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CATEGORIES OF RISK AND DAMAGE IN CONTEXT OF INNOVATIVE ECOLOGICAL-ECONOMIC ACTIVITY'S THEORETICAL ANALYSIS¹

Prokopenko Olha Volodymyrivna

*Doctor of Economics, Prof., Dean of Economics and Management Faculty,
Chief of Economic Theory Department,
Sumy State University, Ukraine;*

Prof. of University of Economics and Humanities, Bielsko-Biala, Poland

Petrushenko Mykola Mykolayovych

*Doctor of Economics, Associate Professor, Associate Professor of Management
Department, Sumy State University, Ukraine*

Shevchenko Hanna Mykolayivna

*PhD, Associate Professor, Associate Professor of Management Department,
Sumy State University, Ukraine*

In the article the necessity of environmental risks problem's actualization in the course of the innovative ecological-economic activities is grounded. Nature and content of damage's categories arising from increased risk of environmentally relevant conflict situations and accordingly ineffective risk management in the context of innovative ecological-economic activity's theoretical analysis are details researched.

Keywords: *environmental risk, ecologic-economical damage, nature-resource conflict, innovative ecological-economic activity.*

Introduction. Actuality of innovative ecological-economic activity's research, including influence of different environmental factors on search and use of new, more energy-saving and «green» uses of natural resources is explained primarily by the

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fact that existing theoretical approaches establishing linkages between economic agents' actions concerning natural resources' using and related environmental pollution and conflicts that caused such actions not take into account the risk factors and ecological-economic damages that caused including inadequate risk management, and, therefore are insufficient to the successful resolve relevant issues. Furthermore, in a social crisis it must have a need for proper actuality, attracting wide attention of economists and politicians to explore new forms and means of environmentally focused activities' proceedings and related aspects of environmental risk, ecological-economic damage in different conflict situations, what is revealed in the paper.

Analysis of recent researches and publications. Scientific researches and publications on issues of ecological-economic activities, in particular sustainable development of the national economy have proliferated since the 1970s. Issues related to the risk of causing damage due to environmental pollution by national economy's agents and therefore conflict situations, recently have acquired even more actuality and interest from both foreign (J. Shogren, 1990 [17]; B. Sinclair-Desgagné, 2003 [15]; P. Collier, 2006 [12]; P. Ricci, 2006 [16]; A. Alao, 2007 [10]; R. Fjeld, 2007 [13]; Y. Hiriart, 2008 [14]; R. Stahl, Jr., L. Kapustka, W. Munns, Jr., R. Bruins, 2008 [18]; C. Anghelache, 2011 [11] etc), and Ukrainian (B. Maklyarskyy, 1980 [4]; S. Pyrozhkov, 1996 [8]; L. Melnyk, 2001 [5]; S. Pavlov, 2001 [6]; S. Bobylyev, A. Khodzhaev, 2003 [2]; Yu. Kushniruk, 2006 [3]; O. Balatskiy, 2007 [1] etc) scientists. In particular, Ukrainian researches in environmental economics are marked multifaceted analysis of deep contradictions, that underlie and create conflicts' potential in the system of relations 'economy – environment – society'.

Separately in this paper the attention to the following papers of ecological (environmental) risk is paid: natural factors of medical-environmental risk [3]; influence of environmental risk on public health [6]; risk's connection with environmental security [8]; environmental risk management [11; 15]; features of environmental risk's analysis [13; 17]; environmental risks' control [14]; integrated assessment of socio-economic and ecological risks [18, p. 1-7] as well as specifics of the relationship 'conflict – risk' [12], categories of damage and criteria for selecting globally relevant environmental risks and risk characterization [19, p. 46-55], sustainability and risk management issues, in particular criteria for making choices in environmental and health risk management [16, p. 39-67].

Previously unsettled problem constituent. Addition to researches of proper ecological-economic activity and innovative vectors of its development and also related conflictual situations and mechanisms to their solution, issues of environmental risk and related ecological-economic damage require individual consideration, as in the analysis of their categorical content and within the overall theoretical analysis of processes related to natural resources using and economic

aspects of environmental protection.

Main purpose of the article. Thus, the purpose of this research is to hold a detailed review of «environmental risk» and «economical damage from environmental pollution» categories in the context of innovative ecological-economic activity's theoretical analysis.

