

## Trends and structural shifts in the tourism industry of Ukraine during the war and possible prospects for its post-war recovery

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Опубліковано	Секція	УДК
30.01.2026	Економіка	338.48:355.01:502.131.1(477)

DOI: <https://doi.org/10.5281/zenodo.19069268>

**Annotation.** The relevance of the study is обусловлена transformational processes experienced by Ukraine's tourism industry as a result of the full-scale war, which has caused the destruction of infrastructure, changes in the geography of tourist flows, the loss of natural, recreational and cultural potential, and the reorientation of tourism priorities. Current challenges require a comprehensive scientific consideration of structural shifts in tourism, taking into account security, spatial and environmental factors that determine the new conditions for the functioning of the hospitality industry.

The purpose of the study is a comprehensive analysis of trends and structural shifts in Ukraine's tourism industry during the war, considering spatial, security and environmental factors, and substantiating priority directions for its post-war recovery.

The study used the following methods: analysis of scientific literature, generalization, systematization, comparison, statistical analysis and graphical interpretation of data.

Results. It has been established that the war has led to structural changes in the tourism industry, in particular causing a decline in international tourist flows, an increase in the role of domestic Ukrainian tourism, and a reorientation of demand toward safe regions and natural locations. It has been substantiated that digitalization, adaptation of management mechanisms, and the strengthening of the role of local communities have become the main factors supporting tourism activities under martial law. Attention is focused on the large-scale destruction of tourism and cultural infrastructure, as well as significant environmental losses, including damage to nature reserve sites, which directly affects the future tourist attractiveness of Ukrainian territories. The spatial differentiation of Ukrainian regions according to the level of risk and the priority of post-war tourism recovery has been determined. It has been proven that the realistic scenario for the industry's development involves the gradual restoration of infrastructure, a focus on domestic tourism, and the development of rehabilitation and nature-oriented types of tourism.

Conclusions. Effective post-war recovery of the tourism industry is possible only through a comprehensive consideration of security, environmental and spatial factors, integration of European standards, attraction of investments, and the formation of new approaches to the management of tourism resources.

**Keywords:** tourism, tourism industry, tourist demand, post-war recovery, natural resources, infrastructure.

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## **Тенденції та структурні зрушення туристичної галузі України в умовах війни та можливі перспективи її повоєнного відновлення**

**Анотація.** Актуальність дослідження зумовлена трансформаційними процесами, яких зазнає туристична галузь України внаслідок повномасштабної війни, що спричинила руйнування інфраструктури, зміну географії туристичних потоків, втрату природно-рекреаційного та культурного потенціалу і переорієнтацію туристичних пріоритетів. Сучасні виклики вимагають комплексного наукового розгляду структурних зрушень у туризмі з урахуванням безпекових, просторових та екологічних чинників, які визначають нові умови функціонування індустрії гостинності.

Мета дослідження - комплексний аналіз тенденцій і структурних зрушень туристичної галузі України в умовах війни з урахуванням просторових, безпекових та екологічних чинників і обґрунтування пріоритетних напрямів її повоєнного відновлення.

У дослідженні використано методи: аналізу наукової літератури, узагальнення, систематизації, порівняння, статистичного аналізу та графічної інтерпретації даних.

Результати. Встановлено, що війна стала причиною структурних змін у туристичній галузі, зокрема спричинила скорочення міжнародних потоків, зростання ролі внутрішнього українського туризму та переорієнтацію попиту на безпечні регіони і природні локації. Обґрунтовано, що цифровізація, адаптація управлінських механізмів і посилення ролі місцевих громад стали головними факторами підтримки туристичної діяльності в умовах воєнного стану. Акцентовано увагу на масштабних руйнуваннях туристичної та культурної інфраструктури, а також на значних екологічних втратах, зокрема пошкодженні об'єктів природно-заповідного фонду, що безпосередньо впливає на майбутню туристичну атрактивність українських територій. Визначено просторову диференціацію регіонів України за рівнем ризику та пріоритетності повоєнного відновлення туризму. Доведено, що реалістичний сценарій розвитку галузі передбачає поетапне відновлення інфраструктури, орієнтацію на внутрішній туризм, реабілітаційні та природно-орієнтовані види туризму.

