

STATE ENVIRONMENTAL SECURITY IN NATIONAL AND GLOBALIZATION ASPECTS

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Abstract. The article is devoted to the study of the state environmental security in national and globalization aspects. It has been established that the environmental security of the state is a status of every person's security, society, state and nature from excessive danger to the environment, i.e. the preservation and protection of vital activity, individual's interests and his environment from negative anthropogenic and natural consequences, which is an important component of the state security. It is established that together with the concept of "environmental security" there is a concept of "environmental modernization" as overcoming of negative impacts on environment from the industrial society by transformation of the latter with help of the latest technologies. The existing threats to Ukraine's environmental security, identified in the National Security Strategy of Ukraine in 2015 have been determined. The need for additional attention to the armed conflict in eastern Ukraine was emphasized as one of the threats to the states' economic security, which is in line with the provisions of the United Nations Resolution "Environmental Protection in Areas Affected by Armed Conflict". It is noted that the Ministry of Ecology and Natural Resources only formally fulfills the task of assessing the environmental status, unlike Finland and Sweden. The issue of public participation of Ukraine in environmental management is still debatable, as defined by the Law of Ukraine "On Environmental Protection", it remains only formal, although, for example, the public is actively involved in the management of this field in China. Accordingly, it was proposed not only completing tasks by the Ministry of Ecology and Natural Resources to develop a single list of indicators at EU level for assessing the environment status, but also to involve the public in full participation in environmental management.

Keywords: suburban environment; ecology; security; environmental security; environmental monitoring

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1. Introduction

Significant deterioration of human health, constant climate change raised the issue of ensuring the state's environmental security in national and globalization aspects for all countries of the world without exception.

The deterioration of the environment eventually leads to the destruction of the normal order of production and life and causes serious economic losses. Thus, according to the European Environment Agency, 400,000 premature deaths occurred due to air pollution in Europe in 2016. Thus, environmental security has become an urgent social need, and environmental security studies have become widespread in the world in the face of changing in economic globalization, scientific advances, and aggravation of military threats.

According to the Green Country Rankings of 2018 ranked annually by the Center for Environmental Policy and Law of the Yale University, measuring the current efficiency in terms of natural resources management and environmental status, Ukraine takes the 109th place from 180 countries between Turkey and Guatemala, the highest developed countries took 12 positions higher than Ukraine in 2018. Although Ukraine is a leader among the post-Soviet states.

It is obvious that not all European countries have a high level of ecology, and it demonstrates the importance of the environmental security issue not only for Ukraine, but for almost all countries of the world.

2. Literature Survey

Perga T.Y pays attention that rethinking of human-nature relations has began since the 1960s, as the environmental consequences of intensive economic development became noticeable. Accordingly, the environmental activist J. Huber firstly proposed the concept of «environmental modernization» in 1980 as the overcoming of negative environmental impacts from industrial society by transforming the latter with help of new technologies. The scientist was supported by some environmentalists from Germany and the Netherlands. J. Huber, and together with another scientist found that environmental modernization is replacing of existing industrial technologies on resource conservation technologies, which are less damaging to the nature, human health and environment (Perga, 2017).

In turn, Z. J. Li, Q. Tian and L. L. Song note that the concept of «environmental security» was firstly introduced by the International Institute for Applied Systems Analysis (IIASA) in 1989. The category of environmental security was firstly included to concept of national security in the report on the implementation of the United States National Security Strategy in 1991. According to scientists, environmental security is not limited to ecosystem security, since it affects the overall national security status, which consists of political, economic and military security (Z. J. Li, Q. Tian, L. L. Song, 2018).

Cornel Zwierlein reveals the meaning of «environmental security» through an analysis of the essence of such concepts as «security» and «environment». Thus, according to the scientist, the environment in its deep and broad sense is an environmental system in its adaptive coexistence with the (industrial) human society. Environmental security is understood by the author as protecting the state and society from direct or indirect threats to the environment (Cornel Zwierlein, 2018). According to Matt McDonald, environmental security is resilience of the ecosystem to the new demands of time (Matt McDonald, 2018).

