

MECHANISM OF LEGAL REGULATION OF ENVIRONMENTAL RISKS FOR THE PRESERVATION OF BIOLOGICAL DIVERSITY IN CONDITIONS OF SUSTAINABLE DEVELOPMENT

Hanna V. ANISIMOVA¹, Volodymyr V. SHEKHOVTSOV¹, Olha V. DONETS¹

¹Department of Environmental Law, Yaroslav Mudryi National Law University, Kharkiv, Ukraine

Abstract: *The relevance of this study is conditioned upon modern realities, when certain changes occur in the ecological system that can destructively affect biological diversity, as well as the safety and continued existence of humanity in general. Technological progress, as well as the sustainable development of all other areas of society's life at the present stage, have an opposite side that destroys ecology—they lead to an increase in the burden on the ecological situation, which in turn is fraught with environmental risks and a reduction in biological diversity. In this regard, issues of legal regulation of environmental risks for the preservation of biological diversity in conditions of sustainable development are of particular importance. The purpose of the paper is to systematise and disclose international legal instruments aimed at managing environmental risks and preserving biological diversity. In the course of this research, such methods as the identification of links between the general and the particular, the legal method of interpreting texts of various regulatory legal texts that directly relate to the subject of this study were applied. Conclusions are drawn that without coordinated interaction of all states-actors at the local, regional, national, and global levels, it is not possible to successfully implement the goals and objectives of the policy of environmental risk management, sustainable use, and conservation of biological diversity. The materials of this paper are of practical importance for specialists in the field of law whose areas of activity are environmental protection, the study of mechanisms for preventing environmental risks for the preservation of biological diversity in conditions of sustainable development.*

Keywords: biological diversity, environmental management law, ecosystem, sustainable development, reproduction (renewal) of natural resources and complexes.

Over billions of years, in the course of the evolutionary path, the biosphere has formed a unique ecological system of the planet Earth in its diversity. According to the British scientist J. Lovelock (2007), it is this diversity in its inextricable connection with abiotic structures that allows the planet to maintain the dynamic equilibrium, as a result of which the necessary conditions for the existence of life on Earth are created. Like all living organisms, humanity is also an integral part of the biosphere and its life depends entirely on the state of ecology. It is a well-known fact that without the physiological activity of animals, plants, and microorganisms, it is not possible to provide humanity with oxygen, food, and drinking water¹. Notably, in modern conditions, when there is widespread development of industrial production, the negative impact on the environment, and, respectively, on biological diversity, is gaining large-scale momentum. According to the data of

¹ S. Bandopadhyay, S. Pandey, "The rights of nature: Taking an ecocentric approach for mother earth", in *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 2020, vol. 12, no. 4, article number 08.

the World Wide Fund for Nature², the biological diversity in the world, which is reflected in the living planet index, decreased by a total of 60% between the 1970s and 2014. Based on these data, it seems possible to assume that about 25-100 thousand living organisms are disappearing every year in the world.

It is important that in addition to rare and sensitive to minor ecological changes, species, plants, and animals of altered cultural landscapes are also threatened with extinction³. The problem of environmental protection and minimisation of environmental risks is becoming urgent. As noted by A.V. Kichigin⁴, public relations in the field of environmental protection and prevention of environmental risks have a complex distinctive feature – a fairly high degree of uncertainty, which is generated as a result of various subjective and objective factors. As noted in the study of A. Stepanov, Yu. Kovalev, M. Ilyushkina, A. Burnasov⁵, scientists and legal experts in the field of environmental protection unanimously agree that it is preferable to prevent environmental risks in advance than to eliminate them later since the process of restoring the environment takes decades, and in some cases there is no guarantee of its complete restoration.

World communities are making attempts to create international legal instruments for environmental protection and environmental risk management to preserve biological diversity⁶. The central place among them is occupied by the European Green Deal, which is a roadmap for the transformation of Europe into the world's first climate-neutral continent until 2050 and is aimed at stimulating economic development, improving people's health and quality of life. The key aspects of the European Green Course are clean energy, climate, construction and renovation, sustainability of eco-systems, reduction of environmental pollution, biodiversity, sustainable agricultural policy⁷. Against the backdrop of the economic crisis and the coronavirus, it is the European

² World Wide Fund for Nature, 2021. Available at <https://www.worldwildlife.org/>.

³ N.K. Komilova, L.K. Karshibaeva, U.T. Egamberdiyeva, Z.L. Abduvalieva, S.Q. Allanov, “Study of nozogeographic situation and its study on the basis of sociological survey”, in *Indian Journal of Forensic Medicine and Toxicology*, 2020, vol. 14, no. 3, p. 2093-2098.

⁴ N.V. Kichigin, “Minimization and prevention of environmental-legal risks”, in *Journal of Russian Law*, 2018, vol. 8, p. 144-154.

⁵ A. Stepanov, Yu. Kovalev, M. Ilyushkina, A. Burnasov, *International protection policy of world biological diversity as the factor of sustainable development of the territorial systems*, 2020. Available at <https://elar.urfu.ru/bitstream/10995/90277/1/10.1051-e3sconf-202015902007.pdf>.