Висновки. Ефективне повоєнне відновлення туристичної галузі можливе лише за умови комплексного врахування безпекових, екологічних та просторових чинників, інтеграції європейських стандартів, залучення інвестицій та формування нових підходів до управління туристичними ресурсами.

**Ключові слова:** туризм, туристична галузь, туристичний попит, повоєнне відновлення, природні ресурси, інфраструктура.

### **Introduction**

The full-scale war in Ukraine has become a significant challenge for the domestic hospitality industry, causing the destruction of all its structural components, both natural and recreational potential and cultural heritage sites. Military operations have not only slowed down the development of the industry in a number of regions, but also caused the systematic destruction of the tourist attractiveness of the territories. Today, a significant part of the territory of Ukraine remains mined and is in the zone of active hostilities, which radically changes the geography of tourist flows and poses an urgent task for the state - a comprehensive scientific and practical analysis of the damage caused and the search for new trajectories for post-war recovery. We understand that for some time the economy will remain under the influence of military reality, therefore the main direction of transformational changes in the tourism sector is the development of non-standard areas of recovery and strategies for post-war development. The tourism industry of Ukraine is experiencing one of the most difficult periods of its development with new challenges of today. Therefore, there is a need to restructure the activities of the tourism industry from typical everyday situations to new ones,

taking into account modern challenges, primarily military operations that pose threats to the business environment of the tourism industry.

The relevance of the study reinforces the need to integrate Ukrainian approaches to environmental protection and restoration with international environmental standards, in particular the norms and practices of the European Union, in the context of post-war reconstruction of Ukraine. Existing scientific developments are often generalized and do not take into account the complex impact of military actions on all components of natural ecosystems, which complicates the development of long-term strategies for ecological reconstruction of territories. In this regard, a comprehensive study of the impact of the war on the tourism industry of Ukraine is relevant, taking into account spatial, environmental and socio-economic aspects, which allows to substantiate the priority areas of post-war tourism restoration and will contribute to the formation of a scientific basis for making management decisions in the field of nature management and environmental protection.

In modern science, the issue of the peculiarities of the functioning of the tourism industry of Ukraine in the conditions of war and its post-war transformation has become interdisciplinary and combines economic, geographical, managerial, security and environmental visions. A significant number of studies are devoted to the reassessment of tourism priorities, changing the behavior of consumers of tourism services, the destruction of infrastructure and the search for models for the restoration of the hospitality industry in the conditions of modern uncertainty.

The study by N. Andrusiak and N. Anipko [1] thoroughly analyzed the transformation of the population's tourism priorities under martial law, in particular the change in tourists' requests towards security, local travel and natural sites. The peculiarities of the formation of the tourism offer under war restrictions were considered, attention was focused on domestic tourism as a key factor supporting the industry, and the behavioral aspects of consumers of tourism services during the current war period were analyzed. In the work of Y. V. Karpenko, M. M. Lohvyn, O. O. Taranenko, D. M. Lohvyin, O. I. Lutsenko [2] the current state of tourism development in Ukraine during the war is considered from the point of view of economic losses, structural changes in the market and possible mechanisms of post-war recovery. The stages of reconstruction of the tourism industry are proposed and the role of state policy and institutional support is substantiated. Such scholars as O. Bordun, V. Shevchuk, V. Monastyrskiy, O. Luchko [3] assessed the scale of losses in the tourism business and searched for ways to preserve it in wartime. Their work analyzed the financial losses of tourism entities, considered the problems of business relocation, personnel shortage, and proposed anti-crisis management tools for hospitality industry enterprises. In the article by V. S. Mazur [4], modern international trends in tourism development are considered and compared with Ukrainian ones. The author substantiates the importance of digitalization, innovative technologies, sustainable development and adaptability of the tourism industry to crisis challenges, which is especially relevant in the context of the war in Ukraine. The study by O. Korol [5] focuses on the influence of threat and hazard factors on international tourist flows. The paper examines mechanisms for reducing inbound tourism in conditions of military risks, analyzes tourists' perceptions of territorial security, and outlines the dependence of tourist attractiveness on the security environment. In the work of A. Matviienko [6], modern strategies for the restoration of tourist and recreational complexes in the context of post-war reconstruction are considered. The author proposes approaches to the modernization of infrastructure, the integration of environmental standards, the formation of new tourist products and the development of regional tourist clusters. The study by L. Matviichuk and Yu. Dashchuk [7] substantiates the European vector of sustainable development of the Ukrainian hospitality industry. The scientists analyzed the need to harmonize national standards with EU norms, introduce environmental practices, improve the quality of services, and develop responsible tourism as the basis for post-war recovery. The study by Yu. B. Myronov [8] is devoted to determining the

