threats	Index of social influence
Destruction of historical and cultural objects in a region	0.69
Manifestations of vandalism, violation of historical monuments	0.0
Unauthorized demolition of monuments	0.67
Loss of historical memory in various national groups	0.69
Change or loss of cultural traditions (norms, customs, ceremonies, rituals)	0.66
Threat of cultural identity crisis in various national groups	0.73
Threat of destruction of the cultural bases of national, ethnic and religious identity of the population	0.78
Destruction of moral values and moral standards among the population	0.68
Manifestations of discrimination, violation of the rights and freedoms of citizens on the basis of national and religious distinctions	0.54
Emergence of informal associations of a counter-cultural orientation	0.60
Index of the sociocultural sphere social influence	0.60

Table 6: Communication of social risks and spheres of habitat

Social risks	Natural and ecological sphere	Sociocultural sphere	Technosphere	Informationalsphere
Life quality deterioration	0.50	0.69	0.60	0.49
Growth of social tension	0.44	0.62	0.46	0.48
Growth of the compelled migration	0.39	0.6	0.43	0.38
Growth of social uncertainty in the region	0.42	0.61	0.43	0.39
Index of social influence of spheres	0.44	0.63	0.48	0.44

Table 7: Probability of risks emergence of consciousness virtualization of the population

Risks of consciousness virtualization	Minimum	Maximum	Mean
Emergence of parallel reality	1	7	3.07
Manipulation with mass consciousness	1	7	4.87
Intellectual degradation	1	7	3.93
Emotional degradation	1	7	3.97
Replacement of real-life communication by virtual communication (communicative degradation)	1	7	4.63
Dependence on computer systems	2	7	4.72

Estimating the existing tendencies of decrease or increase of social risks emergence probability depending on a habitat condition of the region, experts do not note obviously expressed regularities, adhering to the central line in an assessment (Table 7).

Separate interest, in respect of social risks assessment, is represented by the information sphere of habitat of the person. Analyzing the information sphere as a separate locus of modern technosphere, its threats, risks and factors, it is impossible to lay aside the matter of its risks connected with consciousness virtualization of the population (Shapovalova, 2015). According to the experts, manipulation with mass consciousness of the population (4.87 of 7 possible points) and emergence of dependence on computer systems (4.72 of 7 possible points) is most of all probable in this regard. The futurological forecast of parallel reality emergence is less probable (3.07).

### CONCLUSION

The reasons of social risks emergence are various but all of them are in a varying degree connected with certain acts of man and decisions are a consequence of inadequate social transformations. So, the military-political conflicts, fight of social groups for the power and resources, demoralization of politics and law, separatism are caused by changes in the political sphere of society, namely democratization of power structures. Such social problems as repartition of property, corruption, competition, organized crime, at last, unemployment are a consequence of transformational processes in market economy. Disintegration of national consciousness, marginalization, deviant forms of behavior, value conflicts, growth of religious tendencies, anomy are connected with transition to pluralism ideologies. Crisis of various social institutes (family, education, culture, art, mass media), social pessimism are caused by refusal of monostylism in culture. Over time all these processes and phenomena are integrated into a uniform complex of the social problems destabilizing a situation, weakening civil society and the state, causing crisis of spirituality, formation and reproduction of political and legal system, inadequate management, strengthening of authoritative tendencies.

In the conditions of intensive increase of social risks ensuring stability, safety of society becomes the priority direction of public policy. High dynamism, increased

speed of change of all public processes, globality of event space changes, open information and social exchange, emergence of new social institutes and forms essentially distinguish the present stage of development of a civilization and staticize a problem of effective adaptation instruments search for new living conditions of mankind. Forecasting of habitat risks of the person, establishment of communication of the changing conditions with the social future of the state becomes one of such tools.

### REFERENCES

- Beck, U., 1992. Risk Society: Towards a New Modernity. Sage Publications, London, ISBN-13: 9780803983458, Pages: 260.
- Beck, U., 2009. World at Risk. Polity, Cambridge, UK., ISBN-13: 9780745642000, Pages: 269.
- Bedford, T. and R. Cooke, 2001. Probabilistic Risk Analysis. Cambridge University Press, Cambridge, UK..
- Fedorov, M.Y., 2003. Theoretical Problems of Legal Regulation of Social Insurance: Monograph. Omsk State University, Russia, Pp: 15-33.
- Flynn, J., P. Slovic and P. Kunreutner, 2001. Risk, Media and Stigma. Routledge, London.
- Janicki, O.N., 1999. Environmental sociology as a reflection of risk. Sociological Stud., 6: 56-56.
- Kates, G., 2000. Risk Management Systems. Risk Professional, London, pp: 19-31.
- Kenett, R., 2000. Towards a grand unified theory of risk. Operational Risk, London, Pp: 61-69.
- Luhmann, N., 1991. Soziologie des Risikos. De Gruyter, Berlin, New York, ISBN-13: 9783110866056, Pages: 252..
- Machulskaya, E.E., 1999. Social risk as an objective basis for social security. Bull. Moscow Univ., 1: 26-27.
- Shapovalova, I.S. and G.I. Gozhenko, 2015. The structure of modern habitat: An ontological and a factor model. Sociol. Manage. Belgorod., 4: 78-84.
- Shapovalova, I.S., 2015. The information sphere as a priority the modern human environment. Philosophy Sociol. Right Belgorod, 20: 30-43.
- Zubok, Y.A. and V.I. Chuprov, 2016. Risk-taking environment as the factor of social reality change: The problem of social regulation. Sociol. Manage. Belgorod, 4: 8-17.