⁶ N.V. Trusova, N.S. Tanklevska, T.A. Cherniavska, O.S. Prystemskyi, D.V. Yeremenko, V.S. Demko, “Financial provision of investment activities of the subjects of the world industry of tourist services”, in *Journal of Environmental Management and Tourism*, 2020, vol. 11, no. 4, p. 890-902; N.V. Trusova, O.S. Prystemskyi, O.V. Hryvkivska, A.Zh. Sakun, Y.Y. Kyrlov, “Modeling of system factors of financial security of agricultural enterprises of Ukraine”, in *Regional Science Inquiry*, 2021, vol. 13, no. 1, p. 169-182.

⁷ F. Boccia, T. Pientko, G.P. Cesaretti, D. Covino, “Environmental management in a developing global business context: Sustainable challenges and opportunities”, in *Rivista Di Studi Sulla Sostenibilita*, 2020, vol. 2, p. 179-193.

Green Course that is the unifying element that will increase the sustainability of the world. EGC concerns not only climate policy but it is more about the green concept of economic modernisation and economic growth to ensure human life in harmony with the planet and its resources⁸. Notably, Ukraine has recently declared support for the European Green Course and committed itself to achieving carbon neutrality in 2060, as well as reducing the balance of emissions to zero by 2050. However, having embarked on the path of decarbonisation and moving to the EU, Ukraine will need to adopt stricter environmental regulations and standards introduced by the European Green Course. Therewith, the country will need to restructure the coal industry, which is subsidised, unprofitable, and harmful to the environment. In addition, the issue of reproduction (renewal) of natural resources and complexes⁹ is of great importance in modern realities.

Thus, at present, in the conditions of sustainable development, the issue of preserving the environmentally safe state of the environment and managing environmental risks for the preservation of biological diversity is closely intertwined with the issue of preserving human civilisation¹⁰. One of the main difficulties in this case is the fact that environmental problems have great inertia of their development and in some cases can lead to irreparable consequences¹¹. In this regard, the countries of the world community are taking steps to strategically predict the situation in the environmental sphere and sign international legal documents aimed at constructive management of environmental risks and preservation of the necessary level of biological diversity¹². The theoretical and practical significance of this paper lies in the possibility of its use by legal specialists whose field of activity is the legal

⁸ L.V. Korolchuk, "Decoupling of economic growth from environmental damage: A theoretical aspect", in *Scientific Bulletin of Mukachevo State University. Series "Economics"*, 2021, vol. 8, no. 1, p. 37-45; A. Bobkova, N. Andryeyeva, L. Verbivska, V. Kozlovitseva, V. Velychko, "Environmental Responsibility in the Development of Green Entrepreneurship", in *Estudios de Economia Aplicada*, 2020, vol. 38, no. 4, p. 1-9.

⁹ Communication from the commission to the European parliament, the council, the European economic and social committee and the committee of the regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives, 2020. Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>

¹⁰ N.K. Komilova, A.K. Ravshanov, L.K. Karshibaeva, K.Q. Ishankulova, Z.N. Madrahimova, "Some theoretical and practical issues of medical geographical research", in *Indian Journal of Forensic Medicine and Toxicology*, 2020, vol. 14, no. 3, p. 2086-2092; O.M. Batyhina, B.V. Derevyanko, V.V. Kadala, "Recreational lands as a component of health care: some aspects of legal regulation", in *Wiadomosci Lekarskie (Warsaw, Poland: 1960)*, 2020, vol. 73, no. 12(2), p. 2860-2864.

¹¹ H.G. Harry, "Legal risks in European environmental law and policy", in E. Mišćenic, A. Raccah (Eds.), *Legal Risks in EU Law* (pp. 225-238). Springer, Cham, 2016.

¹² D.A. Tursynkulova, A.A. Urisbayeva, A.M. Karatayeva, G.A. Khudaiberdina, Y.B. Akhmetov, "Modern features of law institutions of the european union", in *Rivista Di Studi Sulla Sostenibilita*, 2020, no. 1, p. 441-458.

protection of the environment, the study of mechanisms for preventing environmental risks for the preservation of biological diversity in conditions of sustainable development. In addition, within the framework of this study, conclusions were drawn that coordinated interaction of all states is necessary on the world stage for the successful implementation of environmental policy.

The purpose of this study is to systematise and disclose international legal instruments aimed at managing environmental risks and preserving biological diversity. To achieve this purpose, it is necessary to perform the following tasks: to analyse modern international legal mechanisms within the framework of this subject; to generalise international experience in the field of environmental protection.