ways of post-war restoration of the tourism industry of Ukraine. The author considers the scenarios of the development of the industry, the role of domestic tourism, investment mechanisms and the need for state support to stabilize the tourism market.

Despite the large number of scientific works, the analyzed studies do not sufficiently comprehensively consider the relationship between the destruction of natural and recreational potential, the environmental consequences of war and structural transformations of the tourism industry. The spatial aspect of the transformation of tourist flows, taking into account the "spatiality" of the military impact on individual territories, is not sufficiently considered. Insufficient attention is paid to the combination of security, environmental and economic factors in the formation of priorities for the post-war restoration of regions.

The purpose of the study is a comprehensive analysis of trends and structural shifts in the tourism industry of Ukraine during the war, taking into account spatial, security and environmental factors, and substantiation of priority areas for its post-war restoration.

In accordance with the goal, we were set the following tasks:

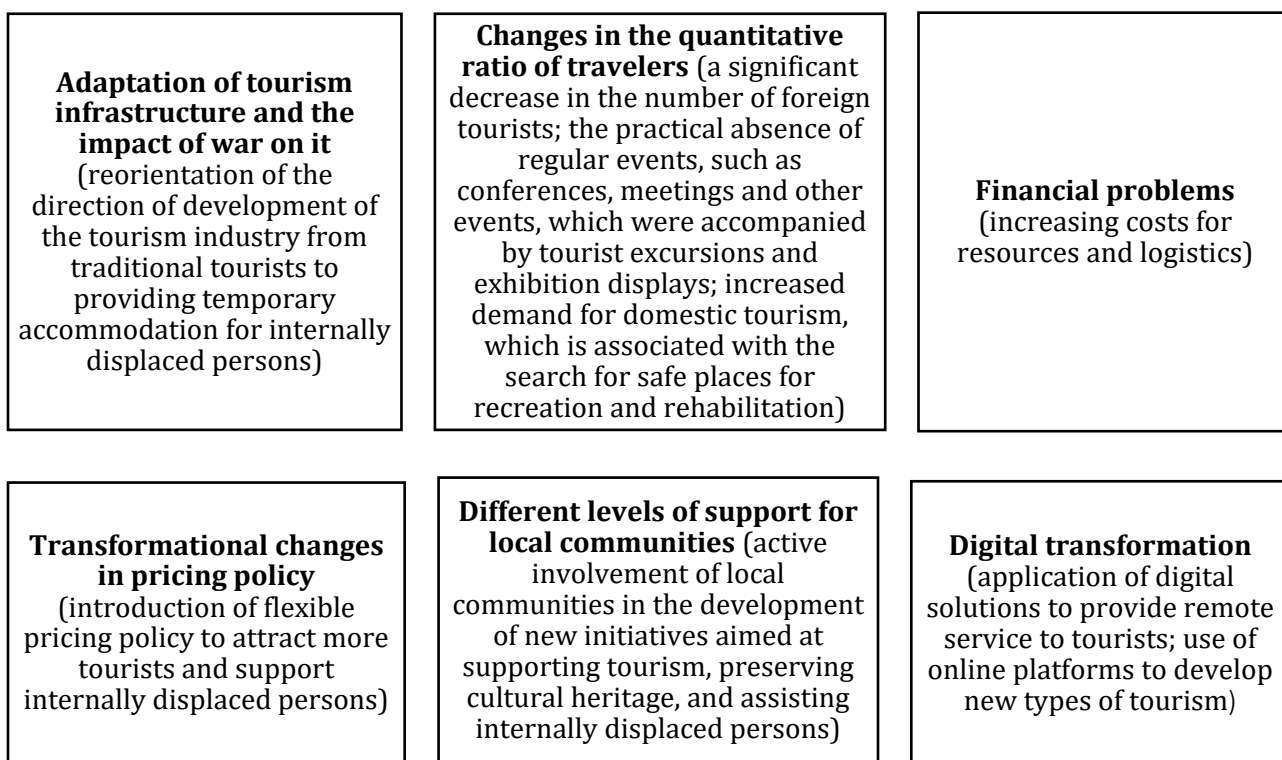
- to analyze current trends in the development of the tourism industry of Ukraine under martial law;
- to consider structural shifts in tourist flows taking into account spatial and security factors;
- to assess the impact of military actions on the natural and recreational potential and tourist infrastructure;
- to substantiate priority areas of post-war restoration of tourist activity in a regional context.