Results and discussions. Ecological-economic activity is initially impossible without potential conflicts in the relationship between relevant economic agents' actions especially when it comes to innovation vectors of natural resources using and environment protection, what is related to uncertainties and contradictions of diverse interests and needs, as producers and consumers of nature's goods and makers of environmentally relevant decisions. With this in mind, in order to go directly to the categories of environmental risks and ecological-economic damage, it is necessary to consider essence of natural resources and also environment in its natural and social forms. In this paper we focus on two of many aspects of natural resources: firstly, on clarifying what is a natural resource; secondly, on the natural resource potential as an economic category, that reflects the perfectionism of economic agents' interests both potential and existing conflicts within a given territory.

Regarding the first aspect, it should be noted that because of constant undamped interest in the subject of natural resources currently there is no single commonly used their definition. However, it is acceptable for most researchers, that nature resource plays a role of functional relationship between the desires of people, their abilities and assessment of their environmental. In the paper [10, p. 16] natural resources are determined as 'all not artificial products located as under the earth, and in it, which may be involved, collected or used due to extraction, harvest or use in order to generate revenue or to serve other functional purposes in the interest of humanity. Natural resources include land, solid minerals, oil, water, water resources and the existing flora and fauna'. It also emphasizes that solar energy and wind are exceptions, because they are not material resources, even if their influence is noticeable.

The similar definition is given in the paper [2, p. 18], where «natural resources are resources formed in the environment as a result of objective natural processes. They consist of natural conditions, which include solar radiation, heating the Earth, terrain, climate, etc. and proper natural resources – elements of lithosphere, hydrosphere and atmosphere used in industrial activities or in the sphere of consumption». Inclusion in the concept of natural resource 'natural conditions' is explained by mobility of limits between them, that leads over time to transformation of some of the conditions in resources, of the natural factor – in the economic factor.

Over the past 40-50 years Ukrainian scholars have engaged in considerable efforts to achieve greater clarity in determining the economic content of natural resources using factor analysis of environment with the category of public utility.

According to the authors [9, p. 389], natural resources should be understood as «territorially limited set of natural factors (or combinations thereof), which are located natural connections' system, that owns a potential value of consumer and with the appropriate level of productive forces» development and scrutiny may be used to meet social needs, participating in processes of production, distribution, exchange and consumption of goods».

In general, the term «natural resources» can be understood as an attempt to prioritize human environment with all its conditions and elements. At the same time natural resource's concept suggests, that the basis for the planning of any agent's activity within a given environment is the assessment of its usefulness to obtain benefits. In addition according to this concept any element of environment can be classified as a natural resource subject to compliance with the two following conditions: first, the availability of knowledge and technical skills for extraction and use of resources; secondly, the existence of demand for materials and services that are produced from a given resource. Thus, natural resource's concept argues that the value of resource is created by human need and ability, not just its physical presence. That is, natural resources are an expression of both objective and subjective assessment.

So, given the fact that natural resources are often seen as use-value of potential character, it is expedient to pay attention to the category of «natural resource potential». In the paper [9, p. 128], «natural resource potential of the territory is defined by presence of proven reserves and discounted natural resources». It emphasizes duality significance of natural resources: 'on the one hand, natural resources are considered as natural productive forces and part of material resources, which are used to produce goods and services of production and non-production significance. On the other hand, natural resources serve as elements of the environment (a place for human life)'. In this stage of science it's claimed that natural resources in the latter sense are not included in the economic potential and not be assessed.

We now consider the concept of «environment» which, firstly, includes natural resources and / or extends around them; second, as a consequence – it has effects on natural resources. The nature of these effects depends on the internal contradictions of environment, that its conflictness. First of all, it is about dialectics of social and natural components of the environment.

According to the authors [5, p. 20], «in the social environment it should be understood artificial material-psychological (information) human environment. The natural environment together with the social environment constitutes the human environment (environment of man)». Thus researchers suggest in a natural environment to understand the general meaning, which includes natural resources and the environment.

We believe that in the context of this research equally important, in fact – the primary task is to analyze the relationship of social and natural environments and its influence on the quality and quantity of natural resources, which form the natural resource potential of certain territory. Using the recommendations in the work [9, p. 887], we note that natural resource potential in general is functionally dependent on these variables: quantity of a type of natural resource, specific performance of a resource, content of useful the component reflecting qualitative state of resources, consideration of influence of environmental quality on productivity of natural resource, conflictness' consideration of social and natural environments that affects on performance and quantity of natural resources.

Generally, in contrast to all classifications of natural resource conflicts in which the natural resources, i.e. activities around them, cause conflict situations well as the environment because of its contradictory affects on natural resources (that is natural resources can be both a cause and a consequence of relevant conflicts), in this research natural resource potential is the subject of the environment's conflict action. The consequences of such action are under-utilization of this potential which should be reflected in its assessment and prediction of its value.