Zurlini Giovanni and Müller Felix emphasize that environmental security is a complex, adaptive system consisting of two major components – a social one characterized by a human factor and an environmental one which has historically interacted. Accordingly, environmental security is a status of protection of vital interests of people, society, environment from dangers arising from anthropogenic and natural impact on the environment (Zurlini, Giovanni, Müller, & Felix, 2008). The same opinion is supported by Wen T., Wang J., Ma Z., Bi J., whose view is the global environmental security depends on maintaining a dynamic equilibrium between human and nature, impeded by rapid industrialization and urbanization, planet growth, economic development, and growing demand for natural resources over the last 30 years (Wen, T., Wang, J., Ma, Z., Bi, J., 2017).

Peter Hough also points out that understanding of environmental issues through the «security» category is quite debatable. First, one group of scientists supports the view that environmental issues should not be equated with the security traditionally used for military issues. And secondly, some scholars are convinced that the promotion of the concept of «environmental security» will inevitably lead to militarization of this field and the issues covered (Hough P., 2017).

3. Methods

Taking into account the existing threats to the state's environmental security and trends for emergence of new threats, it can be concluded that protection of the state's environmental security is carried out through methods of monitoring, analysis, generalization of environmental management, as well as legal methods.

In this case the role of legal methods is to create a legal framework for the activities of authorized entities and, accordingly, their implementation of the state policy in the field of environmental protection by methods of environmental management, as well as monitoring, analysis and generalization. Monitoring, analysis and generalization methods are key to determining the actual status of the environment through the collection and processing of information on the status of water pollution, air, soil, establishment of the list of endangered animals and plants. Analysis and generalization methods, in turn, allow this information to be analyzed and presented in a report format.

4. Results

Environmental security research is a recent phenomenon. The «International Environmental Security Resolution» adopted by the United Nations General Assembly in 1987 in response to the Chernobyl disaster is considered as a referential document. From a scientific point of view, the accepted symbiosis of ecology and security is a sectoral approach to security. The reference object in the environmental sector is environment. Thus, environmental security is a status of every person's security, state and nature from excessive danger to the environment, i.e. preservation and vital activity protection, individual's interests and his environment from negative anthropogenic and natural consequences, which is accordingly an important component of the state security (Sitdikova & Starodumova, 2019).

The Charter of the United Nations and the principles of international law recognize the sovereign right for each State to independently define and implement environmental and development policies and they are responsible for ensuring that activities within their jurisdiction or control do not harm the environment of other States or areas outside of national jurisdiction (Cherchyk et. al., 2019). The Declaration enshrined a number of other important environmental security provisions, in particular: (1) environmental issues are addressed in the most effective manner with the participation of all concerned citizens at the appropriate level; (2) States adopts effective environmental legislation; (3) States should develop national laws on liability and compensation for victims of pollution and other environmental damage; (4) States immediately notify other States of natural disasters or other emergencies that may lead to unforeseen adverse effects on the environment in those States (Rio Declaration on Environment and Development, 1992).

Accordingly, the states paying full attention to environmental issues today are Finland, Iceland, Sweden, Denmark, Slovenia, Spain, Portugal, Estonia, Malta, France and other countries whose environmental indicator is quite high (Fig. 1).