### **Results**

In recent years, the tourism industry in Ukraine has undergone transformational changes caused by global and local geopolitical challenges, technological changes, transformation in management and evolution of demand patterns. Until 2022, Ukrainian tourism was moving linearly towards increased integration with European tourism markets, modernization of infrastructure and expansion of international tourist flows. The full-scale invasion of Ukraine in 2022 became both a catalyst for negative trends and a cause of changes that completely transformed the challenges, priorities and strategic trajectories of the industry's development [9].

Despite the critical state of the industry and a significant reduction in jobs, tourism in Ukraine is characterized by a high degree of adaptability, gradually transforming under the influence of the active phase of the war. The emergence and popularization of such specific areas as military and inclusive tourism shows that the sector is able to meet the demand of society even during hybrid national threats. The formation of effective strategies in wartime and during the post-war recovery period requires not only the attraction of international investments, but also a radical update of the legislative framework, harmonization of standards with the requirements of the European Union and the creation of fundamentally new management mechanisms that will allow turning current problems into a reliable basis for the future sustainable development of the tourism industry [10].

Figure 1 fully reflects the structural shifts in the tourism industry of Ukraine in the modern period, including: changes in the quantitative ratio of travelers; problems of financial support; the diverse impact of digitalization; changes in digital policy; adaptation to security conditions; and uneven levels of support at the level of territorial communities.



**Fig. 1. Main directions of influence on the tourism business in Ukraine**

**Source: authors' own development**

One of the main areas of change has been digitalization and technological innovation. Even before the war, there was a growing interest in platforms, mobile applications and online booking systems, but in the period 2022–2024. the implementation of virtual and augmented reality, contactless services, digital reputation and tourism destination management accelerated. Museums, cultural heritage sites and tourist destinations are actively introducing virtual tours, digital reconstructions and actively using augmented reality tools to maintain tourist interest in conditions of limited accessibility, security and infrastructure destruction. This change encompasses both the automation of tourism business processes and the improvement of the tourist experience [11].

It should be noted that in the context of global economic and geopolitical changes, the use of digital tools affects not only the improvement of the tourism industry, but is also a necessary condition for ensuring competitiveness in wartime and in the context of developing post-war recovery measures that attract tourists, ensure security, and are a catalyst for changes in information management and the restoration of tourists' trust in tourist destinations.