Materials and methods

According to the fact that environmental problems have a complex nature that requires systematisation at the proper level of views and approaches, ways of protecting the environment and maintaining environmental safety, the authors consider it reasonable to apply general philosophical methods (for example, metaphysics, idealism, dialectics, materialism) when conducting research. In addition, the authors consider it necessary to use general scientific methods, such as analysis, synthesis, inductive and deductive methods, analogy, system approach, semiotics, synergetics, structural and functional analysis, and historical method. In the course of the study, such methods as identifying the links between the general and the private were used, and a legal method was also used to interpret the texts of various regulatory documents and acts that relate to the mechanisms of regulatory management of environmental risks for the preservation of biological diversity in conditions of sustainable development. In addition to the above, the methodological basis of this study is general and special methods of scientific cognition, namely system, legal, and logical methods of scientific analysis.

The theoretical basis of this research is the fundamental, general categories and concepts of international environmental risk management, as well as the conservation of biological diversity in conditions of sustainable development. Notably, in the process of conducting this research, the results of studies on the problems of environmental risk management and conservation of biological diversity, as well as international environmental policy were used. The foundation of research is, among other things, the study of papers and developments, regulatory documents, agreements, and conferences. The regulatory and legal framework of mechanisms for the prevention of environmental risks for the preservation of biological diversity is studied based on extensive use of methods of ecological, system, sociological, functional, comparative-legal, and formal legal analysis.

These methods occupy one of the most important positions in the methodology of scientific cognition due to the fact that when studying the subject of this paper, it is necessary to carry out a comparative characteristic of the legislation of various states in the field of environmental protection. In addition, the use of formal legal analysis helps to describe, classify, generalise, and convey the knowledge gained during the research in a clear and definite way. Paramount in this analysis is the logical, linguistic, and abstract side, which expresses the structural patterns of environmental law. Notably, this study is based on a system approach, in which the researcher uses methods of scientific generalisation, ecological and economic modelling, aggregation, forecasting, statistical and sociological analysis, as well as analysis of expert assessments within the framework of the subject under study, observations, and other well-known methods of studying global, complex environmental, and socio-economic phenomena. In the process of solving particular tasks that were set in the introduction of this study, methods of historical-logical, ecological-legal, ecological-economic, expert, as well as methods of comparative analysis, induction and deduction, dialectical and Aristotelian methods were used.

Results and discussion

Technological progress, as well as the development of various areas of life, have the opposite side that has a destructive effect on the environment – they lead to an increase in the load on the state of the ecological situation. The current rate of extinction of biological species is higher than throughout the history of the planet. According to some data, the rates of extinction range from 1 to 3 species per hour, or about 36 thousand species per year. In support of the trends set out in the Convention on Biological Diversity, an International Agreed Plan for the Study and Conservation of Biodiversity of the Planet was developed in 2010 at an international meeting of representatives of 200 countries in Japan. It is based on the UN Strategic Plan on the prevention of the extinction of biota species on the planet, which has already exceeded the rate of extinction of dinosaurs at the time. It envisages a 2-fold reduction in the rate of species extinction and an increase in the territories of protected areas to 17% on land and up to 10% – in the ocean. The protocol signed on this occasion in Nagoya also contains guidelines on the provision of financial assistance to developing countries to preserve ecosystems. According to the data of the World Wide Fund for Nature¹³, it is noted that biological diversity means not only all the organisms living on the planet in their totality but also the diversity within the same living organisms and the existing relationships between them. The existence or absence of environmental risks, as well as the appearance and disappearance of biological species directly affect

¹³ World Wide Fund for Nature, 2021. Available at <https://www.worldwildlife.org/>.

and determine the area of biological sphere's evolution. There have been periods of mass extinction of biological species and the existence of environmental risks on the planet throughout its existence. The number of animal and plant species living today is only 1% of the total number of previously existing species¹⁴.

Against the background of the above, the countries of the world community are taking steps to strategically predict the situation in the environmental sphere and sign international legal documents aimed at constructive management of environmental risks and preservation of the necessary level of biological diversity. The famous social philosopher B. Latour identifies the "ecological attractor" as the main vector of development of modern world, international, and national policies to maintain environmental safety¹⁵. And in this regard, the diplomacy of biological diversity is only one of the areas of global environmental policy. In the case of environmental risks from the standpoint of legal science, H.G. Harry proposes to distinguish two main types of risk inherent in environmental law – legal and instrumental risks as consequences of legal or factual uncertainty¹⁶. In conditions of sustainable development, the economic interests of states prevail, which in turn makes impressive changes in the process of compliance with the requirements of international environmental and legal norms and, accordingly, the requirements of international conventions and regulatory documents are not fully implemented. The reaction of the world ecological community to the negative impact on the environment is the development of new international agreements¹⁷. For example, the lever of direct influence on states through the adoption of coercive, binding decisions by international organisations, as, for example, the European Economic Community can do to protect the environment. The European Commission calls for strengthening the EU's leadership in the environmental agenda through active involvement in the development of the United Nations' Global Framework Programme in the field of biodiversity, contribute to the global transition to sustainable food systems using available tools: trade policy, neighbourhood policy and expansion, etc.

