# State Archives in Ukraine during the Russian Aggression: Challenges and Achievements

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#### Abstract

The study delves into the activities of archival institutions in Ukraine during the full-scale military aggression initiated by the Russian Federation. It sheds light on the outcomes of content analysis conducted on the websites of central and regional archival institutions, which serve as fundamental communication channels for representing the composition and structure of Ukraine's National Archive Fund. The results of the Ukrainian archival institutions' operations in the year 2022 are characterized within the complex context of military aggression. Furthermore, the paper delineates the challenges faced by the nation's leading archives and presents a series of measures aimed at the restoration and safeguarding of Ukraine's National Archive Fund under extreme circumstances. The imperative need to enhance the efficiency of digitizing archival holdings is conclusively established.

#### **Keywords**

archival institutions, archival funds, Russian military aggression, losses, Ukraine, digitalization of archival documents, internet resources in the archival field, corporate digitalization projects

# 1. Introduction

Commencing in 2014, Russia's military aggression against Ukraine escalated into full-scale invasion by 2022, inflicting a severe blow to the operations of archival institutions. This aggression led to the illegal removal of some of Ukraine's most valuable archival holdings by the aggressors. It resulted in the destruction and damage to archive facilities in Chernihiv and Kharkiv; the forced evacuation and protection of the lives of archive personnel in occupied regions, the suspension of planned work, and the implementation of extreme measures for the protection and preservation of documentary collections (including the development of an operational framework for archive activities during a state of war), among other consequences.

Indeed, as a result of the occupation of Kherson, the State Archive of Kherson Oblast was seized and plundered by the invaders. Such practices by the aggressor nation are not new with respect to Ukraine, as noted by the Head of the State Archival Service of Ukraine, A. Khromov: "This occurred during the times of the Russian Empire, during the Soviet era, and also in 2014 when Ukrainian archival documents stored in state archives of the Autonomous Republic of Crimea and Sevastopol, in violation of existing rules and norms of international law, were declared part of Russia's archival holdings" [12]. Consequently, it is pertinent to identify the fundamental challenges faced by the Ukrainian archival network during the Russian-Ukrainian war and develop a roadmap for their resolution.

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#### 2. Related Works

Official sources that allow us to identify the current issues in the activities of archival institutions in Ukraine include their websites (https://archives.gov.ua/ua/державні-архіви-областей-м-києва/) and the official website of the State Archival Service of Ukraine (https://archives.gov.ua/ua/). Particularly valuable is the project of the State Archive of Kyiv Oblast, "Archive of War: Collect and Preserve," whose goal is the daily documentation of events related to the territory of Kyiv Oblast regarding the consequences of the Russian-Ukrainian war and the creation of a thematic archival collection dedicated to these events.

"Ukraine by Furthermore. the War Archive" project the Docudavs team (https://ukrainewararchive.org) [26] deserves special mention. A non-profit platform compiles all forms of digital materials collected since the onset of Russia's full-scale invasion of Ukraine, with the aim of documenting crimes committed against Ukrainian society. The implementation of such archival projects holds immense significance for the documentary recording of facts and the establishment of an evidentiary basis for numerous war crimes committed by the occupying country, which forms the foundation for Ukraine's victory in the information war. As experienced archivists note, "During the information war, archiving serves several purposes: it counters propaganda, competes with other narratives about the course of events, helps to research and make sense of historical heritage, and preserves testimonies for future generations. Preserving original testimonies allows descendants to understand what happened, what events preceded it, and what led to certain consequences" [27].

The activities of scientific archival institutions in the conditions of a state of war are elucidated by L. Yaremenko, with a focus on the challenges faced by experts (from evacuation to issues related to organizing work in an extreme regime), the protection and preservation of the historical and cultural heritage, as well as providing methodological assistance to archives regarding the specifics of working in wartime conditions, among other aspects [12].

The scientific publications of most Ukrainian archivists delve into the issues of the theory and technology of digitization, as well as the organization of the utilization of archival information resources. They substantiate the necessity of establishing consortia for digitizing the national archival heritage. Notable features of forming web collections of archival documents are elucidated in the works of O. Levchuk [15], Kh. Kruchinina, Yu. Cherniatynska [23], V. Bezdrabko [25], A. Maistrenko, R. Romanovsky [2], Ya. Kalakura, M. Paliienko [29], I. Tiurmenko, L. Bozhuk, Yu. Smolnikov, Yu. Syerov [7], L. Diduk, T. Kovtaniuk [6], and others.