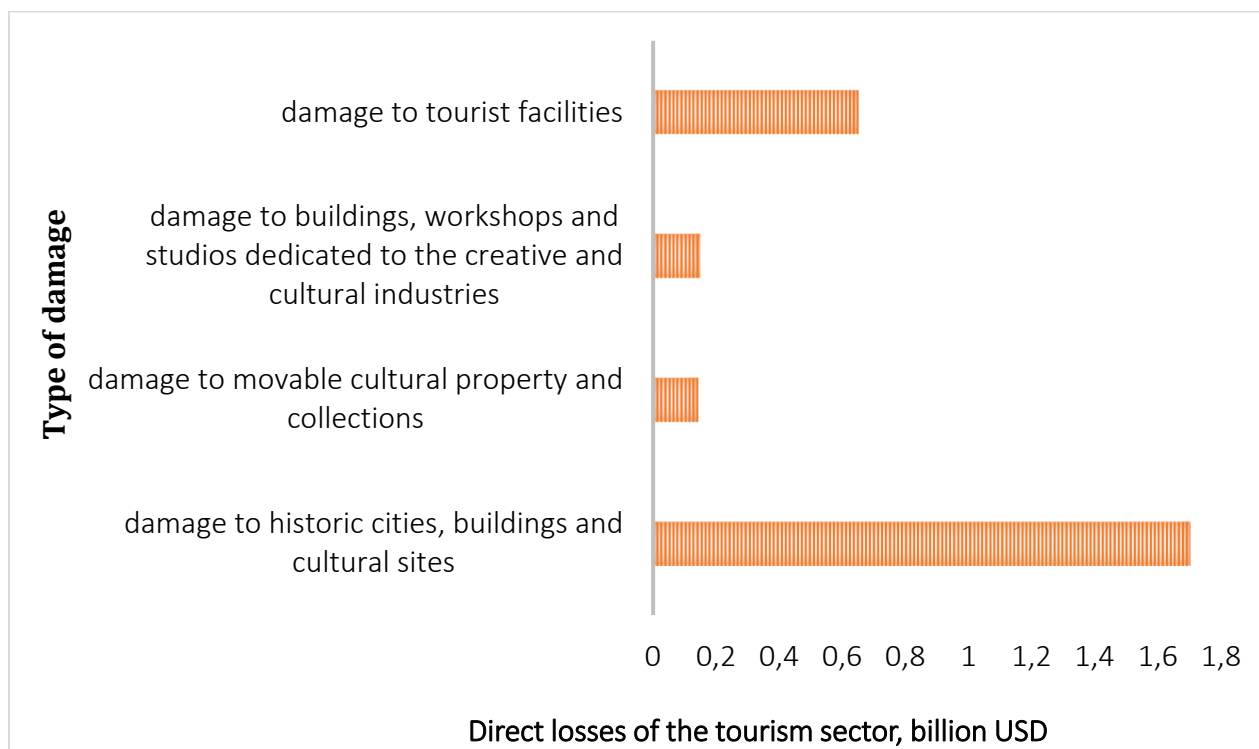
Another important area, in our opinion, is governance, state regulation and institutional policy for adaptation. The war caused a reorientation of state and regional policies. State governance mechanisms were reformatted to respond quickly to emergencies caused by military conflict, which include the following [12]:

- policy instruments at the national level, including strategic frameworks, security standards, digital strategies, which have become very relevant, timely and important;
- cooperation between local authorities and public organizations played a very important role in planning, restoring and defining tourism as part of programs in the context of future post-war reconstruction;
- Ukraine's steps towards integration with European Union norms have become important, in particular in such areas as safety, infrastructure, service standards, occupational health and safety, and environmental protection measures. Over the past five years, cooperation

between donor governments has expanded, the number of programs, grants, international technical assistance, and external financing has increased, which are very important for the restoration of damaged infrastructure, the promotion of the hospitality industry, and the development of new services.