Having defined the content of natural resources as the main object, which is associated with environmental innovation and arising ecological-economic contradictions, now consider the category «risk» in the context of the research. Thus, any innovative ecological-economic activity is potentially dangerous, that is «risky». From theoretical point of view risks' positions related to probability theory, theory of making management decisions, including game theory, and to concepts of catastrophes, crises and conflicts.

Environmental risks are considered in technogenic and natural aspects. In first case environmental risk is a measure of expected failures in environmentally relevant activities of economic agents, as well as damages related to facts of adverse effects of activities for recipients, the main of which are human health and life.

Specificity of risk as a phenomenon lies in its surprise, that offensive dangerous situation's surprise. The risk is the criterion for assessing of destructive environmental conflicts – combinations of conditions and relationships between economic agents in which each party is trying to take a position incompatible or opposite in relation to ecological-economic interests of the opposite party; with cumulative effect of economic agent's activity in conflict is lower the same indicator without environmental conflict. In turn, the constructive side of environmental conflicts' action corresponds opposite condition in which economical agents receive in conflict additional effect compared with conflict-free situation.

In making decisions on admissibility of environmental and other risks' existence at the micro level, firstly, given the changes and unpredictability in the macroeconomic and ecological environments, the impossibility to avoid any risks to a

company and its employees is considered. Secondly, an enterprise is unable to use all possibilities against the risks because it will lead to undesirable consequences in other fields of activity like social and related economic. Thirdly, choosing optimal variant of risk-management, a level of acceptable risk is established, with the acceptability problem is the views and interests of all entities that are related to this risk.

Thus, innovation activity of enterprises and the regional economy as a whole is inevitably conflicting. Potentiality of conflict speaks that due to different political, economic and other factors the consideration of all stakeholders' interests adequate to sustainable development principles takes no place. That risk is always a conventionally acceptable. Those parties feel an increased risk for itself in its absolute sense or in comparison with other agents of ecological-economic activities, can initiate the active forms of conflicts.

Overall risk management in the field of ecological-economic relations aims to achieve an optimum in obtaining natural resources and environmental services for society; it includes an analysis of the situation related to environmental risk, substantiation and development of appropriate management decisions to minimize risks based on analytical assessment of quantitative and qualitative characteristics of environmental risk. At the same time the tactical plan's goal is to enhance public safety, including such indicators as life expectancy, morbidity, and traumatism. In strategic terms it is to maximize the welfare of the population (GDP growth).

In the context of environmental safety acceptable risk implies observance of limits on environmental effects (for example, maximum allowable emissions rate, maximum allowable discharges concentrations, maximum allowable environmental loads on recreational land, etc.).

It should simultaneously consider two main types of environmental risk: individual (environmental risk of the individual); social (environmental hazard, which is exposed to group of people). In the latter case, in the context of economic and political aspects' research it comes to regional and national levels of environmental safety.

Economic researches of environmental risks should be based on the experience of other scientific fields, including medical-environmental, such as in the paper [6] or in [3]. In particular in the term of territorial medical-environmental risk is proposed as a level of uncertainty, which is associated with «change in the health of specific space-time coordinates due to integrated environmental influence... Low risk is associated with expected low level of morbidity, mortality, disability, etc». Along with the economic aspects of environmental risk author of the work [8] identifies its following types: risk of natural systems destruction; risk to public health; risk of technogenic systems for specific industrial enterprises; risk management of natural resources; risk of natural disasters; risk of regional military conflicts; risk of environmental terrorism.

Thus, the objective existence of environmental conflicts is not contrary to the concept of acceptable risk in public, particularly economic relations. In turn, in the context of environmentally caused conflicts' research because of their inextricable relationship with the environment, it is appropriate, primarily to analyze the risk of threshold (such where the environment or its components are on the verge of switching to 'lower quality') states of nature.

In general analysis of the environmental conflict taking into account risk criteria consists of the following steps:

1. Definition of the territory in which conducted the identification and assessment of potential environmental conflicts.
2. Formulation of winnings' functions for environmental conflict's player, which according to the previous step is a socio-economic territorial system.
3. Predictive assessment of environmental conflicts, taking into account risk criteria.

The risk of environmental conflicts reflects the lost opportunity to obtain maximum effect (winning) by agents of ecological-economic activities (parties to an environmental conflict) according to the specific situation of environment ('state of nature') because of the destructive effects caused by such conflicts to affected sides of the conflict.

