

International Legal Regulation of Environment Impact Assessment: Problems and Prospects

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Abstract—In this paper, the authors indicated the definition of environment risk, and analyzed the factors that increase environmental risk in the modern world. The problem of preserving the environment is acute for the whole international community. In addition, the authors analyzed the content of the concept of environmental impact assessment and its importance for maintaining environmental balance in the world. The authors described the forms of cooperation between countries in conducting an environmental impact assessment, and showed the influence of basic principles of international law on the norms governing the international environmental impact assessment procedure. The problems and prospects of normative regulation from the standpoint of the principles and norms of international law on environmental impact assessment are indicated.

Keywords—environmental assessment; ecological regulation; international environmental law; ecological assessment

I. INTRODUCTION

The problem of preserving the environment is acute for all countries of the world. It is estimated that about 50% of all pollution is the result of industrial activity [1]. One of the biggest environmental problems is air pollution caused by smoke and emissions from burning fuel. For example, the United States EPA (Environmental Protection Agency) of the United States is tracking more than 80 different toxins that can be detected from industrial pollution, from asbestos and dioxin to lead and chromium. In many countries of the world, there are sanctions for environmental offenses and crimes [2]. However, sanctions are not always effective and proportionate to the offense. In addition, the majority of legal means are aimed at identifying the already committed offenses and eliminating negative consequences, rather than at preventing offenses and determining the environmental risk of forthcoming actions of the subject. The harm caused to nature is often difficult to measure with money, and it can take decades to restore the original state. Environmental risk is now recognized as one of the tools for assessing the state of the environment, including in the framework of environmental regulation [3]. Therefore, a unique legal tool was created to prevent or reduce damage to the environment - environmental impact assessment. The purpose of this article is to analyze the current situation of the international legal regulation of environmental impact assessment and the further cooperation of states in its regulation.

II. THE CURRENT STATE OF INTERNATIONAL LEGAL REGULATION OF ENVIRONMENTAL IMPACT ASSESSMENT

In the framework of the principles and norms of international environmental law, there is no definition of environmental impact assessment. Each state defines this category in its own way. In the Russian Federation, according to Article 1 of the Federal Law “On Ecological Expertise” it is established that “the establishment of compliance of documents and (or) documentation justifying economic and other activities planned in connection with the implementation of the object of environmental expertise, environmental requirements established by technical regulations and legislation in environmental protection, in order to prevent the negative impact of such activities on the environment” [4]. Ecological expertise includes several types: on the one hand, they distinguish state ecological expertise, which is carried out in relation to all projects of economic or other activities that may adversely affect the state of the environment. The experts' conclusions are based on information containing an environmental impact assessment (EIA). The project customer carries out this assessment. It includes the analysis, systematization, and dissemination of information on the impact [5]. On the other hand, there is a public environmental review, that is, it is organized and conducted on the initiative of citizens and public organizations (associations), as well as on the initiative of local governments by public organizations (associations), whose main activity in accordance with their charters is environmental protection, including the organization and conduct of environmental impact assessment, and which are registered in the manner prescribed by the legislation of the Russian Federation [6]. Based on the theoretical aspects that determine the peculiarities of environmental impact assessment in the Russian Federation, a comparison can be made of the effectiveness of legal regulation in a number of countries in this area. Referring to the US experience (ranked 27th in the world in environmental cleanliness in 2018), which became the first state to submit legislative requirements for the process, which is now known as environmental impact assessment. The “National Environmental Policy Law”, adopted in 1969, provides that federal agencies must prepare a detailed analysis of any of their actions that imply a significant impact on the quality of the environment (namely, the “environmental assessment”

[EA] and “Conclusion for impact on the environment” [EIS]. The environmental impact conclusion should list the environmental consequences of the proposed actions, negative environmental consequences that cannot be avoided if the intended action is made, alternatives to this action, and any irreplaceable resource costs involved in the action. In order to find out whether it is necessary to prepare an “Opinion on the impact on the environment”, an initial “environmental assessment is often carried out.