There has also been a transformation in the market structure, demand and behavior of consumers of tourism services. The most popular traditional flows of international tourists have significantly decreased due to the war, and domestic tourism and regional routes with compliance with security conditions have gradually begun to gain relevance and arouse interest among tourists. Travelers' priorities have shifted towards safety, the availability of accessible infrastructure, and shorter trips. Currently, nature and outdoor tourism, tourism related to cultural heritage, spiritual tourism, and memory tourism are gaining popularity. Interest in internal regional travel within Ukraine is gradually growing, often to areas less involved in the conflict and to regions that are trying to restore tourism infrastructure and adapt it to martial law. These changes are orienting tourism enterprises to readapt their tourism products, which are currently trying to emphasize sustainability, safety, historical authenticity, and diversification of hospitality services [13].

The tourism infrastructure has suffered significant damage, including hotels, transport, and cultural heritage sites, which currently require restoration and significant investment. Thus, according to World Bank estimates, by the end of 2023, the total direct damage to the tourism industry in Ukraine caused by the war in the country amounted to 2.6 billion USD, and the total damage from the war in Ukraine amounted to 15.2 billion USD. Financial losses by type and type of damage are shown in Figure 2.



**Fig. 2. Losses of the tourism sector of Ukraine, as of the end of 2023, billion USD**

**Source: developed by the authors based on [14]**

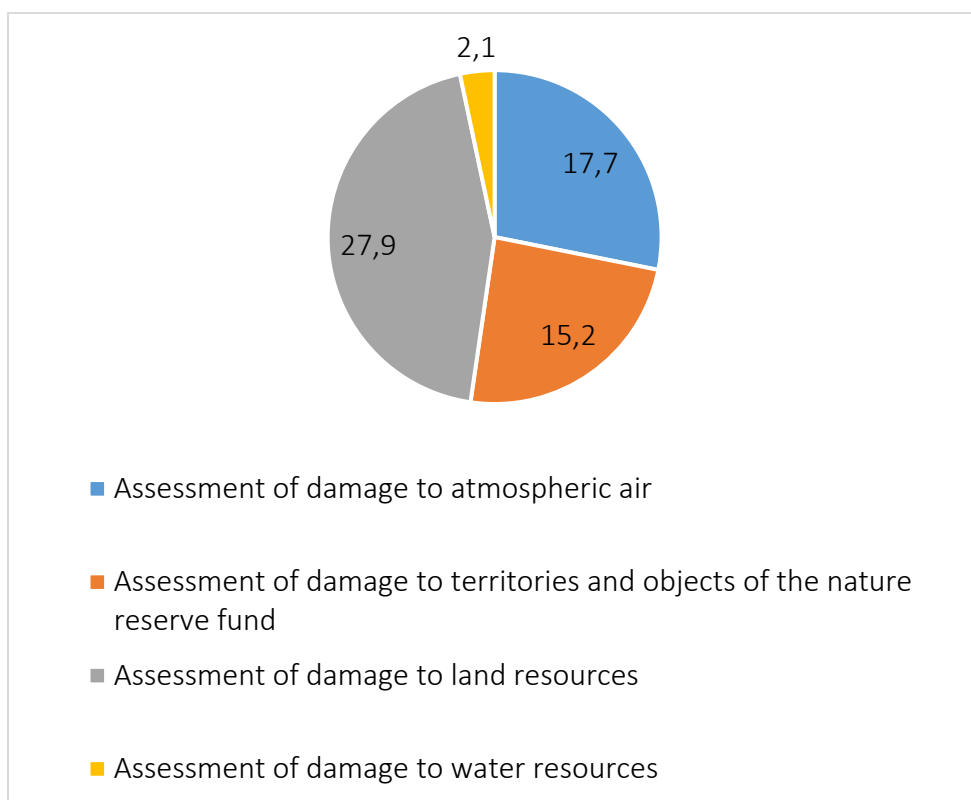
According to the Ministry of Culture and Information Policy of Ukraine, as of the end of 2023, 1,702 cultural tourism infrastructure facilities throughout Ukraine suffered various types of damage from the war. Approximately 49% of this destruction fell on Ukrainian club institutions. In terms of types, cultural tourism infrastructure suffered as follows: 841 club

institutions; 601 libraries; 131 art education institutions; 99 museums and cultural galleries; 30 theaters and philharmonics [14].