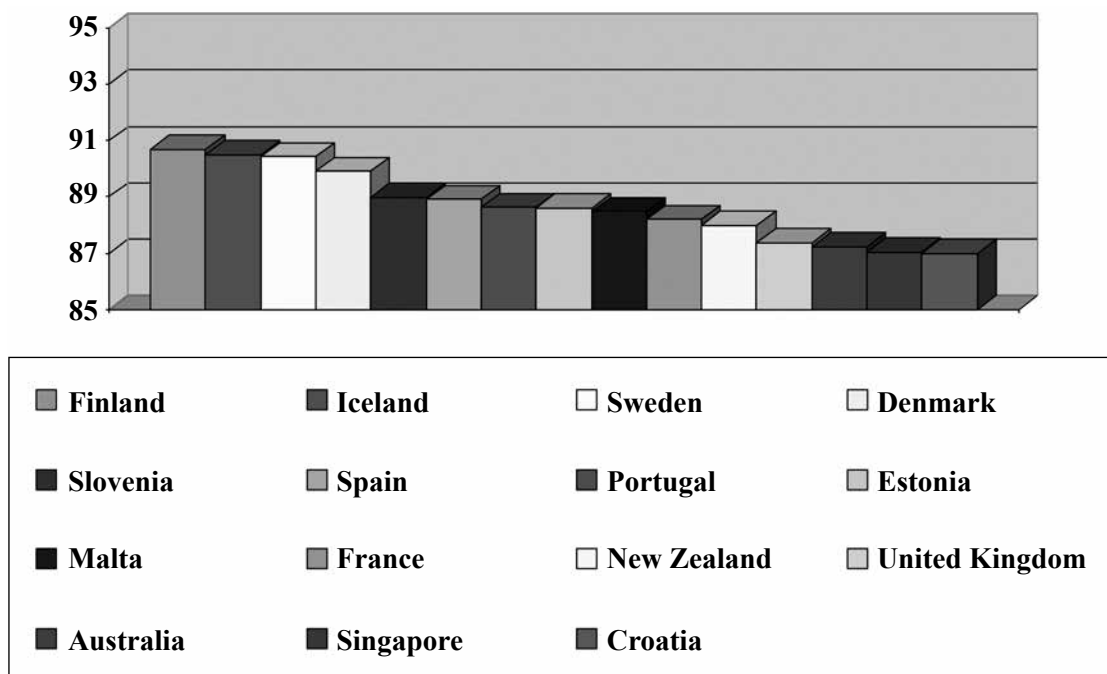


Figure 1. List of the most green countries according to the world ranking

Considering that the environmental security of the state is a component of the state national security, it should be noted that the Law of Ukraine “On National Security” defines national security as the protection of state sovereignty, territorial integrity, democratic constitutional order and other national interests of Ukraine from the real and potential threats (National Security Law, 2018). Directly the mentioned regulatory act does not contain a list of threats to the state’s environmental security, however, they are enshrined in the National Security Strategy of Ukraine in 2015, the main threats of the state’s environmental security are: (a) excessive anthropogenic impact and high level of technogenic load on the area of Ukraine; (b) the negative environmental consequences of the Chernobyl disaster; (c) a significant amount of production and consumption waste and an inadequate level of recycling, processing and disposal; (d) unsatisfactory state of the unified state system and civil protection forces, environmental monitoring system (National Security Strategy of Ukraine, 2015).

Unfortunately the acting National Security Strategy of Ukraine does not highlight such threat to the state’s environmental security as the armed conflict in eastern Ukraine. However, the international community also pays attention to it. For example, the United Nations adopted a resolution «Protecting the Environment in Areas Affected by the Armed Conflict» in May 2016. The resolution called on all Member States to continue supporting the development and implementation of programs, projects and policies aimed at preventing or reducing the impact of armed conflict on the environment. The International Criminal Court also recognized the need to resolve this aspect of the conflict, saying that priority would be given to the prosecution of crimes under the Rome Statute, its committing and consequences of such actions are related to the environmental degradation, illegal exploitation of natural resources or illegal land disposal. Donbass has historically been a center of the industrial sector for Ukraine. Before the start of the conflict in 2014, there were more than 1,160 enterprises of mining, metallurgical, chemical, petroleum, and energy industries operating in the region. In addition, there are 1,230 kilometers of oil, gas and ammonia pipelines in the region (Korauš et. al., 2019).

Brendan Duprey and Olena Bondarenko paid attention, that it is not surprisingly, before the conflict the region was one of the most polluted in Ukraine. At the same time, the armed conflict began in 2014 had both a positive and a negative impact on the environment in the region. Because of the situation in the region, many of the enterprises have ceased their activities, which has had a positive impact on the environment. On the other hand, maintenance of these facilities has also ceased, leading to an increased risk of catastrophic failure, and continuous shelling poses serious threats to these facilities (Brendan Duprey, Olena Bondarenko, 2019).

Yevhenii Yakovliev and Sergiy Chumachenko emphasized on complication of the environmental situation in the Donbass as a potential threat to the state's environmental security. According to scientists, the following measures by the state are extremely important today: (a) activation of environmental monitoring of the anti-terrorist operation zone, including by means of remote sensing methods; (b) study and assessment of new factors related to environmental threats in the Donbas, namely: the effects of uncontrolled flooding of cities and villages and associated hazardous surface and ground water pollution processes; subsidence and dangerous deformation of residential and industrial buildings, other structures; establishment of potential routes for pollutants migration beyond the region and even beyond Ukraine due to the rapid contamination of the Seversky Donets River due to the destruction of dams and other hydraulic constriction; (d) additional research of radiation threat to assess the hazard level; (c) taking measures to restore critical infrastructure for water supply, sewage and industrial waste treatment (Yakovliev & Chumachenko, 2017).