Interesting from the point of view of the approach to the structure and sectoral value, the experience of Germany, which ranks 13th in terms of environmental cleanliness in 2018 [7]:

In Germany, assessing the technogenic impact on the environment, guided by three main principles

- prevent damage to nature, and do not eliminate the consequences;
- take into account the interests of both humans and animals, and plants when approving projects;

- describe damage to nature by eight factors.

These factors include effects on the soil; water; air and climate; landscape; cultural objects and other material values; in particular, it takes into account the life, health, and comfort of people; animals; plants; and the interaction of these factors. As a result of this assessment, the necessary measures to protect the environment are identified in advance [8].

Russian legislation in the field of environmental impact assessment of environmental impact is carried out according to general law for all industries, because of which additional work has to be performed. That is, for example, for an enterprise with a low environmental hazard, an assessment should be carried out in the same amount as for an enterprise with a high environmental hazard, which does not contribute to saving money and resources.

Comparing the countries under consideration, the differences in the environmental review procedure can be presented in two stages. Moreover, in Russia, one of these stages does not exist at all. (See "Table I")

TABLE I. STAGES OF THE ENVIRONMENTAL ASSESSMENT PROCEDURE

	USA	Russian Federation	Germany
Strategic stage	“Conclusion for impact on the environment”	No analogue	Strategic Environmental Assessment (SEA) (EU 2001)
Project stage	Environment Assessment [EA] and “Environment Impact Statement” [EIS] based on “National Environmental Policy Assessment” (NEPA, USA)	Ecological Assessment (Federal Law “Concerning Ecological Examinations” dated 1995), common to all economic sector. Environment impact analysis (Order of the State Committee on Ecology of Russia dated 05/06/200 No. 372)	Environment Impact Statement (EU 1997)

Thus, environmental impact assessment in Russia and EIA are means of control at the project level prior to its approval and implementation, which corresponds to the design stage of the environmental impact assessment procedure in Germany and the USA. The strategic stage is absent, although the institutes of “environmental impact assessment” and EIA are close, they also have a significant difference. EIA allows you to ensure that environmental requirements are taken into account when planning and designing new economic activities and form the basis for preparing environmentally important business decisions; in turn, environmental expertise creates the legal prerequisites for their adoption. The environmental review is a logical continuation of the environmental impact assessment of the planned economic activity and ensuring that environmental requirements are taken into account in its design and planning. But at the same time, the legal significance of environmental expertise is wider. The task of the state environmental review is to ensure that the EIA process provides for measures to protect the environment that are adequate to the requirements of the legislation.

After analyzing the approach to the definition of environmental impact assessment in the Russian Federation

and comparing the approaches to the environmental impact assessment procedure in a number of countries, it should be noted that they differ significantly. Therefore, to fully understand the essence of this procedure, it is necessary to proceed to the consideration of environmental impact assessment from the position of international law, in which there are a number of principles and international treaties that have a direct impact on the implementation of environmental impact assessment.

First of all, this is the principle “The environment is the common concern of mankind”. The meaning of this principle is that the international community must and must protect the environment at all levels [9].

The principle of preventing harm is, according to which all states should evaluate substances, technologies, products and categories of activity that affect or can significantly affect the environment [10]. The development of modern energy production on organic fuel goes towards improving environmental performance by increasing the efficiency of energy generation processes, improving the technology of cleaning combustion products and reducing greenhouse gas emissions, including carbon dioxide [11][12].

The principle of pollution prevention dictates the need for individual or collective measures to prevent, reduce and control pollution by any harmful substances of the environment. The main means of implementing these principles is environmental assessment. Directly related to this is a risk assessment of emergency situations of technogenic and natural character [13].

The essence of the principle of “access to information relating to the environment” is that every state must guarantee the right to access to information, to public participation in the decision-making process and to access to justice in matters relating to the environment. This principle is manifested in public environmental impact assessment [14].