Thus, the 'environmental risks – environmental conflict' relationship has two main aspects: first, environmental risk – as probability of negative anthropogenic changes in nature – can cause environmental conflict; secondly, in the context of environmentally caused conflicts' research it is expedient to intensify the attention to environmental risk destructive consequences of these conflicts [7].

Research of natural resource conflicts (in the wider sense – environmental conflicts) as one of the main categories of socio-natural relationships and at the same time, a consequence of ecological-economic activity is connected with formation of the special performance. The economic development is accompanied by environmental pollution, destruction of natural ecosystems, degradation of the urban environment as a result a society suffers from large material and moral damages. In conditions of increased risk of natural resource conflicts, these damages are constantly present factor and the imbalance of economic growth. Thus material assets welfare of society as a whole and its individual members suffer from significant damage. Health damage certainly occupies a central place among all recipients of environmental damages.

Category 'environmental damage' is generalizing expression of socio-economic system destruction's scale as a result of environmental pollution. In turn, the effectiveness of measures to combating environmental pollution can be assessed using the indicator of damages that are prevented or eliminated.

Among the major recipients of environmental damage due to the risk of natural

resource conflicts are the following: human health, fauna, natural resources, materials, and climate.

For each type of damage in this classification two components should be allocated: basic and additional damages. Thus the first of them expressed in financial form, the second to the extent possible expressed in the form of cost. For example, it comes to the assessment of damage to human health as a result of natural resource of the conflict: to the main damages include loss of productivity due to premature death and disease caused by weapons or pollution, as well as the related treatment costs etc. Additional damages are the loss both material and immaterial nature caused by the threat of disease from air pollution or water, as well as the inconvenience and losses resulting increase in noise, harmful smells, etc.

Determination of environmental damage from the risk of natural resource conflicts in financial form is conditional, because:

– There are no clear classification' criteria of a certain situation to the status of conflict. From a broad perspective almost any situation characterized by environmental damage may be considered as conflict. In addition, you can also distinguish between the concept of environmental conflict and natural resource conflict, the more so because in recent decades there is a tendency to increase environmental components named natural resources (land, minerals, territorial resources, etc.).

– When identifying a certain situation as a conflict the essence of this conflict's nature may be uncertain. That is the question of environmental, social, political, etc. nature of the conflict may be unresolved. If the conflict is complex, it is an open question about contribution to its negative consequences, including environmental damage, the natural resource component. For example, if as a result of natural resource conflict's influence with weapons people have been wounded and at the same time their health has suffered as a result of pollution caused by conflict, how to find the environmental causes of these damages, and perhaps what is the expediency of this finding.

– Not always possible to attributing environmental damage exactly to the conflict situation. In the same territory you can watch simultaneously negative results of environmental pollution as in the traditional sense of the latter, and in terms of natural resource conflicts.

– Environmental damages caused by natural resource conflicts usually closely related to social damages, to determine that, in financial form not only economic-mathematically difficult, but also immoral in terms of ethic.

– Subjectivism in assessments and perceptions of ecological-economic relations' agents to some extent interfere with detection of the environmental damage's scale. As a rule it is a consequence of insufficient or erroneous awareness about the actual content of environmental damage.

Either way, the environmental damage caused by pollution from industrial plants, means of transport or conflicts of any kind, always are mediated through 'participation' of the environment in its transfer from the issuer to the recipient. It is about comprehensive nature of the composition of environmental damage's occurrence and the extension of natural resource conflicts (based on the recommendations in the works [1; 4, p. 26]).

A detailed assessment of the environmental damage caused by natural resource conflicts, should serve as the basis for determination of compensation for victims of pollution. A thorough analysis of the structure of these damages reveals the differentiation of their social consequences, to establish the pollution perpetrators, and those recipients who are most affected by air pollution, noise stress, degradation of urban environment, etc. [4, p. 24-25].

For different categories of economical agents environmental damages take various specific forms: natural, moral, aesthetic, prestige, social, economic, legal and so on. When determining the damage from pollution it is necessary to proceed from enigma of their display and can not be confined to their economic form. Thus the conflict theme intersects especially social form of damages. «The value of these damages is important to people because they are related to the level of essence the person's formation and his way of life» [1, p. 77-78].

