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LEGAL SECURITY OF ENVIRONMENTAL SAFETY UNDER THE CONDITIONS OF MARITAL STATE IN UKRAINE

Purpose. To develop tools, recommendations and proposals for improving international and national law in the sphere of environmental protection during the war.

Methodology. The methods used are critical analysis to establish that environmental protection during the war cannot be implemented on the basis of current legislation; analysis and synthesis in the study on the state of national environmental law (EL); system analysis in the study on the state of international EL; content analysis to study the effectiveness of the protocols of Geneva Conventions; a systematic approach to building an EL-system, including bilateral and multilateral agreements; elementary-theoretical analysis to establish the narrowing of democracy in relation to punishment for environmental damage by military means; comparison which indicates the presence of hyperbolic signs of environmental damage during hostilities; abduction that leads to the conclusion that environmental protection should be systemic, continuous and permanent.

Findings. An analysis of national and international environmental law during the war was conducted. The following is indicated: the presence of gaps in the legislation and the absence of legal norms of direct effect; the need for an information system for environmental monitoring together with the implementation of a systematic approach based on subsystems: from the legal fixation of environmental damage to proposals for the adoption of legal acts. Recommendations based on improving environmental law were developed.

Originality. An algorithm of the decision support system for operational management actions and strategic legal regulation of environmental protection during hostilities was developed. It is established that the legal protection of the environment should be systemic, continuous, and permanent.

Practical value. The proposed recommendations for improving international and national environmental law during the war can be used by lawyers and scholars. The developed algorithm of the decision support system can be applied in managerial and legal practice.

Keywords: *legal support, ecological security, war, decision support*

Introduction. From the first hours of large-scale military operations, bombing, artillery and rocket attacks on large enterprises, energy facilities, and oil depots were observed. Chemical tanks, gas pipelines were damaged, merchant vessels in the Black Sea were destroyed. This irreparably harms the environment.

Military actions damage not only the environment and natural resources of Ukraine, but also the biosphere of the planet. Their influence is cross-border. The negative impact of large-scale hostilities is present in all natural spheres: atmosphere, surface and groundwater; soils; natural complexes; total disturbance of ecosystems.

Nowadays, Ukrainian reserves and sanctuaries, the flora and fauna of which are listed in the Red List, are being destroyed.

Approximately ~ 200 protected areas of the Emerald Network, which is ~ 2.9 million hectares, are being destroyed, for example, the world-famous biosphere reserve “Askaniia-Nova”, natural parks “Azovo-Syvaskyi”, “Dzharylhatskyi”. They need protection at the European level because they ensure the survival of rare species.

The danger of large-scale pollution of water sources is raising the level of mine water as a result of disruption of technological maintenance of mines in the territories occupied by the aggressor.

Sonars are installed on the aggressor’s warships, which generate sound waves of ~200 decibels, which leads to the death of dolphins. Therefore, a significant reduction in the population of Black Sea dolphins is observed.

As of March 8, 2022, 232 fires were extinguished in the area of more than 1,875 hectares, which is more than forty times the figures for 2021. More than half of these fires are the result of hostilities. During large-scale hostilities, 26 large fires were registered in forests with a burning area of more than 5 hectares. Of these 26, 23 cases were the result of hostilities.

These threats should serve as an incentive for the formation of international legal norms on punishment for harming the planet’s biosphere.

Literature review. The dilemma between the need to help the military waging war against the aggressor and the need to protect the environment in the legal framework is raised in many scientific works, in particular in [1]. The difficulty of resolving the dilemma lies in the need to apply an interdisciplinary approach and find new forms of cooperation based on international law [2]. A limiting factor in the legal framework is also the fact that the international environmental law applies only in peacetime. And during the armed conflict, international humanitarian law (IHL) is enforced, which only indirectly implements the protection of the environment during the war [3]. The details of the IHL enforcement using the examples of the analysis of the Hague and Geneva law are given in [4]. In [5] it is proposed to take soft safety measures and to use the International Court of the Environment to ensure compliance with legally binding rules, which contradicts the provisions given in [3]. The concept of ecological peacebuilding proposed in [6] also looks unrealistic because for its implementation all parties to the conflict must have environmental protection, and this does not happen in practice. Environmental characteristics are not “incentives for cooperation and