¹⁴ A. Balazsi, J. Dänhardt, S. Collins, O. Schweiger, J. Settelecde, T. Hartel, "Understanding cultural ecosystem services related to farmlands: Expert survey in Europe", in *Land Use Policy*, 2021, vol. 100, article number 104900; M. Breitenstein, D.Kh. Nguyen, Th. Walther, "Environmental hazards and risk management in the financial sector: A systematic literature review" in *Journal of Economic Surveys*, 2021, vol. 35, no. 2, p. 512-538.

¹⁵ B. Latour, *Das terrestrisch Manifest*, Suhrkamp Verlag, Berlin, 2018.

¹⁶ H.G. Harry, "Legal risks in European environmental law and policy", in E. Mišćenic, A. Raccah (Eds.), *Legal Risks in EU Law* (pp. 225-238), Springer, Cham, 2016.

¹⁷ A. Kolodii, "Legal bases of ecodiversity", in *Scientific Journal of the National Academy of Internal Affairs*, 2021, vol. 118, no. 1, p. 146-147.

Since the early 1960s, this issue has been reflected in international legal documents in the field of environmental protection. In 1992, the United Nations (UN) Conference on Environment and Development held in Rio de Janeiro, Brazil, was attended by 150 countries. Within the framework of this conference, the Convention on Biological Diversity was signed¹⁸. The document clearly states the fact that the reduction of biological diversity is nothing other than the result of certain human activities. According to the document, the main mechanism for preventing environmental risks and protecting biological diversity is the preservation of the stability of the ecological system and the naturalness of habitats of animal species, plants, and microorganisms. Convention on Biological Diversity was the first fundamental international legal document that laid the foundation for international diplomacy to counter environmental risks and preserve biological diversity¹⁹. Its governing body is the Conference of the involved parties and, as a rule, such conferences are scheduled to be held once a year. In the period from 1992 to 2019, 14 such conferences were held, at which measures were taken to implement the points of the international Convention on Biological Diversity.

Notably, in general, the very fact that the Convention on Biological Diversity was created and adopted has global historical importance since it represents one of the most universal and promising regulatory legal documents that have ever been adopted by the community of nations before, it summarises a new look at the relationship between humanity and nature²⁰. Article 1 of the Convention on Biological Diversity defines clear objectives of biological diversity policy, namely: "the conservation of biological diversity; the sustainable use of its components and the fair and equitable sharing of benefits associated with the use of genetic resources, including by providing the necessary access to genetic resources and by appropriate transfer of appropriate technologies, considering all rights to such resources and technologies, as well as by adequate financing"²¹. The three main objectives of the biological diversity policy indicated in the Convention on Biological Diversity form its threefold basis. The actual implementation of the third goal of the Convention on Biological Diversity, which implies obtaining fair and

¹⁸ Convention on Biological Diversity, 1992. Available at <https://www.cbd.int/doc/legal/cbd-en.pdf>.

¹⁹ *Ibidem*.

²⁰ A. Stepanov, Yu. Kovalev, M. Ilyushkina, A. Burnasov, *International protection policy of world biological diversity as the factor of sustainable development of the territorial systems*, 2020. Available at <https://elar.urfu.ru/bitstream/10995/90277/1/10.1051-e3sconf-202015902007.pdf>; G. Mukhanova, "The population life quality related to health as the basis from human capital formation in Kazakhstan", in *Life Science Journal*, 2014, vol. 11, no. SI 8, p. 20-28, article number 4.

²¹ Convention on Biological Diversity, 1992. Available at <https://www.cbd.int/doc/legal/cbd-en.pdf>.

equal benefits from access to the use of available genetic resources, was in practice more controversial and complex than it seemed. Together with the articles Convention on Biological Diversity, which regulate the basics of conservation, protection, and sustainable use of existing biological diversity, as well as the training of personnel necessary for these purposes, there are articles that define the conditions for access to genetic resources and the features of technological, information and financial exchange between countries.

Notably, article 15 of the Convention on Biological Diversity highlights the basic principles of managing access and sharing of genetic resources. It notes the recognition of the sovereignty of states over their own genetic resources and their right to regulate access to them. From article 23 to 42 of the Convention on Biological Diversity, innovative institutional mechanisms have been established that relate to the interaction between states, the process of conducting certain negotiations, the implementation of any legal procedures in the field of development and improvement of this international treaty on minimising environmental risks and preserving biological diversity²². The next important legal event is that the United Nations Framework Convention on Climate Change was adopted²³, which was signed by more than 180 countries of the world. The purpose of this document is to unite the efforts of the parties to prevent dangerous climate changes, manage environmental risks for the conservation of biological diversity, and achieve stabilisation of greenhouse gases in the atmosphere at a possible safe level²⁴. E.I. Mayorova²⁵ believes that due to difficulties in the process of implementing the points of the United Nations Framework Convention on Climate Change on reducing emissions, these obligations have informally become considered legally non-binding.

In this regard, the Kyoto Protocol²⁶ to the United Nations Framework Convention on Climate Change was prepared²⁷. The purpose of the document is to stabilise the level of concentration of harmful greenhouse gases in the atmosphere at a level within which dangerous anthropogenic impact on the climate system, respectively, and on the level of biological diversity, would not

²² *Ibidem*.