Let us analyze in more detail the nature of the criteria for eco-economic damages due to the risk of natural resource conflicts:

- Depending on the mechanism of influence damages can be divided into direct and indirect. When considering the economic problems of the environment arising from the action of natural resource conflicts people is central. Proceeding from this, direct damages are in their manifestation directly to the person: ill health, lower productivity, deterioration of health, violations of emotional and moral condition, – as a result of the environmental impacts of natural resource conflicts. Indirect damages occur in the form of loss of certain values for economic and environmental objects (recipients).

- Environmental damages caused negative effects of natural resource conflicts can have both temporary and permanent character. In addition, environmental damage can be seen as the current and prognosticated. In relation to natural resource conflicts damages as sometimes the most conflict situations are difficult to predictions. This in turn leads to increasing of potential damages' weight compared to actual damages in their complex combination. However, the success of preventive measures will also mean greater value of averted damages. Specifically, preventing conflict itself, we can prevent future ecological, economic and social damages. The complexity of the issue is that not always the best solution is to prevent conflict situations.

- A special place in the classification of environmental damages is occupied by

the so-called recovery damages, which refers to losses from pollution process on a small scale with the inverse character (as opposed to non-renewable damages).

– Environmental damages due to natural resource conflicts' risks can have both cumulative and synergistic nature.

Conclusions and further researches directions. So, as a result of the research, we have come to the following conclusions: first, in the global and national social, environmental and economic crisis the necessity to actualize the issues of environmental conflictness, including its consideration in assessing the natural resource potential of a certain territory in the implementation of innovative environmental-economic activity is discovered; secondly, expediency of research in environmentally conflictual situations two aspects of risk is proved: occurrence's probability of a threshold state of nature and occurrence's probability of environmental risks within one state of nature; thirdly, the notions of destructive environmental conflict and environmental conflict's risk considered in economic context are proposed; fourthly, the nature and content of category of damages arising from increased risk of conflictual environmentally relevant situations and accordingly ineffective risk management in the context of innovative eco-economic activities' research are detailed described.

Further researches will focus on development of methods for establishing complex diverse relationships between social and natural components of the environment as a space for innovative eco-economic activities.

References

1. Balatskiy O.F. (2007). *Antologiya ekonomiki chistoy sredy [Anthology of clean environment's economy]*. Sumy: PTH 'Universitetskaya kniga' [in Russian].
2. Boblyev S.N., Khodzhayev A.Sh. (2003). *Ekonomika prirodopolsovaniya [Economy of natural resources using]*. Moscow: MSU named M.V. Lomonosov Publishing [in Russian].
3. Kushniruk Yu.S. (2006). Pozityvni pryrodni chynnyky pry vyznachenni medyko-ekologichnogo rysyku [Positive natural factors in determining of medical- environmental risk]. *Naukovi zapyski Vinnytskogo derzhavnogo pedagogichnogo universytetu. Seriya Geografiya – Scientific notes of Vinnitsa State Pedagogical University. Series of Geography*, 12, 81-87 [in Ukrainian].
4. Maklyarskiy B.M. (1980). *Ekologicheskiy boomerang: Klassovyye aspekty problemy ohrany okruzhayushchyey sredy [Environmental boomerang: The class aspects of the environmental protection's problem]*. Moscow: Mezhdunarodnyye otnosheniya [in Russian].
5. Melnik L.G. (2001). *Ekologicheskaya ekonomika [Environmental economics]*. Sumy: PTH 'Universitetskaya kniga' [in Russian].
6. Pavlov S.B. (2001). Ekologicheskiy risk dlya zdorovya naseleniya [Environmental risk to public health]. *Medizinskiye isslyedovaniya – Medical researches*, vol.1, #1, 16-19 [in Russian].
7. Petrusenko M.M. (2012). Analitichna ozinka potentsiynyh ekologichnyh konfliktiv iz urahuvanniam chynnyka ryzyku [Analytical assessment of potential environmental conflicts, taking into account of risk factors]. *Ekonomichnyy visnyk Nazionalnogo girnychogo universytetu – Economic Bulletin of National Mining University*, 4, 65-71 [in Ukrainian].
8. Pirozhkov S.I. (1996). Konzepziya ryzyku ta ekologichna bezpeka [Concept of risk and environmental safety]. *Dovkillya ta zdorovya – Environment and health*, 1, 12-15 [in Ukrainian].