peace, not violence and competition” as declared in [7]. Therefore, the concept of ecological peacebuilding, despite attempts to implement it in IHL, is unproductive. At present, the fragmented IHL documents on combating threats to the environment and human security do not have a comprehensive conceptual framework that would include issues related to active conflicts, as noted in [8]. Many approaches have been proposed as a basis for the formation of the IHL system of legal documents, in particular in [9], the time frame of war ecology has been formalized as an “ongoing process of three intersecting stages: preparation, war (armed conflict) and postwar activities”; in works [10, 11] monitoring of environmental damage is defined as an instrument of reasoned legal position. In [10], the Geographical Information System for Environmental Monitoring in Wartime, which can be used to calculate the environmental risk indicator and manage it and which is used in our work, is proposed. Research [11] proposed methodological approaches to monitoring three common forms of environmental degradation, which was also used in our study. Work [12] discusses legal mechanisms that provide opportunities for political intervention to mitigate the effects of hostilities. Unfortunately, the proposals [12] are too general. Scholars point out [13] the fragmentation, dispersion and non-compliance of existing IHL documents related to environmental protection during the war. This applies even to local, non-international armed conflicts, which is considered in [14]. A specific example is the analysis [15] of the results of the activities of the International Legal Commission (ILC) [16] on environmental protection in connection with the armed conflict and the inability to use ILC decisions as legal documents of direct effect. Before the start of the large-scale war in Ukraine and the total violation of all the norms of war by the aggressor, no one was ready for the need to directly use legal norms to protect the population and the environment. The situation is similar in the national legal framework. This is evidenced even by studies of Ukrainian scientists, which were conducted before the start of a large-scale war. In particular, [17] points to the limited conceptual framework of legal regulation of environmental safety in the war zone, [18] states the inconsistency of Ukrainian legal documents with a fairly segmented IHL on environmental protection during the war, [19, 20] indicate the limited tools of public administration in the environmental sphere during the war due to lack of legal mechanisms.

Unsolved aspects of the problem. The analysis of scientific works indicates significant gaps in the international and national legal framework to address the problem of environmental protection during hostilities. Therefore, the task of eliminating fragmentation, dispersion and non-compliance with existing legal documents arises as well as the need to develop tools, recommendations and proposals for improving international and national law in the sphere of environmental protection during the war.

The purpose of the article. To develop tools, recommendations and proposals for improving international and national law in the sphere of environmental protection during the war.

Methods. Using the method of critical analysis, it is established that nowadays the problem of environmental protection during hostilities cannot be solved on the basis of current laws and regulations governing environmental protection, in particular, Resolutions of the Cabinet of Ministers of Ukraine (CMU), as they do not provide for martial law. The application of the method of analysis and synthesis in the study on the state of the national legal sphere of environmental protection allowed establishing the still unregulated legal aspects, in particular: the legislative and regulatory acts do not take into account the consequences of violations for the environment; unsatisfactory condition of the system of state monitoring of the ecological state of the environment; ineffective control over compliance with legislation in the sphere of environmental protection and failure to ensure the inevitability of liability for environmental damage: the emergencies that are present in

environmental legislation do not include consequences for the ecology due to hostilities. The application of systems analysis has established that this problem is not properly regulated in international law also. Moreover, even the basic principles of environmental protection during large-scale hostilities have not been embodied in legal documents, except for general provisions. In particular, this is evidenced by the use of the method of content analysis of the Additional Protocol of 1977 to the Geneva Conventions of 1949 on the protection of victims of international armed conflicts). For example, Article 35 of this document formulates the principle that the choice of methods or means of waging war is not unlimited. Part 3 of Article 35 of this document prohibits those methods of warfare that have the purpose of special wide, long-term and significant damage to the environment or this damage is expected using the methods. But the implementation of these norms in legal practice has not taken place properly. That is, they do not have the force of direct effect. The results of the Rio Declaration on Environment and Development, which does not seem to ensure the formation of legal doctrine but considers only a list of principles of environmental law, in fact have long been in the discussion. This is especially true for the formation of legal standards of environmental law during large-scale hostilities.

There are provisions relating to the protection of the environment during war only in the field of international humanitarian law on armed conflict.