²³ United Nations Framework Convention on Climate Change, 1992. Available at <https://unfccc.int/resource/docs/convkp/conveng.pdf>.

²⁴ O. Tkachuk, "Biological features of the distribution of root systems of perennial legume grasses in the context of climate change", in *Scientific Horizons*, 2021, vol. 24, no. 2, p. 69-76; S. Satpathy, K.K. Dash, M. Mohapatra, "A study on the new design thinking for industrial revolution 4.0, requirements and graduate readiness", in *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 2020, vol. 12, no. 4, article number 09.

²⁵ E.I. Mayorova, "International legal conventions as an instrument for preventing environmental risks", in *Vestnik Universiteta*, 2021, vol. 6, p. 44-51.

²⁶ Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1997. Available at <https://unfccc.int/resource/docs/convkp/kpeng.pdf>.

²⁷ United Nations Framework Convention on Climate Change, 1992. Available at <https://unfccc.int/resource/docs/convkp/conveng.pdf>.

be allowed. According to this document, requirements for reducing greenhouse gas emissions were established for industrialised countries, and requirements for reducing all emissions by 5% for developing countries. Currently, the participants of this Kyoto Protocol to the United Nations Framework Convention on Climate Change are 191 states and the European Union (EU)²⁸.

The 21st UN Conference on Climate Change in December 2015 adopted the Paris Agreement – an international agreement within the Framework Convention on Climate Change to regulate measures to keep global average temperatures below 2°C, increase the ability to adapt to adverse effects of climate change, harmonisation of financial flows to solve global problems of climate change, etc. The Paris Agreement entered into force on 1 January 2021. It replaced the Kyoto Protocol, which expired in 2020. The European Parliament approved the EU Climate Law, which establishes the achievement of climate neutrality by 2050 and the intermediate goal of reducing net greenhouse gas emissions by at least 55% by 2030 compared to levels in 1990. The law must now be formally approved by EU member states and enter into force. The European Commission will also propose to reach the 2040 target no later than six months after the first global review in 2023 under the Paris Agreement.

Therewith, the German Constitutional Court has recognised the law insufficiently harsh and in need of amendment. It compelled the government to amend the law by the end of 2022. In particular, it is argued that the Federal Law on Climate Protection is partly contrary to the Basic Law of Germany and should therefore be amended. According to the court's decision, the current law does not specify how to reduce carbon dioxide emissions from 2031 to 2050.

In addition to the Convention on Biological Diversity²⁹, the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets³⁰ were developed and adopted by the involved states. The mission of this document implies the adoption of effective and immediate measures to prevent the process of loss of biological diversity to ensure the resistance of ecological systems and the regular provision of basic services by them by 2020, which in turn would guarantee the diversity of life on earth and a considerable contribution to the well-being of mankind and the eradication of poverty. Within the framework of this document, two types of conservation of biological diversity were envisaged. Firstly, it is the restoration and

²⁸ Climate Change Performance Index 2021, 2020. Available at https://ccpi.org/download/the-climate-change-performance-index-2021/?fbclid=IwAR0GGTYZgH_pR5td92F2QNnIBAAbih90n_Bs6APfj5esAkVa_icIY2A-Ik

²⁹ Convention on Biological Diversity, 1992. Available at <https://www.cbd.int/doc/legal/cbd-en.pdf>.

³⁰ The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, 2010. Available at <https://www.cbd.int/kb/record/decision/12268>.

maintenance of a viable population in the natural environment, which implies the creation of specially protected natural territories and reserves by states. Secondly, it is the conservation and maintenance of the resources of the gene pool of organisms outside their natural habitats, the creation of so-called artificial conditions³¹.

In addition, at the initiative of Japan, the period from 2011 to 2020 was declared the Decade of Biological Diversity by the UN. As noted by E.I. Mayorova³², in modern society, scientific opportunities and developed new technologies are making their adjustments in the field of biology. The popularisation and development of the industry for the production of genetically modified organisms by the end of the 1990s already required the immediate adoption of particular control measures in this area³³. The Cartagena Protocol on Biosafety to the Convention on Biological Diversity was adopted³⁴. The purpose of the document is to assist the process of ensuring an appropriate level of protection in the field of safe transfer, use, and processing of living modified organisms, which are the result of the use of modern biotechnologies and adversely affect the process of conservation and sustainable use of biological diversity, considering, among other things, harm to the health of all mankind. This document is an international treaty that regulates the transportation of living modified organisms resulting from the use of modern biological technologies from one state to another. In addition, the need to adopt such a document was determined by some potential risks, such as the possible displacement of common species by the most stable genetically modified ones, as well as the possibility of the emergence of living organisms with some undesirable or negative characteristics and their impact on natural populations and ecological systems.