According to the World Tourism Organization, financial losses from the destruction of Ukrainian historical tourist sites already amount to about 19.3 billion US dollars, and damage to cultural sites is estimated at 1.1 billion US dollars. The war in Ukraine also caused great damage to intangible cultural heritage, in particular, to internal values of emotional, symbolic, spiritual and existential significance and to creative industries [15 - 16].

Given the above, investments in tourism infrastructure are currently relevant in terms of prioritizing restoration and modernization to ensure sustainable development in the context of ensuring the European integration process. Such components of the hospitality industry as accommodation infrastructure, transport connections, security infrastructure, communication networks and digitalization are priority aspects of primary restoration. In the second place is the restoration of the quality of tourism services and the provision of qualified personnel.

It should be noted that in terms of various components of the environment, as of 2024, the objects of the nature reserve fund account for 15.2% of financial losses. At the same time, the structure of financial losses for other components of the natural environment has the following values: damage caused to atmospheric air - 17.7%; damage caused to land resources - 27.9%; damage caused to water resources - 2.1%. These indicators are clearly displayed in Figure 3.



**Fig. 3. Structure of financial losses caused by the war to the environment of Ukraine as of 2024, in %**

Source: developed by the authors based on [17 - 18]

Popular tourist resources of Ukraine have also been negatively affected by the war. As of July 2022, according to the statistics of the State Ecological Inspectorate of Ukraine, 38 cases of the impact of hostilities on the natural ecosystems of the state have already been registered, including 9 of these impacts on the objects of the nature reserve fund. As of August 2022, 0.9 million hectares of the objects of the nature reserve fund have been affected by the war, which

is about 20% of the total area of the NRF objects and about 2.9 million hectares of forest have been completely destroyed. Another example of the negative impact of hostilities on ecosystems is the Tuzlivski Limany National Natural Park, where, according to reliable information, about 50 thousand cetaceans have already died. Although these factors do not have a lethal effect on living organisms, they cause constant stress for all living things, which is expressed in migrations, slowing down of growth and development, reduction of reproduction rate, etc. Important in this context are also stress reactions of living organisms, in particular noise, infrasound, vibrations, ultrasounds and electromagnetic radiation caused by military actions [19].

At the same time, the war in Ukraine also affected a large number of objects of the natural reserve fund of Ukraine of various importance. In particular, on various scales, the most destructive impact was experienced by the objects of the NRF located in the occupied territories, regions where active hostilities are underway, in particular [20 - 21]:

1. Biosphere Reserve «Askania-Nova» - financial losses of UAH 62.7 million. As of 2023, 67 fires were registered on the territory of the biosphere reserve;
2. National Nature Park «Nyzhnyodniprovsky» - due to the explosion of the Kakhovka HPP, 100% was flooded, and as a result of hostilities, 12% burned down;
3. Feldman Ecopark – 90% of the park's infrastructure was damaged as a result of rocket attacks;
4. National Natural Park «Beloberezhya Sviatoslav» - during the war period, 403 fires broke out, respectively, 96% of the territory burned down;
5. Dzharylhatsky National Nature Park - during the war, 43 fires occurred in the park, one fire lasted almost a week. Due to the occupation of the park, the full picture is unclear.