The application of a systematic approach indicates the need to build a system of norms for environmental protection during hostilities, based on the basic provision that an integral factor of such a system is the obligation to protect the environment, and the use of bilateral and multilateral agreements that directly regulate the environment as elements of this system.

This is painstaking and long-term work, which is made impossible by the fact that the issue of environmental protection during the active phase of the war has not yet been considered relevant in international political relations, which, in turn, did not prompt consideration of international law relating to this issue.

The absence of these norms in international law, as *de lege lata* norms that ensure the lawfulness of legal documents, their actual enforcement in legal practice, indicates only the possibility of relying on legal norms to be created – *de lege ferenda*.

The application of the method of elementary-theoretical analysis indicates that in the absence of even axiological provisions that should form the legal basis for environmental protection during large-scale hostilities, democracy is narrowed to punish those who massively and purposefully destroy the biosphere. This leads to the absence of penalties even for the deliberate destruction of the biosphere and speculation by the aggressor of environmental issues as a means of pressure on the victim of aggression and to blackmail the world community. This is also facilitated by the fact that international law does not resolve the dilemma of implementing tasks due to military expediency and ensuring environmental protection. In practical terms – whether a threat of military defeat is worth the destruction of several hectares of forest, for example. Especially this concerns the side of the conflict, which ignores all the provisions of international law on humanity and the norms and rules of hostilities.

The method of comparison indicates the presence of hyperbolic signs of damage to the environment during hostilities, due to the fact that international law in this sphere has many gaps. In particular, this applies to the existing outdated regulations with different objective and subjective conceptual apparatus in this sphere of international law.

The application of the abduction method leads to the conclusion that the proper protection of the environment should be systemic, continuous, permanent. That is, the legal basis for environmental protection should not consider separate periods of peace and war (without division into non-international and world conflicts) while ensuring the basic principles of the environmental law.

Results. Analysis of the current legal status of the problem of environmental protection during hostilities indicates that environmental security and its legal protection as an integral part of national security is mentioned in the legal framework. In particular, paragraph 9 of the Law of Ukraine “On National Security” states: Ukraine’s security – protection of state sovereignty, territorial integrity, democratic constitutional order and other national interests of Ukraine from real and potential threats”. That is, legal norms for the protection of environmental security should be considered as part of the legal system of national security. According to the Law of Ukraine “On Environmental Protection” – “ensuring the environmental safety of human life – an integral condition for sustainable economic and social development of Ukraine”. This Law (Article 3) formulates the principles of environmental protection, in particular: “the priority of environmental safety requirements, ... guaranteeing an environmentally safe environment for human life and health; mandatory assessment of environmental impact; compensation for damage caused by violation of environmental legislation”, and others.

But adherence to these principles during hostilities is problematic. It is pointless to demand from the aggressor to comply with them. That is, the war creates new realities that require rapid adaptation of the legislative and regulatory framework.

There is some progress in this direction. For example, the Law “On Amendments to Certain Legislative Acts of Ukraine on Environmental Activities and Civil Protection for the Period of Martial Law and in the Reconstruction Period” was adopted, but, in our opinion, this Law needs to be improved due to the complexity of the problem.

In general, there are currently no direct norms on causing environmental damage during hostilities in Ukrainian legislation. There are only indirect rules, for example, regarding the acquisition of a state of the natural environment that poses a threat to public health (according to Article 50 of the Law of Ukraine “On Environmental Protection”). Indirect norms make it much more difficult to apply laws in legal practice.

There is a need to include military action in the list of environmental emergencies in the Law of Ukraine “On the environmental emergency zone”. This Law, in particular, formulates “the grounds and procedure for declaring a certain area a zone of ecological emergency; legal regime of the zone, conditions of its change and termination; implementation of environmental monitoring; grounds for recognizing legal entities and individuals as victims and compensating them for the damage caused; responsibility for violating the legal regime in this area”. Resolutions of the Cabinet of Ministers of Ukraine need similar adjustment: “On approval of the Regulations on the state environmental monitoring system”, “On approval of the Concept of protection and reproduction of the environment of the Azov and Black Seas”, “On approval of the Regulations on the State Environmental Protection Fund”, “On Procedure development and approval of standards of ecological safety of atmospheric air”.