The next regulatory document is the Stockholm Convention on Persistent Organic Pollutants³⁵. This document is aimed at solving global environmental problems caused by the widespread use of persistent organic harmful substances, as well as at preventing further harm and damage to the health and life of both humans and animals. To date, the subject of regulation of this document are 12 especially toxic chemical compounds, which are called "dirty dozen". To protect humanity and existing biological diversity from

³¹ EU environmental policy, 2021. Available at <https://wecoop.eu/ru/regional-knowledge-centre/eu-policies-regulations/>

³² E.I. Mayorova, "International legal conventions as an instrument for preventing environmental risks", in *Vestnik Universiteta*, 2021, vol. 6, p. 44-51.

³³ I. Kravchenko, "Problems of legal regulation measures of control over biodiversity", in *Law Journal of the National Academy of Internal Affairs*, 2021, vol. 11, no. 2, p. 45-55.

³⁴ Cartagena Protocol on Biosafety to the Convention on Biological Diversity, 2000. Available at <https://www.cbd.int/doc/legal/cartagena-protocol-en.pdf>.

³⁵ Stockholm Convention on Persistent Organic Pollutants, 2001. Available at https://www.env.go.jp/chemi/pops/treaty/treaty_en2009.pdf.

mercury poisoning, the United Nations conference adopted the Minamata Convention on Mercury, which is dedicated to ensuring safety for human health and the environment from the harmful effects of mercury compounds³⁶. This document was signed by 128 countries. According to the document, the use of mercury should be regulated and the production of a number of mercury-containing devices should be reduced. In addition, it provides for the restriction of a number of industrial processes and industries, including mining and cement production. Notably, starting in 2020, Minamata Convention on Mercury prohibits the production, import, and export of a number of different types of mercury-containing devices, including electric batteries, electric switches, some types of compact fluorescent lamps, etc.

It is impossible not to mention Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters³⁷ in the framework of this study. This document is recognised today as one of the most important international legal documents in the field of environmental democracy. The purpose of this document is to support the protection of human rights to exist in a favourable environment to preserve their well-being and a high level of health, as well as access to information, the right of citizens' involvement in the process of making important decisions and access to justice in environmental matters. Convention on Environmental Impact Assessment in a Transborder Context³⁸ is an international agreement that was initiated by the United Nations Economic Commission for Europe and signed at Espoo in Finland. This document is an important tool for preventing any risks of transboundary air pollution with all kinds of harmful substances that contribute to further negative climate change, deterioration of human health, loss of biological diversity, etc.

The Convention on Environmental Impact Assessment in a Transborder Context³⁹, as well as in the case of Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters⁴⁰, implies broad, active involvement of citizens of

³⁶ Minamata Convention on Mercury, 2013. Available at <https://digitallibrary.un.org/record/758711>.

³⁷ Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 1998. Available at <https://unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf>.

³⁸ Convention on Environmental Impact Assessment in a Transboundary Context, 1991. Available at http://library.arcticportal.org/1870/1/ECE.MP.EIA.21_Convention_on_Environmental_Impact_Assessment.pdf.

³⁹ *Ibidem*.

⁴⁰ Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 1998. Available at <https://unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf>

certain countries in making important decisions in the field of environmental protection. As for the European Union, the environmental safety system is established by Directive No. 2012/18/EU of the European Parliament and of the Council "On the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive No. 96/82/EU" (2012). This document defines some key requirements for participating countries. Operators who work with harmful substances in large volumes are obliged to periodically inform the population at risk and ensure the dissemination of reports on all safety measures, safety management systems, as well as internal emergency plans. The document also establishes the fact that the greater the amount of harmful substances used in the production process, the stricter the rules should be and should be subject to stricter control. Directive No. 2012/18/EU of the European Parliament and of the Council "On the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive No. 96/82/EU"⁴¹ imposes obligations on participating states to prohibit the use of any facility, storage, or installation in which the measures taken by the operator to prevent and reduce large-scale accidents have serious drawbacks. To achieve this purpose, the participating states, in particular, undertake to consider the relevant destructive experience in taking necessary and appropriate measures, which are indicated in the control and inspection reports.

It is also prohibited to use any object, storage and installation, its or any part thereof, in cases where the operator has not provided any notifications, reports, or any other information required under Directive No. 2012/18/EU of the European Parliament and of the Council "On the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive No. 96/82/EU"⁴², for a certain period of time. Notably, over the past decades in international practice there has been an active search for new ways to minimise the negative impact of society on the environment and alternative ways to increase the degree of environmental safety. Thus, the emphasis is shifted from studying the situation, forecasting and eliminating destructive consequences as a result of environmental pollution, to carrying out particular organisational and practical actions to reduce and further prevent all possible environmental risks and disasters to preserve biological diversity. Based on the existing unsuccessful experience, the world community has also come to realise that the procedures for updating environmental requirements for especially dangerous objects are slow and

⁴¹ Directive No. 2012/18/EU of the European Parliament and of the Council "On the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive No. 96/82/EC", 2012. Available at <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:197:0001:0037:EN:PDF>

⁴² *Ibidem*.

inefficient. In addition, there has been a shift in the priorities of the world community in the policy of preserving environmental safety towards early warning of environmental risks and accidents by nature users themselves⁴³. Notably, in this situation, nature users are given the right to take on additional increased environmental safety standards themselves in the form of particular rules within corporations.