At the same time, as experts say, the dangerous environmental situation taking place today in the occupied territory becomes critical, which can subsequently lead to a real disaster, its consequences will affect not only the entire area of Ukraine, but also many of our neighboring countries, including the Russian Federation, Poland, Moldova, Belarus, Georgia, Turkey and other countries (National Security & Defense. Razumkov Center, 2019).

It should be agreed with Zoran Mačak, Milan Kankaraš and Dejan R. who believe that there are good reasons to be interested in environmental security in the defense structures, especially the ministries responsible for defense and the Armed Forces of Ukraine. The high level of industrial pollution and practice of incorrect disposal of existing, even nuclear waste, was recorded in the activities of the military in the so-called «transition countries». The military aims often do not meet environmental goals. Peace in the world is unlikely to be achieved without armed conflict. At the same time, during the preparation for military activities, facilities for military accommodation are constructed, training courses are held for the military, their weapons are provided, and military equipment is supplied, manufactured according to the needs of the state. The need to produce complex and multi-purpose military installations poses a number of environmental risks. From an environmental point of view, enterprises engaged in the production and testing of weapons and military equipment using a number of complex chemical, technological and engineering processes are significant pollutants of the environment. These are also munitions and explosive plants in most countries, and only nuclear, biological or chemical weapons plants in some countries. Environmental risk of contamination at manufacturing facilities may be present during the technological process and disposal of production residues (waste). Of course, the military is not the largest environmental pollutant in the world, but they do significant damage to the environment not only during the armed conflict but also in the process of preparing for it (Zoran Mačak, Milan Kankaraš, Dejan R., 2018).

At the same time, UNEP notes that there are not virtually well-established mechanisms for protecting natural resources during armed conflicts, and there are no permanent international powers to control violations and resolve environmental liability and redress in such situations. UNEP recommends that the Permanent Arbitration Tribunal, on the basis of «Optional Rules for the Reconciliation of Disputes Concerning the Environment and / or Natural Resources», resolves disputes related to environmental damage during armed conflicts and produces a consolidated report on the environmental situation of consequences of armed conflicts, which is presented annually to the General Assembly of the United Nations (Drobyazko, 2019a, 2019b).

It is worth noting that today the mechanism of environmental protection in general only is being formed, in particular the relevant state bodies and authorities are being established. Thus, the Interpol created the Committee on the Compliance with Environmental Legislation and three working groups: on crimes against wildlife; on pollution-related crimes; on crimes in fisheries in 2012. Also the Interpol established a radiological and nuclear terrorism prevention unit to expand its ongoing counterterrorism activities to address chemical, biological, radiological and overt threats (Elizabeth Florescu, Jerome C. Glenn, 2015).

In turn, the issues of formation and implementation the state policy in the field of environmental protection are

within the competence of the Ministry of Ecology and Natural Resources at the national level. In accordance with the resolution of the Cabinet of Ministers of Ukraine «On Approval of the Regulation on the Ministry of Ecology and Natural Resources of Ukraine» adopted in 2015. The Ministry provides legal regulation, namely, develops draft regulatory acts, issues regulatory acts within the powers provided by law in the field of environmental security, waste management, in particular radioactive, hazardous chemicals, pesticides and agrochemicals, environmental impact assessments, and overcoming the effects of the Chernobyl disaster on the issues of: (1) licensing conditions for conducting business activities in the field of hazardous waste management, production of particularly hazardous chemicals, the list of them is determined by the Cabinet of Ministers of Ukraine; (2) keeping records of waste disposal sites and objects generation, processing and disposal facilities; (3) control of transboundary movements of hazardous wastes and their disposal; (4) waste certification; (5) environmental security during the transport of dangerous goods and elimination of the accidents consequences occurring during their transportation; (6) the list of hazardous waste properties; (7) the list of pesticides and agrochemicals permitted in Ukraine; (8) determining the conformity of pesticides and agrochemicals with quality certificates, determining the residues of pesticides and agrochemicals; (9) carrying out an environmental impact assessment (Regulation on the Ministry of Ecology and Natural Resources, 2015).