In the field of environmental protection, there is a sufficiently large range of international acts, the provisions of which should be taken into account when conducting environmental assessments. Among them are World Charter for Nature (1982), South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga) (1985), Vienna Convention for the Protection of the Ozone Layer (Vienna, 1985), Directive 85/337 / EEC of June 27, 1985, concerning the environmental impact assessment of certain public and private projects, European Charter on Environment and Health (Frankfurt, 1989) and others.

It should be noted the most important document of an international character - the International Convention on Environmental Impact Assessment in a Transboundary Context. This act enshrines the duties of officials and public rights in the implementation of activities aimed at assessing the adverse effects on the habitat and population of another country.

The Convention contains List of types of environmentally hazardous activities and relevant objects of state environmental impact assessment, as well as general criteria that help in identifying environmentally significant activities not included in the list, requirements for environmental impact assessment documentation submitted for state environmental impact assessment, procedure requests for proposed activities, recommendations for post-project analysis and arbitration, as well as elements of bilateral and multilateral cooperation of states in the field of environmental impact assessment and environmental impact assessment.

EEU Directive No. 337/85 “On the Environmental Impact Assessment of Certain Public and Private Projects” designates the basic principles of environmental assessment, establishes the obligation to inform the public, and provides for the active participation of the public in environmental assessment [15].

The most actively develop contractual relations on a bilateral and regional basis: we single out several international treaties that are valid in the territory of the CIS countries and Russia:

- Agreement on the interaction of the CIS countries in the field of ecology and environmental protection, 1999.

- Agreement of the CIS countries on cooperation in the field of environmental monitoring, 1999.

After analyzing a number of international principles and international acts in the field of international legal regulation of environmental impact assessment, we can note the absence of a universal international agreement on cooperation in the field of environmental impact assessment and unified forms of cooperation between states.

III. FORMS OF INTERNATIONAL COOPERATION IN THE FIELD OF ENVIRONMENTAL IMPACT ASSESSMENT: PRACTICAL EXPERIENCE

Based on the above analysis of the theoretical and comparative base of the institute of environmental impact assessment, it should be noted a number of examples of environmental impact assessment with the participation of the Russian Federation:

A. *International Environmental Impact Assessment of the Project “New Coast” (Experience of Russian-Finnish Cooperation)*

Issues of ensuring the environmental safety of urban planning solutions and building technologies are priorities for the project. According to the project “Engineering preparation of land plots”, the conclusions of the six most authoritative independent organizations were received. This is a conclusion on the materials of the urban planning project “New Beach”, prepared in February 2011. Center for Ecological Expertise and Audit of the Russian National Committee for the Promotion of the United Nations Environment Program (UNEP); conclusion on the results of a comprehensive analysis of the environmental safety of the project, completed in February 2011 St. Petersburg Scientific Center, United Scientific and Public Council of the St. Petersburg Scientific and Practical Center “Ecology and Natural Resources” of the Russian Academy of Sciences; the conclusion of the public environmental impact assessment of the project, the All-Russian Society for the Conservation of Nature in November 2011; the conclusion of the expert commission of public environmental impact assessment on the materials of the project documentation of the International Academy of Ecology, Human and Nature Safety (IAEHNS), issued in November, 2011. Based on the requirements of the legislation of the Russian Federation, a state environmental impact assessment of the project was carried out by the Department of the Federal Service for the Supervision of Natural Resources in the North-West Federal District (Department of Federal Service for Supervision of Natural Resource Usage for Northwestern Federal District). According to the results of the work of the expert commission of the state environmental review issued Conclusion No. 45 dated 10.07.2012. The results of environmental audits and environmental assessments are positive.

Within the framework of international cooperation in the field of ecology, North-West Invest LLC held consultations with representatives of the Helsinki Commission (HELCOM) in Russia in order to ensure that the design solutions comply

with the requirements of not only Russian legislation but also with the norms of the European Union.