Foreign experience in digitizing paper documents from various institutions and countries, as well as the principles, standards, and technologies of this process, are expounded upon in the works of Steven Puglia, Jeffrey Reed, and Erin Rhodes [20], Melissa Terras [14], Beatrice de la Porte and Richard Higgs [3], Adrian Brown [1], and others. Their scientific achievements contribute to enhancing the efficiency of digitizing archival collections and organizing remote access to them. They also provide a basis for the best models of preserving national cultural heritage, revealing the initial steps in this direction. Issues related to the dissemination of digital content and a system of measures for its utilization are discussed by Masao Nakamura, Seiji Fujioka, and Toru Ishikawa [13].

One particularly pressing issue for contemporary Ukrainian archiving is the preservation of documentary heritage in the conditions of armed aggression. Strategies for safeguarding cultural treasures during armed conflicts are discussed by Roger O'Keefe, Camille Péron, Tofig Musayev, and Gianluca Ferrari [17], as well as Jiri Toman [9]. These authors present a range of international normative documents that serve as sources of international legal norms regulating the protection of cultural heritage in armed conflicts. They also characterize the experiences of safeguarding cultural treasures during wartime or occupation.

The study of foreign experiences is valuable for Ukrainian scholars and practitioners in the field of archival affairs, as it represents a key factor in enhancing the effectiveness of preserving and protecting the National Archive Fund during the challenging times of Russia's armed aggression against Ukraine.

# 3. Methodology / Methods

The methodological framework for investigating the functioning of archival institutions in Ukraine during the full-scale invasion has been established based on systemic and socio-communicative approaches. These approaches have allowed for the justification of the need to enhance the coordination of their activities in extreme conditions and improve the effectiveness of their communication interactions. This is essential for the successful implementation of digitization projects for archival documents aimed at their protection and preservation for future generations, as well as for organizing open access to the digital resources of the National Archive Fund of Ukraine.

Content analysis of archival websites, along with a comparative analysis of their content, the presence of user-friendly services, has enabled the identification of leading institutions that, despite the war, have not slowed down the pace of digitizing archival cultural heritage and its integration into the global communication space. A comparative analysis of foreign experiences in organizing archival affairs has allowed the identification of prospects for its implementation in Ukraine and the delineation of a range of top-priority issues requiring resolution.

### 4. Our approach

With the onset of the armed Russian aggression, the primary focus of activity for Ukrainian archival institutions was the organization of the evacuation of archival holdings to safer areas. As a result of these efforts, 93% (11,758 storage units) of the documents from the National Archive Fund (NAF) of the State Archive of Donetsk Region (in Kostiantynivka) and 90% (31,298 storage units) of the documents from the NAF of the State Archive of Luhansk Region (in Severodonetsk) were successfully evacuated. Partial evacuation of NAF documents also took place from the Central State Scientific and Technical Archive of Ukraine (CSSTAU) in Kharkiv, with the documents being temporarily transferred to the State Archive of Cherkasy Region.

However, there were also losses. Russian forces seized documents from the State Archive of Kherson Region (SAKR), resulting in the loss of nearly 1,500 collections (1,015 collections from storage facility No. 1 and 443 collections from storage facility No. 2) [22]. "In Chernihiv, due to shelling, 13,000 documents, which provided evidence of the crimes of the totalitarian Soviet regime, were destroyed in the building of the archival unit of the Security Service of Ukraine" [16].

It should be noted that with the onset of hostilities, the state archival institutions of Donetsk, Zaporizhia, Luhansk, Mykolaiv, Sumy, Kharkiv, and Kherson regions found themselves in the occupied territories. Due to rocket attacks, archival buildings in the territories of Kharkiv, Mykolaiv, and Kherson regions were damaged, but the holdings were successfully preserved. The data presented are what is already known for certain, but since the war is ongoing, the final results regarding the identification of losses in the National Archive Fund (NAF) of Ukraine will be known upon the conclusion of military operations.

To provide methodological support to archival institutions in the conditions of Russia's armed aggression against Ukraine, the State Archival Service of Ukraine has compiled around three dozen electronic materials and resources on its website, regulating the actions of institutions in emergency situations, including important issues such as the protection and preservation of cultural heritage: "Protection of cultural heritage in the event of armed conflict" (UNESCO), Roger O'Keefe, Camila Peron, Tofig Musayev, Gianluca Ferreri's "Protection of Cultural Property: Military Manual," and others [28, 17, 9].

Despite the challenging work of Ukrainian archival institutions in times of armed conflict, there is an increase in the overall number of NAF documents in various media, demonstrating the dynamics of archival holdings growth (Figure 1).



Figure 1: The dynamics of the National Archival Fund (NAF) of Ukraine growth

Another important direction of work for archival institutions is the restoration of paper documents. In 2022, the plan for the restoration of NAF paper-based documents was not fully completed, as the repair of 335,650 sheets was planned, but only 261,564 sheets were successfully restored [18] (Figure 2).