It is worth noting that one of the tasks of the Ministry of Ecology and Natural Resources of Ukraine is to assess the impact of human activity on the environment. At the same time, the lack of technology for environmental security assessment is a significant shortage not only of Ukraine, but the whole international community, which encourages domestic and foreign researchers to develop and improve methods and approaches for assessing the integrated indicator of environmental security at the level of the country and its regions. The best calculation methodology, according to Kharlamova, G. and Nesterenko V., is a concept developed by Yale University (USA) objectively describing and assessing the environmental status of the country and the world on the whole. According to this methodology, Ukraine belongs to the group of countries with weak environmental protection emphasizing the need for research on this topic. Unfortunately, a comprehensive environmental security assessment is not carried out and there is no single environmental monitoring system in Ukraine. The first priority for ensuring environmental security in Ukraine should become the development of the scientifically justified and unified methodology for calculating the integrated indicator of environmental security (Kharlamova, G., Nesterenko, V., 2014).

Assessment of human activity impact on the environment also takes place in Finland and Sweden. In particular, Sweden has been undertaking national environmental impact assessments every year since 2007, and the Swedish National Agency for Civil Situations also conducts the environmental impact assessing of each industry. Sectoral impacts are directly integrated into the human activity assessment impact on the climate, which contains a detailed analysis of considering the impact of different future scenarios on the environmental situation in Finland (Emma Hakala, Ville Lähde, Antti Majava, Tero Toivanen, Tere Vadén, Paavo Järvensivu, Jussi T. Eronen, 2019).

Thus the impact assessing of industrial activity on environmental security in the country is a normal practice in developed countries. Therefore, granting such power to the Ministry of Ecology and Natural Resources of Ukraine is quite reasonable and justified. Although there are no other legal grounds for its implementation today. In particular, as of 2018, the priority task of the State Environmental Inspectorate of Ukraine was development, as well as coordinating with the interested central executive bodies and submission to the Ministry of Ecology and Natural Resources for consideration a draft regulatory act on improvement of organization environmental monitoring by the Cabinet of Ministers of Ukraine.

But improving the organization of environmental monitoring requires the determination of indicators of the environmental status assessment. In particular, Hongqi Zhang and Erqi Xu propose to highlight the following indicators: (1) water security: an indicator of the amount of water resources per capita; water resource utilization rate; share of water resources by types; (2) soil safety: soil erosion; desertification of land; salt-alkaline soil index; soil contamination with heavy metals; (3) atmospheric safety: air pollution by nitrogen; carbon dioxide emissions; pH of acid rain; (4) biodiversity security: the number and species of endangered plants; the number of endangered animals per 100 km² (Zhang, Xu, 2017).

At the same time, the implementation of only formal regulation of public relations in environmental management by the state is not always sufficient in practice, where the mechanisms of citizen participation in environmental protection must actually be implemented.

5. Discussion

As part of the debate on citizen participation in the environmental security mechanism, it worth drawing attention to the China's experience, where the government decided to informally regulate the sphere of environmental management affected by the public, largely complementing the formal regulation promoted by the government in the field of environmental management. Public participation in environmental policy plays a crucial role in environmental protecting, not only in China but also in Europe and the world in general. According to the "China Environmental Annual", a number of public complaints and petitions of environmental protection said to the public authorities through letters, official hotlines and the Internet has grown steadily with the environmental awareness of the Chinese public from 1995 to 2014. Almost 90% of Chinese surveyed citizens expressed their willingness to pay for reducing air pollution. In addition, the recently revised Law on Environmental Protection of China firstly introduced the «Information Disclosure and Public Participation» section aimed at promoting public participation in environmental protection through information disclosure (Xinlei Yang, Xiucheng Dong, Qingzhe Jiang, 2019; Pechancová, Hrbáčková, Dvorský, Chromjaková, Stojanovic, 2019).