One of the world's leading companies, POYRY FINLAND OY, conducted an international environmental assessment of the project "Engineering preparation of land located north of the village of Lisiy Nos, by reclaiming and stabilizing the territory. The organization of relief vertical planning" (better known as "New Coast"). According to the results of the international environmental impact assessment, an opinion was obtained on the compliance of the environmental impact of the proposed reclamation works with EU requirements, the Espoo Convention, HELCOM recommendations and principles.

B. International Ecological Expertise at Leningrad NPP

Environmental specialists from five countries visited the construction site of new power units of the Leningrad Nuclear Power Plant.

The visit took place within the framework of the international environmental assessment of materials justifying the license to carry out activities in the field of the use of atomic energy. The commission included representatives of several environmental non-government organizations. For the first time, foreign specialists joined the Russian specialists. The commission was attended by experts from Finland, Hungary, Armenia, Kazakhstan. They noted that the assessment of the impact on all components of the environment is exhaustive, and the design of WWER-1200 reactor plant fully complies with the requirements of nuclear and radiation safety.

After analyzing examples of cooperation between the Russian Federation and foreign countries in environmental impact assessment, it is possible to determine several of its forms:

- conducting a standard audit of the project in countries whose interests affect its implementation. At the same time, public organizations are also required to carry out an examination (although at the national level more often they produce only state expertise) [16];
- the organization of a commission consisting of experts who represent different countries [17].

IV. CONCLUSION

In conclusion, I would like to note that environmental impact assessment is one of the main means of control in the environmental law of most states and is an assessment for compliance with environmental regulations of acts, decisions, etc. at the design stage [18].

Currently, cooperation at the international level in this field is actively developing, primarily due to regional agreements between countries. Ecological expertise began to play a large role in approving joint global industrial, construction projects of states or a state project in a region that could cause great harm to the environment without proper control at the project planning stage, for example, construction of a nuclear power plant.

However, despite the active development of this institution, at the international level, there is a lack of universal norms in this area, which creates difficulties in the implementation of cooperation between countries in environmental assessment [19]. It seems necessary to create an international organization with authority in the field of environmental impact assessment, which will allow: to achieve the unification of the norms that regulate the production of environmental impact assessment in all states (and for this to delegate to the organization the relevant legislative powers); to speed up the implementation of the audit, since it will be enough to apply to the same organization, rather than conduct the same procedure in different countries or collect an expert commission.

REFERENCES

- [1] V.Yu. Ivlev and M.L. Ivleva, "Philosophical Foundations of the Concept of Green Economy", Proceedings of the International Conference on Contemporary Education, Social Sciences and Ecological Studies (CESSSES 2018). Series "Advances in Social Science, Education and Humanities Research". vol. 283, pp. 869-873, 2018. DOI: 10.2991/cessses-18.2018.192
- [2] B.N. Zemtsov and T.R. Suzdaleva, "Ecological Law of Russia: Milestones of Formation", Proceedings of the International Conference on Contemporary Education, Social Sciences and Ecological Studies (CESSSES 2018). Series "Advances in Social Science, Education and Humanities Research", vol. 283, pp. 329-332, 2018. DOI: 10.2991/cessses-18.2018.74
- [3] Lavrentyeva G.V., Mirzeabasov O.A., Synzynys B.I., Geshel I.V. Radiation environmental risk for terrestrial ecosystems in the zone of influence of a radioactive waste repository. Radiation and risk. 2018. Vol 27. No. 4, pp.65-71.
- [4] Federal Law "On Ecological Expertise" dated 11/23/1995 No. 174-FZ. Access mode: www.consultant.ru/document/cons_doc_LAW_8515/ (access date 10.06.2019).
- [5] State ecological expertise. Access mode: <https://fehrplay.com/zakon/111753-gosudarstvennaya-ekologicheskaya-ekspertiza.html> (access date 14.06.2019).
- [6] Federal Law "On Ecological Expertise" dated 11/23/1995 No. 174-FZ. Access mode: www.consultant.ru/document/cons_doc_LAW_8515/ (access date 10.06.2019).
- [7] Rating of countries of the world in terms of environmental efficiency in 2018. Access mode: <https://nonews.co/directory/lists/countries/ecology> (access date: 16.06.2019).
- [8] N.N. Gubanov and N.I. Gubanov, "Mental Responses to Risks in Modern Society", Proceedings of the International Conference on Contemporary Education, Social Sciences and Ecological Studies (CESSSES 2018). Series "Advances in Social Science, Education and Humanities Research", vol. 283, pp. 1003-1007, 2018. DOI: 10.2991/cessses-18.2018.220
- [9] Dudchenko A. A. Problems of criminal responsibility for environmental crimes // All-Russian Student Conference "Student Scientific Spring" dedicated to the 165th anniversary of the birth of V.G. Shukhov": a collection of abstracts. (Moscow, April 2-30. 2018). - Moscow, 2018. - p.180-181.
- [10] Shvidentko A.V., Schepachenko D.G., Climatic changes and forest fires in Russia // Forest science. 2013. № 5, p. 50-61.
- [11] Lozovetsky V. V., Lebedev V. V., Cherkin V. M., Ivanchuk M. S. Reducing the heat load on the environment by using heat pumps in a wastewater treatment system. Engineering magazine. 2018. Volume 91. No. 2, p. 504-512 /