Legislation on air pollutant emissions, state environmental control, environmental audit procedures, legal support of citizens’ constitutional rights to a safe environment through pollution control, guarantees of compensation for damage caused by actions that lead to environmental hazards need to be revised.

It is necessary to speed up the adoption of the resolution of the Cabinet of Ministers “On some issues of deforestation in Ukraine and forest inventory under martial law” and amendments to the Code of Administrative Offenses and the Criminal Code of Ukraine to strengthen liability for damage to flora during hostilities.

Budget items on environmental protection and restoration are not legally protected. This is confirmed by significant fluctuations in capital investment in the protection and restoration of the environment (Fig. 1) even before the active phase of hostilities.

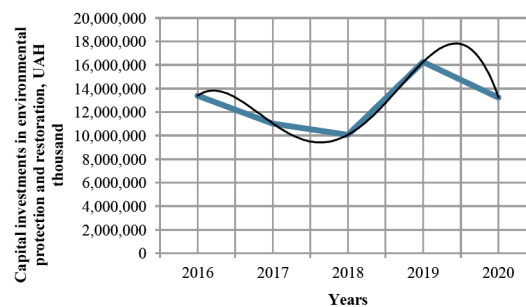


Fig. 1. Dynamics of capital investment in environmental protection and restoration, thousand UAH

This is also confirmed by the analysis of the dynamics of expenses in actual prices for environmental protection by types of environmental measures before the period of large-scale hostilities (Table), which indicates their significant unevenness, especially in terms of capital investment, which certainly did not contribute to environmental measures. With the beginning of large-scale military operations and the mobilization of financial resources of the state to provide the army and assistance to the population and sectors of the economy in the case of destruction, the implementation of programs to finance environmental activities has been significantly reduced. That is, the declaration of environmental protection is not supported by the necessary financial resources. For future periods, it is necessary to strengthen public and legal control over the observance of the appropriate level of financing of environmental measures.

A general analysis of the international environmental law during hostilities has led to the following recommendations:

- there is a gap in the system of international law regarding the protection of the environment during hostilities because the existing legal norms relevant to this area are characterized by rudimentary nature, which, in particular, is due to the fact that environmental protection is neither the subject nor the object of existing regulations;
- legal instruments on this issue are scattered in various treaties, conventions, protocols, which causes a significant degree of inconsistency between them, and does not lead to an adequate level of legal protection of the environment;
- international legal documents in the sphere of the environmental law are not able to ensure the protection of the environment during large-scale hostilities, so it is necessary to add the relevant legal provisions to such documents to be used in the active phase of the war;
- principle 24 of the Rio Declaration on Environment and Development, which is often seen as the application of the so-called “customary norm” for the protection of the environment during armed conflicts, does not unambiguously express the principle of environmental protection during armed conflicts; does not impose any obligations on the destroyer of the environment;
- since the protection of the environment in military conflicts is based on customary humanitarian law, the regulations of this law, in particular, Protocol II of the Geneva Conventions set very high thresholds for their application in practice;
- the status of the principles used to protect the environment during hostilities in customary humanitarian law does not reach the required level of acceptance by the international community and recognition as law;
- nowadays it is important to replace the principle of 24 Rio Declaration on Environment and Development with a binding principle of general international law, not limited to the sphere of the environmental law;
- the set of international laws for the formation of the paradigm of environmental protection as a common good of mankind should also be revised.

The Algorithm of decision support system is proposed (Fig. 2) for effective comprehensive implementation of opera-

Dynamics of expenses in actual prices for environmental protection by types of environmental measures before the period of large-scale hostilities, thousand UAH