9. Ekonomicheskii potentsial administrativnykh i proizvodstvennykh system [Economic potential of administrative and production systems]. (2006). [Pod red. O.F. Balazkogo – red. O.F. Balatskiy]. Sumy: PTH 'Universitetskaya kniga' [in Russian].
10. Alao A. (2007). Natural resources and conflict in Africa: the tragedy of endowment. NY: University of rochester press.
11. Anghelache C. (2011). Management of the environmental risk – an economic-social priority. Theoretical and applied economics, vol. XVIII, #3(556), 117-130.
12. Collier P. (2006). Post-conflict risks. CSAE Working paper series from Centre for the Study of African Economies, University of Oxford. #12, 19.
13. Fjeld R.A., Eisenberg N.A., Compton K.L. (2007). Quantitative environmental risk analysis for human health. – Hoboken: Wiley, 390.
14. Hiriart Y., Martimort D., Pouyet J. (2008). The regulator and the judge: the optimal mix in the control of environmental risk. Revue d'économie politique. Vol. 118, issue 6, 941-967.
15. Sinclair-Desgagné B., Gozlan E. (2003). A theory of environmental risk disclosure. Journal of environmental economics and management. Vol. 45, issue 2 (1), 377-393.
16. Ricci P.F. (2006). Environmental and health risk assessment and management: principles and practices. Dordrecht: Springer, 478.
17. Shogren J.F. (1990). A primer on environmental risk analysis. Staff Report 90-SR 46. Center for Agricultural and Rural Development of Iowa State University. Dec, 40.
18. Valuation of ecological resources: integration of ecology and socioeconomics in environmental decision making (2008). / R.G. Stahl, Jr., L.A. Kapustka, W.R. Munns, Jr., R.J. Bruins. NY: CRC Press, 231.
19. World in transition: strategies for managing global environmental risks : annual report. German advisory council on global change. (2000). Berlin: Springer, 359.

КАТЕГОРІЇ РИЗИКУ ТА ЗБИТКІВ В КОНТЕКСТІ ТЕОРЕТИЧНОГО АНАЛІЗУ ІННОВАЦІЙНОЇ ЕКОЛОГО-ЕКОНОМІЧНОЇ ДІЯЛЬНОСТІ

Прокопенко Ольга Володимирівна

*доктор економічних наук, професор, декан факультету економіки та менеджменту,
завідувач кафедри економічної теорії,
Сумський державний університет, Україна;*

Професор Вищої школи економіко-гуманітарної, м. Бельсько-Бяла, Польща

Петрушенко Микола Миколайович

*доктор економічних наук, доцент, доцент кафедри управління,
Сумський державний університет, Україна*

Шевченко Ганна Миколаївна

*кандидат економічних наук, доцент, доцент кафедри управління,
Сумський державний університет, Україна*

У статті обґрунтовано необхідність актуалізації проблеми енвайронментальних ризиків у ході провадження інноваційної еколого-економічної діяльності. Детально розкрито сутність і зміст категорії збитків, які виникають унаслідок підвищеного ризику виникнення конфліктних екологічно релевантних ситуацій і, відповідно, неефективного ризик-менеджменту в контексті проведення теоретичного аналізу інноваційної еколого-економічної діяльності.

Ключові слова: *енвайронментальний ризик, еколого-економічні збитки, природно-ресурсний конфлікт, інноваційна еколого-економічна діяльність.*

**КАТЕГОРИИ РИСКА И УЩЕРБА В КОНТЕКСТЕ ТЕОРЕТИЧЕСКОГО АНАЛИЗА
ИННОВАЦИОННОЙ ЭКОЛОГО-ЭКОНОМИЧЕСКОЙ ДЕЯТЕЛЬНОСТИ**

Прокопенко Ольга Владимировна

*доктор экономических наук, профессор, декан факультета экономики и менеджмента,
заведующая кафедрой экономической теории,*

Сумский государственный университет, Украина;

Профессор Высшей школы экономико-гуманитарной, г. Бельско-Бяла, Польша

Петрушенко Николай Николаевич

доктор экономических наук, доцент, доцент кафедры управления,

Сумский государственный университет, Украина

Шевченко Анна Николаевна

кандидат экономических наук, доцент, доцент кафедры управления,

Сумский государственный университет, Украина

В статье обоснована необходимость актуализации проблемы энвайронментальных рисков в ходе осуществления инновационной эколого-экономической деятельности. Детально раскрыта сущность и содержание категории ущерба, который возникает вследствие повышенного риска возникновения конфликтных экологически релевантных ситуаций и, соответственно, неэффективного риск-менеджмента в контексте проведения теоретического анализа инновационной эколого-экономической деятельности.

Ключевые слова: *энвайронментальный риск, эколого-экономический ущерб, природно-ресурсный конфликт, инновационная эколого-экономическая деятельность.*