- [12] Ksenofontov B. S., Butorova I. A., Kozodaev A. S., Afonin A. V., Taranov R. A. Toxicity problems of ash and slag waste. Ecology and industry of Russia. 2017. Vol 21. No. 2, p. 4-9.
- [13] Alexandrov A. A., Larionov V. I., Sushchev S. P. The Uniform Methodology for Analyzing the Risk of Emergencies of Technogenic and Natural Nature. Bulletin MGTU them. N. E. Bauman. Natural Sciences. 2014. №1 (58), p. 113-132.
- [14] N.N. Gubanov and N.I. Gubanov, "Mental Bases of Social Solidarity", Proceedings of the International Conference on Contemporary Education, Social Sciences and Ecological Studies (CESSES 2018). Series "Advances in Social Science, Education and Humanities Research", vol. 283, pp. 998-1002, 2018. DOI: 10.2991/cesses-18.2018.219
- [15] M.B. Oseledchik, V.Yu. Ivlev, M.L. Ivleva, "Knowledge as a non-equilibrium dynamic system", Proceedings of the 2nd International Conference on Contemporary Education, Social Sciences and Humanities (ICCESSH2017). Series "Advances in Social Science, Education and Humanities Research", vol. 124, pp. 1-5, 2017. DOI: 10.2991/iccessh-17.2017.1
- [16] The international environmental impact assessment of the project "New Coast" has been completed. Access mode: www.ecogazeta.ru/archives/87 (access date: 15.06.2019).
- [17] International public environmental assessment confirmed the safety of power units under construction at the Leningrad NPP. Access mode: https://polit.ru/article/2016/05/11/laes_rel/ (access date: 15.06.2019).
- [18] M.B. Oseledchik, M.L. Ivleva, V.Yu. Ivlev, "A new paradigm for analyzing knowledge transfer processes", Proceedings of 4th International Conference on Education, Language, Art and Intercultural Communication (ICELAIC 2017). Series "Advances in Social Science, Education and Humanities Research", vol. 142, pp. 766-770, 2017. DOI: 10.2991/icelaic-17.2017.177
- [19] N.N. Gubanov, N.I. Gubanov and L.O. Rokotyanskaya, "Prospects for the Development of a Universal Theory of Truth", Proceedings of the International Conference on Contemporary Education, Social Sciences and Ecological Studies (CESSES 2018). Series "Advances in Social Science, Education and Humanities Research", vol. 283, pp. 801-805, 2018. DOI: 10.2991/aceses-18.2018.177