The issues of sustainable development and environmental protection, although not new, have become more relevant within the framework of transformation processes and existing negative trends. Tourism in Ukraine is currently in a critical state. In the context of post-war development, three scenarios of its development are possible: optimistic, realistic and pessimistic [22 - 24]:

The optimistic scenario assumes that after the war, tourism demand will grow rapidly. People will start traveling a lot, and rehabilitation tourism for children and veterans with PTSD will be the most popular;

A realistic scenario assumes that after the end of the war, the tourism sector will need time to stabilize. The main clients of travel agencies will be domestic tourists, who will only visit safe regions. Promising areas will be mountain tourism, cycling tourism, historical tourism. The priority area is rehabilitation tourism;

The pessimistic scenario is the most likely and assumes that if the war continues and Ukraine loses the occupied territories, then a slight development of tourism will be possible only in isolated, safe regions, in particular in western Ukraine. Such regions as Mykolaiv, Kherson and Zaporizhia will be inaccessible for tourism due to mining and shelling, in these regions only one option will be possible - military tourism.

However, the most likely and possible scenario is the «realistic scenario», because the recovery will in any case be long, gradual, and, given the already existing destruction, difficult.

At the same time, the post-war restoration of tourism activities should be gradual, phased and prioritized – that is, tourist facilities and infrastructure and relevant regions should be restored first where there was previously the greatest demand. According to research by the National Tourism Organization of Ukraine, the state already has tourist areas that have different degrees of risk of destruction – low, medium and high, and accordingly there are areas of different priority in tourism for restoration – also low, medium and high (Table 1).

Table 1

**Priority of post-war tourism recovery in the regions of Ukraine**

Risks associated with military operations	Priority of tourism in economic development (tourist flows + place in the economy)		
	High	Medium	Low
High (the territory is occupied, there are active military operations, there is a high probability of missile strikes)	Odesa region Kherson region Mykolaiv region Zaporizhia region Donetsk region	Kharkiv region	Luhansk region Sumy region
Medium (the territory is not occupied, but has a common border with the Russian Federation or the Republic of Belarus, there are risks of missile strikes and mining)	Kyiv city Volyn region	Kyiv region Chernihiv region Khmelnitskyi region Vinnytsia region Poltava region Dnipropetrovsk region Zhytomyr region	Rivne region
Low (territory is unoccupied, risks are insignificant)	Lviv region Ivano-Frankivsk region Zakarpattia region Chernivtsi region	Ternopil region Cherkasy region	Kirovohrad region

Source: compiled by the authors based on [25 - 27]

According to Table 1, the most priority regions in which it is necessary to restore tourism activities are the South and the East [27]. In these regions, active hostilities continue to this day and, accordingly, tourist facilities continue to be destroyed, but at the same time, in the pre-war period these regions were characterized by high tourist attractiveness and intensive flows of domestic and international tourism, which still determines their priority and prospects in post-war recovery.

### Conclusions

Despite the existing set of current problems and the presence of post-war risks, the tourism industry is a promising, economically profitable and popular industry in Ukraine, therefore, a detailed scientifically based study of existing problems, a forecast of further impacts on it, the development of targeted development programs, the development of a regulatory framework and the participation of all sector entities in its restoration will ensure a gradual process of its restoration and further functioning.

The future recovery of the industry requires a comprehensive scientific and practical analysis and the implementation of phased strategies focused on a radical update of the legislative framework and harmonization of standards with the requirements of the European Union. The most likely development scenario is considered to be realistic, which involves a long and complex reconstruction process given the scale of destruction and long-term security risks. The priority of reconstruction should be based on the risk level of the territories and their pre-war economic potential, which requires the active involvement of international investments, the creation of new insurance mechanisms and overcoming the shortage of qualified personnel through the participation of educational institutions. Effective management of the recovery process is possible only if the efforts of the state, business and regulatory authorities are consolidated to minimize corruption risks and create a reliable basis for the future sustainable

development of the hospitality industry. Prospects for further scientific research lie in the detailed development of mechanisms for the digital transformation of tourist services and innovative models of security management in post-war recreation areas.

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