Figure 2: Indicators of the restored quantity of sheets of paper documents for the years 2020-2022

Leaders in carrying out restoration work among central state archives are the Central State Historical Archive of Ukraine in Lviv (20,559 sheets) and the Central State Historical Archive of Ukraine in Kyiv (14,181 sheets). Among the state archives of the regions, the State Archive of Dnipropetrovsk Oblast (12,587 sheets), the State Archive of Khmelnytskyi Oblast (11,332 sheets), and the State Archive of Odessa Oblast (9,781 sheets) have excelled in restoration work [18]. In 2022, the planned targets were not met due to the Russian military aggression against Ukraine in the archives of the regions that became

the epicenter of the hostilities: Donetsk and Luhansk. Therefore, the planned rates of restoration work on paper-based documents in 2022 decreased compared to the pre-war period.

The next priority direction of archival institutions activities in Ukraine is the formation of the digital collection of the National Archival Fund (NAF), as defined by the "Program for Digitization of Archival Information Resources for 2022-2025".

Despite the complicated working conditions during the armed aggression, in 2022 state archives digitized 271,913 storage units and 31,770 inventories of files [18]. In 2020, 15,063 inventories of files were digitized, and in 2021 - 24,990 [19]. Therefore, comparing these data with the previous years, we observe a trend of increasing the pace of digitizing archival documents, which is particularly important today as it reduces the risk of complete loss of document collections as a result of archival repositories destruction.

The dynamics and volumes of document digitalization by central and state regional archives in Ukraine in 2022 are illustrated in Table 1, based on the data [18].

#### Table 1

parative analysis of the dynamics of archival documents digitalization		
N/N	Name of the archival institution	The number of digitized accounting units
1.	Central State Audio-visual and Electronic Archive	15587
2.	Central State Archive of Higher Authorities and Administration of Ukraine	7856
3	Central State Historical Archive of Ukraine (Kyiv)	7291
4	Central State Historical Archive of Ukraine (Lviv)	5406
5	State Archive of Poltava Oblast	136360
6	State Archive of Kirovohrad Oblast	21990
7	State Archive of Kyiv Oblast	20064
8	State Archive of Khmelnytskyi Oblast	18138

Therefore, digitization allows for the preservation and widespread accessibility of the most valuable documents held in the archives. In 2022, over 2.3 million documents from the 20th century became available online as part of a project initiated by the Memorial Holocaust Babyn Yar Charitable Foundation. Work is ongoing to populate the scientific research internet project "Ukrainian Martyrology of the 20th Century", which contains records of 112,562 repressed individuals who were victims of political repression [21] (https://archives.gov.ua/um.php?fbclid=IwAR0y9jbZkcsVCj3B1NdjLe4idN6qRMoQqfTImqYcQlXq ousgGsBmwFXn4JM).

In May 2022, the State Archival Service of Ukraine presented the "Interarchival Search Portal" on the ARCHIUM platform (https://searcharchives.net.ua). The portal provides 24/7 access to consolidated archival information (digital copies of storage objects) through a single access point. It featured 7,020 archival funds. The following archives are currently involved in the project:

- Central State Archive of Higher Authorities and Administration of Ukraine (3,425 fonds, 6,051 finding aids, 2,227,219 files);
- Central State Historical Archive of Ukraine in Kyiv (1,598 fonds, 4,278 finding aids, 1,304,508 files);
- Central State Archive of Public Associations and Ukrainika (339 fonds, 764 finding aids, 323,588 files);
- Central State Archive-Museum of Literature and Art of Ukraine (1,434 fonds, 2,245 finding aids, 319,216 files);
- State Archive of Lviv Oblast (5,154 fonds, 13,341 finding aids, 2,684,190 files).



Figure 3: Interarchival Search Portal

However, out of the 7 central state archives, only 60% of institutions are participating in this important project. Among the 24 regional state archives, only one is from Lviv. Therefore, the most important task today is the consolidation of digital resources from all central and regional state archival institutions of Ukraine into a single access point. This will significantly enhance their service and communication capabilities.