As for Ukraine, firstly it should be emphasized that existence of public environmental management is caused, first of all, by the need to implement the citizens' rights to participate in the management of public affairs, as proclaimed in Art. 38 of the Constitution of Ukraine, and ensuring protection against the authorities arbitrariness, neglect and disrespect of the environmental and related rights of the population from their side (Constitution of Ukraine, 1996). Conservation of natural resources and environmental protection have only recently become integrated into social systems, with attention to environmental issues, increasing public awareness and responsibility (Moumen, Z., El Idrissi, N.E.A., Tvaronavičienė, M., Lahrach, A., 2019).

The Ukraine's legislation also provides opportunities of conducting environmental management functions by citizens and their associations. In many cases, it regulates public participation in the environmental management process much more widely than it is required by international standards. Art. 9 of the Law of Ukraine "On Environmental Protection" enshrines the environmental rights of Ukrainian citizens. There is Art. 21 "Powers of public associations in the field of environmental protection" in Section IV of "Powers of Environmental Management Authorities" establishing the rights of public environmental associations. Based on the analysis of the legislation provisions on participation in the process of citizens and their associations' environmental management, opportunities for participation in the environmental management processes can be divided into groups: (1) influence on environmental policy-making at different levels and participation in the environmentally significant decisions; (2) public environmental monitoring; (3) initiating and conducting environmental review; (4) implementation of public environmental control (Law of Ukraine on Environmental Protection).

Despite the existence of the above mentioned legal act, most of its important provisions have remained declarative since 1991. In particular, it is evidenced by the content of the Concept for the Implementation of the State Policies in the Field of Industrial Pollution, adopted in May 2019, which primarily focuses on the problem addressed by this document. The issue of ensuring openness and transparency of data on actual volumes of industrial pollution in accordance with international standards are indicated in this document, since such effective tools for timely and complete informing of the public on the compliance of economic entities with permits in the field of environmental protection, are absent, as well as access to actual pollution data and reporting of the entity are limited. It can be characterized as unsatisfactory the level of state control over compliance with permit conditions in the field of environmental protection and the mechanism of ensuring compliance with the requirements of environmental legislation which does not encourage economic entities to increase investments in environmental measures (Concept of implementation the state policy in the field of industrial pollution, 2019).

Conclusions

Thus, contemporary there is no common understanding of the concept of “environmental security of the state”, but significant deterioration of the environmental situation in both Ukraine and countries of the world requires the development not only of theoretical principles of environmental security, but also the introduction of effective mechanisms of environmental protection. It is worth noting that environmental security in the general understanding is the protection of the environment from rapid industrialization and urbanization, the growth of the planet’s population, economic development, and the growing human demand for natural resources.

Today, environmental security is an important component of the national security of the state as financial, military and so on. Each state, in accordance with international documents, has the sovereign right to independently determine and implement environmental and development policies and it is responsible for ensuring that activities within their jurisdiction or control do not cause damage to the environment of other states or areas outside its jurisdiction. In view of this, the National Security Strategy of Ukraine in 2015 identified threats to Ukraine’s environmental security. However, the armed conflict in eastern Ukraine has been neglected. Considering that the United Nations in the Resolution “Environmental Protection in Areas Affected by the Armed Conflict” still calls on states to support the development and implementation of programs, projects and policies aimed at preventing or reducing the impact of the armed conflict on the environment. We believe that the conflict in eastern Ukraine should be included in the list of threats to the state’s environmental security in the National Security Strategy of Ukraine 2015.

An important omission of a number of countries in the world is lack of a single agreed list of indicators of environmental safety assessment in each country. This is important given the commitment of each state to take measures to protect the environment that eliminate the possibility of harming the environment of other states. Accordingly, availability of the same indicators for all states will allow to control the status of environment in the state by other stakeholders, as well as to ensure the actual responsibility of the state for the unsatisfactory status of the environment. Accordingly, the relevant environmental institutions at the international level should pay attention to it and involve representatives of the states and competent experts in the development, harmonization and implementation of common indicators for assessing the status of the environment in the country.

Another point that deserves attention at the national and international levels is public management of the environmental protection. In particular, today most of the legislation provisions of Ukraine enshrining the rights of public environmental associations, in particular to influence the formation of environmental policy, to participate in making environmentally significant decisions, to conduct public environmental monitoring, to initiate and conduct environmental expertise; to conduct public environmental control are more formal than implemented in practice. That is why the highest authorities of Ukraine should pay attention to the implementation of real instruments of implementation of the above rights.

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