As noted by E.V. Novikova⁴⁴, major accident prevention plans (MAPP) can serve as examples in the countries of the European Union and the environmental risk management system (EMS) in the United States of America. As noted earlier, environmental risk management is carried out by nature users themselves. They have the right at the local level to independently adopt additional increased requirements and standards for maintaining environmental safety in the form of certain internal corporate traditions and rules. Such rules may include the following: considering international experience in emergency and disaster management; modelling of any emergency situations; risk assessment and prevention; minimisation of destructive consequences; application of the best available technologies; strengthening environmental control at work; voluntary certification; environmental insurance, audit and staff training⁴⁵. Thus, today, in conditions of sustainable and transient development, the priority areas of international policy in the field of environmental risk management and conservation of biological diversity remain measures for the sustainable functioning and development of specially protected natural territories, rare, endangered species of plants and animals, as well as the sustainable use of biological resources. In the situation with climate policy, as well as with the preservation of biological diversity, the world community seeks to combine the goals of economic growth of states with the environmental challenges of modernity. According to this model, the protection of the environment and biodiversity is primarily a purposeful activity of public authorities, local governments, public

⁴³ I. Dunayev, Y. Kuts, N. Stativka, O. Ziuz, V. Kralia, "An analysis of the mechanisms for establishing cooperation between public authorities, the private sector, and the public in domestic waste management in Ukraine [Valdžios institucijų, privačiojo sektoriaus ir gyventojų sąveikos mechanizmų analizė kietųjų atliekų tvarkymo srityje Ukrainoje]", in *Public Policy and Administration*, 2020, vol. 19, no. 2, p. 314-328.

⁴⁴ E.V. Novikova, "Modern economic and legal instruments for preventing and minimalizing environmental damage", in *Pravovedenie*, 2018, vol. 62, no. 4, p. 625-639.

⁴⁵ H.S. Kühn, D.E. Bowler, L. Bösch, H. Bruelheide, J. Dauber, D. Eichenberg, N. Eishower, N. Fernandez, C.A. Guerra, K. Henle, I. Herbing, N.J.B. Isaac, F. Jansen, B. König-Ries, I. Kühn, E.B. Nilson, G. Pe'er, A. Richter, R. Schulte, J. Settele, N.M. van Dam, M. Voigt, W.J. Wägele, Ch. Wirth, A. Bonn, "Effective biodiversity monitoring needs a culture of integration", in *One Earth*, 2020, vol. 3, p. 462-474; X. Li, Y. Wang, Y. Luo, J. Wen, H. Li, E. Gottschalk, J. Settele, O. Schweiger, "Opportunities to improve China's biodiversity protection laws", in *Nature Ecology & Evolution*, 2021, vol. 5, p. 726-732.

organisations, legal entities and individuals, aimed at the restoration, rational use, and preservation of natural objects⁴⁶.

Given the complexity and diversity of this activity, it (protection) has organisational and procedural, financial and material, cultural-ideological, and legal aspects. In particular, the organisational and procedural aspect is manifested in the activities of the above entities in the field of conservation, that is, in the adoption of particular measures to study the state of protection of natural objects, their use, and reproduction. The financial and material aspect consists in the implementation by the states of proper financing of such activities, in accordance with the budget estimate, the cultural and ideological aspect – in programming the development of respect for wildlife, development and implementation of measures to increase legal awareness and culture, rationality and the development of a sense of responsibility for the preservation of natural objects for present and future generations⁴⁷. The legal aspect involves the activities of competent state bodies and local governments to develop and adopt laws and other regulations in the field of use, reproduction, and protection of natural resources. Providing courts with due process and practice.

In the decisions of the ECHR in the context of compliance with Art. 8 of the Convention for the Protection of Human Rights and Fundamental Freedoms, the European Court emphasises that the environment is a value and that economic requirements and even fundamental rights, such as property rights, should not take precedence over environmental requirements, especially if the state has enacted legislation on this issue⁴⁸. Therefore, the government must take the necessary steps within a reasonable time to ensure the effectiveness of environmental measures. Indicative in this case are the cases of *Amer v. Belgium* and *Kyrtatos v. Greece*, in which the European Court protected trees felled for construction purposes, which disturbed the natural balance of flora and fauna in the region, and protected the applicants' right to respect for private and family life. The Court noted that the environment, although not mentioned in the Convention, is a value in the interest of both society and the public authorities. Economic needs and even property rights should not prevail over environmental needs (requires a court decision). The

⁴⁶ S. Narendiran, R. Bhuvanewari, “Consciously eco-conscious: An eco-conscious re-reading of Bibhutibhushan Bandyopadhyay’s Moon Mountain as young adult literature”, in *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 2021, vol. 13, no. 2, p. 1-9.

⁴⁷ V.Y. Bocheliuk, S.F. Denysov, T.A. Denysova, V.M. Palchenkova, N.S. Panov, “Psychological and legal problems for ensuring human rights”, in *Rivista Di Studi Sulla Sostenibilita*, 2020, no. 1, p. 235-245.