Types of environmental measures	Years									
	2016		2017		2018		2019		2020	
	Total in one year	Including capital investments	Total in one year	Including capital investments	Total in one year	Including capital investments	Total in one year	Including capital investments	Total in one year	Including capital investments
Total	32488702.1	13390477.3	31491958.5	110255535.2	34392270.3	10074279.3	43735862.1	16255671.8	41332201.7	13239649.8
protection of ambient air and climate	4263419.2	2502805.8	4712301.7	2608027.4	6403592.6	3505920.6	7240656.7	4276767.6	7971112.2	5595319.4
wastewater management	8960117.4	1160029.1	9341782.6	1276530.2	11316115.1	1692640.7	12626613.3	1753869.1	12325011.2	1578201.4
waste management	8928254.3	2208676.6	9979183.2	2470969.5	10012249.3	1182045.8	15981405.2	5754260.9	14096941.5	2899793.4
protection and remediation of soil, groundwater and surface water	1617183.2	419988.9	2268283.8	1284502.0	2732666.6	1444291.6	3305851.4	1721924.9	4131255.3	2554224.5
noise and vibration abatement (excluding work-place protection)	361994.2	94788.5	696443.7	161509.6	278081.9	60244.7	36057.2	6872.7	478199.9	77909.2
protection of biodiversity and landscapes	594125.8	49577.9	944563.7	177278.7	871182.7	73369.5	1171144.4	211656.2	1339109.7	371118.1
protection against radiation	7053479.2	6943976.2	3114089.4	3012367.8	2166508.2	2036489.3	2709785.3	2479134.8	514031.8	142915.9
research and development for environmental protection	58649.5	2435.1	89267.0	3832.9	124199.0	5727.5	126955.8	10005.3	127887.1	9808.0
other environmental protection activities	651479.3	8199.2	346043.4	30517.1	487674.9	73549.6	537392.8	41180.3	348653.0	10359.9

tional management tasks and the formation of proposals to change the national legislative and regulatory framework and to make the necessary adjustments to the international law for the proper implementation of environmental protection in wartime. The urgency of its adoption is due to the complexity of the problem and the need for rapid changes in a significant number of legal acts in various areas of law.

The primary task in this direction is to amend the legislation on the state environmental monitoring system. This monitoring should be realized through the implementation of an integrated system approach, which must be based on the subsystems of environmental damage recording, primary processing, transmission, storage and analysis of information on the impact of hostilities on the environment, development of relevant forecasts of the consequences of adverse effects and de-

velopment of reasonable proposals for effective management decisions and proposals for the adoption of legal acts.

The first steps have already been taken to provide organizational support for monitoring at the state level. In particular, on March 1, 2022, the State Ecological Inspectorate of Ukraine established an Operational Headquarters to form a register of environmental damage due to the aggressive war. The institution is responsible for recording, calculating and systematizing environmental damage, maintaining a single register of damages, and analytical research on cases that pose a large-scale threat to the environment and public health. The Ministry of Environment, the State EcoInspection, the State Forestry Agency, the State Water Agency and other relevant institutional structures are involved in this work.

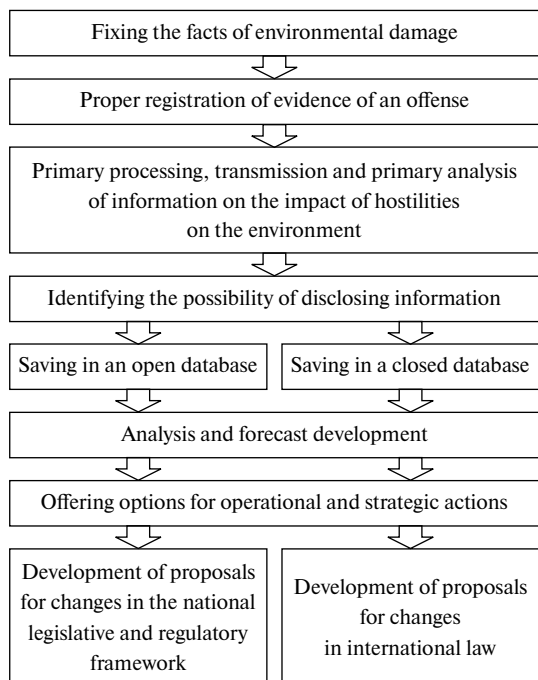


Fig. 2. Algorithm of decision support system for both operational management actions and strategic legal regulation of environmental protection

Also, on April 29, 2022, the Cabinet of Ministers approved amendments to the Procedure for Determining Damage and Losses Caused to Ukraine as a Result of Aggression. In addition, areas according to which the damage to the environment as a result of hostilities must be determined, have been significantly expanded.

Conclusions. According to the results of the analysis of the legal provision of environmental protection during large-scale military actions, it can be stated that the Ukrainian legislation in this sphere was not ready for a large-scale war. The environmental legislation of martial law at present is not even at the stage of adoption of regulations and legislation, but only at the stage of development.