⁴⁸ T. Novak, V. Melnyk, “On the issue of legal environment”, in *Law. Human. Environment*, 2021, vol. 12, no. 3, p. 75-83.

Federal Environmental Agency UBA wants to introduce a point on biodiversity into legislation when approving pesticides from 1.01.2020⁴⁹.

The Convention on Wetlands of International Importance, Mainly as a Habitat for Waterfowl, entered into force for Ukraine on 15.11.1997. Under this Convention, "each state party shall include in the Ramsar List at least one territory to grant it a wetland regime of international importance". Currently, the list of wetlands of international importance in Ukraine includes 50 Ramsar sites. For the last time, on August 9, 2019, the Ministry of Environment officially presented certificates of new wetlands of international importance to representatives of organisations responsible for their conservation, due to which 11 new wetlands were included in this list (Atak-Borzhyvske, Daffodil Valley, Cave "Druzhba", Black Swamp, Burshtyn Reservoir, Sources of the Pogorilets River, Sources of the Prut River, Dniester River, Upland swamp "Nadsyannia", Liadova-Murafa, Ozirnyi-Brebeneskul natural landmark).

The Emerald Network is a network of protected areas of European importance, which is created to implement the provisions of the Bern Convention on the Conservation of European Wildlife and Natural Habitats. Ukraine ratified this convention in 1996, committing to the creation of an Emerald network. This is provided for in other documents: in 2021, Ukraine must complete the creation of the Emerald network in accordance with the Association Agreement between Ukraine and the EU. The network aims to preserve species and ecosystems that have been recognised as rare throughout Europe. Their list is available in Resolutions 4 and 6 of the Bern Convention. Today, the Emerald network operates in most European countries. However, in EU member states the network is called Natura 2000, and in non-EU countries – the Emerald network. The Natura 2000 network is identical to the Emerald network in everything except the aspect of membership in the European Union. The Emerald Network currently operates effectively in Switzerland, Norway, the United Kingdom, and other countries. Therefore, the work on the implementation of the Emerald network in Ukraine is a preparation for the future transition to European legislation in the field of environmental protection. Over the past 10 years, Ukrainian scientists have been involved in the development of the Emerald Network. In 2019, at a meeting of the Standing Committee of the Bern Convention, a modern scheme of the Emerald Network of Ukraine was approved⁵⁰. Natura 2000 is a network of the main breeding and recreation sites for rare and endangered species, as well as some rare natural habitats that are protected. It covers all 27 EU

⁴⁹ Biodiversity rules hit pesticides in Germany, 2019. Available at <https://www.agroxxi.ru/gazeta-zaschita-rastenii/novosti/pravila-bioraznoobrazija-udarjat-po-pesticidam-v-germanii.html>

⁵⁰ Emerald Network in Ukraine, 2021. Available at <http://emerald.net.ua/>

countries, both on land and at sea⁵¹. The purpose of the network is to ensure the long-term survival of Europe's most valuable and endangered species and habitats, listed in both the Birds Directive and the Habitats Directive⁵².

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was adopted and opened for signature in Washington on March 3, 1973. The purpose of this convention is to "protect flora and fauna from over-exploitation in international trade by establishing clear procedures for their implementation through the introduction of controls on trade in these species through a system of export-import permits".

Conclusions

Thus, the methods used in the course of this study allowed considering, systematising, and establishing the main mechanisms of legal regulation of environmental risks of the preservation of biological diversity, as well as to cover the goals, main points, and the degree of compliance with the requirements of the most important international environmental conventions that have been developed at the present stage of the development of civilisation. Based on the theses presented in this study, it seems possible to conclude that in modern society there is a process of the cross-border interweaving of environmental interests, as well as their mutual penetration. International environmental organisations and societies, all the states of the planet are involved in this process, despite the fact that they still have not come to a common decision for all regarding the development of an effective global environmental policy. In addition, there is so-called insufficient effectiveness of existing conventions and agreements in the field of environmental risk management and conservation of biological diversity since, as a rule, the existence of an economic system is increasingly observed in modern states, the essence of which is a consumer attitude to nature.

Nowadays, international diplomacy in the field of environmental protection, minimising environmental risks, and preserving biological diversity is a kind of response of the world community to such a universal, global problem as the threat of extinction of existing biological species. Under this kind of threat is, in addition to the reduction of species diversity among animals and plants, the very fact of the existence of all living things on the planet, including humanity. Awareness of the importance of this problem contributed to the development of the so-called international policy on the conservation of biological diversity and environmental risk management. The

⁵¹ B. Danylenko, "Land market: the perspectives for Ukraine and Ukrainians", in *Law. Human. Environment*, 2021, vol. 12, no. 1, p. 52-74.

⁵² Natura 2000, 2021. Available at https://ec.europa.eu/environment/nature/natura2000/index_en.htm.

effectiveness of all the international regulatory and legal documents previously mentioned in this paper, as well as the entire international diplomacy of the environment or ecosystems, directly depends on the level of cooperation and trust between international actors.