The analysis pointed to the lack of efforts of diplomats and environmental lawyers in the area of IHL on environmental safety during hostilities. The existing body of international legal instruments contains gaps and has limited application. Legal support for monitoring the impact on the environment during and after the end of the active phase of hostilities is not institutionalized at the international level. As a result, the existing international legal instruments cannot ensure the inevitability of punishing the aggressors and make them compensate for damage caused to the environment during hostilities.

The dynamics of the growth of threats increased significantly. Delayed solution of legal issues increases the level of threats to Ukraine and the world. Nowadays, despite Russia's war crimes, in particular in the sphere of radiation safety, ignoring Ukraine's appeal, the IAEA does not exclude citizens of the aggressor state from making decisions to reduce the level of nuclear threats in Ukraine. And this threatens the world with a nuclear catastrophe.

To accelerate the adoption of legal acts of direct effect in the sphere of environmental safety and to increase comprehensively the effectiveness of regulatory influence, an algorithm of the decision support system has been developed for both operational management and strategic legal regulation of environmental protection. The priority in this direction is to amend the legislation on the state environmental monitoring system, which should be implemented with a comprehensive system approach, which must be based on subsystems for environmental damage, primary processing, transmission, storage

and analysis of information on the impact of hostilities on the environment, development of relevant forecasts of the consequences of negative influences and the development of appropriate reasonable proposals for effective management decisions and proposals for the adoption of legal acts.

Recommendations for the systematic improvement of international law in the sphere of environmental protection during hostilities are proposed.

Specific proposals have been developed for priority changes in the legislative and regulatory framework of the national environmental security during hostilities, such as, in particular, the inclusion of military action in the list of environmental emergencies in the Law of Ukraine "On the ecological emergency zone", adjustment of the Resolution of the Cabinet of Ministers: "On approval of the Regulation on the state environmental monitoring system", "On approval of the Concept of protection and reproduction of the natural environment of the Azov and Black Seas", "On approval of the Regulations on the State Fund for Environmental Protection", "On the Procedure for Development and Approval of Environmental Safety Standards", legislative protection of budget articles on safety and restoration of the environment.

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Правове забезпечення екологічної безпеки в умовах воєнного стану в Україні

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Мета. Розробити інструменти, рекомендації та пропозиції щодо вдосконалення міжнародного й національного права у сфері захисту довкілля під час війни.

Методика. Використані методи: критичного аналізу для встановлення, що захист довкілля під час війни не може бути реалізований на базі діючого законодавства; аналізу й синтезу при дослідженні стану національного екологічного права (ЕП); системного аналізу при дослідженні стану міжнародного ЕП; контент-аналізу для дослідження результативності протоколів Женевських конвенцій; системного підходу для побудови системи ЕП, включаючи двох- і багатосторонні договори; елементарно-теоретичного аналізу для встановлення звуження демократичності щодо покарання за нанесення екологічної шкоди військовим шляхом; порівняння - вказує на наявність гіперболічних ознак шкоди довкіллю за бойових дій; абдукції – підводить до висновку, що захист довкілля повинен мати системний, безперервний, постійний характер.

Результати. Проведено аналіз національного й міжнародного екологічного права у часи війни. Указано: на наявність прогалин в законодавстві й відсутність правових норм прямої дії; на необхідність інформаційної системи моніторингу довкілля за реалізації системного підходу, що спирається на підсистеми: від правої фіксації екологічної шкоди до пропозицій прийняття правових актів. Розроблені рекомендації для вдосконалення екологічного права.

Наукова новизна. Розроблено алгоритм системи підтримки прийняття рішень для оперативних управлінських дій і стратегічного правового регулювання захисту довкілля під час війни. Установлено, що правовий захист довкілля повинен мати системний, безперервний, постійний характер.

Практична значимість. Запропоновані рекомендації щодо вдосконалення міжнародного й національного екологічного права під час війни можуть бути використані правниками й науковцями. Розроблений алгоритм системи підтримки прийняття рішень може бути застосованим в управлінській і правовій практиці.

Ключові слова: правове забезпечення, екологічна безпека, війна, підтримки прийняття рішень

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