It should be noted that, in addition to the "Inter-Archival Search Portal" project, Ukraine already has dozens of other digital archival projects on various platforms offering a variety of content, including digitized documents, photographs, audio and video resources, and more:

- Central State Electronic Archive of Ukraine (CSEA Ukraine) (https://tsdea.archives.gov.ua/en/);
- MYKHAILO HRUSHEVSKY e-ARCHIVE he was a prominent Ukrainian scientist, public figure, politician, and statesman (http://hrushevsky.nbuv.gov.ua/en);
- LIBRARIA Electronic Archive of Ukrainian Periodicals, a project of Archive Information Systems (https://libraria.ua/en/);
- Electronic Archive of the Ukrainian Liberation Movement a powerful portal with a significant array of digitized freely accessible documents (https://avr.org.ua/en);
- "Electronic Archive of Ukrainian Printed Press" a specialized portal that brings together online resources of libraries and archives for users interested in Ukrainian history and periodicals of various times (http://back2news.org/en);
- "Archive of Ukrainian Silent Cinema" the first online resource (film documents) in Ukraine that contains a unique collection of documentary films (with corresponding filmography) produced by the All-Ukrainian Photo Cinema Administration (https://www.youtube.com/playlist?list=PLaiKyJj77P4wlB1K\_lrcNnMoetK8Ykxeh);
- "Electronic Archive of Ukrainian Folklore" (https://folklore-archive.org.ua/en);
- Maidan Digital Archive (https://digitalmaidan.org);
- Electronic Archive of Ukrainian Unofficial Art "UU#Kyiv" project that represents samples of Ukrainian unofficial art of the second half of the 20th century "Ukrainian Unofficial" (http://www.archive-uu.com/en/golovna);
- V. I. Vernadsky Electronic Archive (http://www.irbis-nbuv.gov.ua/cgibin/irbis\_eav/cgiirbis\_64.exe?C21COM=F&I21DBN=NAV&P21DBN=EAV&Z21ID=);
- Electronic Archive and Library of the Shevchenko Portal (http://kobzar.ua/en/main);
- "Polyphony" an online archive of musical folklore (https://www.polyphonyproject.com/en/).

These archival digital collections vary in theme and the types of funds they encompass, presenting unique documentary heritage of Ukrainian historical and cultural significance. They offer the opportunity for individuals to access these resources at any time, which is a crucial service provided by archival institutions in the context of the digital society's development. To enhance the efficiency of the Ukrainian digital archival space, it is essential to consolidate the resources of these archival projects into a single access point by reflecting information about them in the Inter-Archival Search Portal.

Furthermore, the quality of information support for archival requests from Ukrainian citizens is vital. This support is facilitated through digital resources available on the official websites of archival institutions and their social media accounts (Facebook, YouTube, Twitter, Instagram). The following data illustrate this: In 2022, the number of followers on the page of the State Archival Service of Ukraine on Facebook increased to 7,500 individuals (14% more than in 2021), with 1,320 followers on YouTube and 788 on Instagram. Ukrainian Research Institute of Archival Affairs and Document Studies, as well as all central state archives and regional state archives, maintain their own accounts on social media platforms.

Thanks to the round-the-clock presence and well-established network communication of archival institutions on the Internet and social media, there is effective feedback between archival professionals and users. This contributes to efficient interaction among all stakeholders in the archival field, reduces user complaints, improves the quality of their information services, and enhances the image of archival institutions.

# 5. Conclusions and Future Works

Therefore, the activities of archival institutions in Ukraine, amidst the Russian Federation's military aggression, have endured trials, including the destruction of their material infrastructure and the loss of a portion of archival funds in occupied territories. Thanks to the high level of professionalism and patriotism among archival workers, a series of measures have been developed to evacuate and protect archival funds from destruction under extreme conditions. Among the most critical of these measures is the acceleration of digitization efforts for the most valuable segments of archival funds. This involves the participation of central state and regional archival institutions of Ukraine in corporate digitization projects, as well as the consolidation of digital collections into a single access point through the Inter-Archival Search Portal. These projects embody essential principles of effective archival management: systematicity, planning, coordination, and cooperation, uniting all types of resources to preserve and provide open access to the foundational components of the National Archival Fund of Ukraine.

## 6. References

- [1] A. Brown, Practical digital preservation: A how-to guide for organizations of any size, Facet Publishing, London, 2013.
- [2] A. Maistrenko, R. Romanovsky, Digitization of Archival Documents in Foreign Countries: Information-Analytical Overview, Archives of Ukraine 4(312) (2018) 64-87. URL: https://au.archives.gov.ua/index.php/au/article/view/53/. [In Ukrainian]
- [3] B. de la Porte, R. Higgs, Challenges in digitisation of cultural heritage material in the Western Cape, South African Journal of Information Management 21(1) (2019). doi: https://doi.org/10.4102/sajim.v21i1.1104.
- [4] Digitization Activities, Federal Agencies Digitization Guidelines Initiative. URL: https://pdf4pro.com/amp/download?data\_id=44aace&slug=federal-agencies-digitizationguidelines-initiative.
- [5] Digitization and Archives Canadian Council of Archives. URL: https://pdf4pro.com/amp/view/digitization-and-archives-canadian-council-of-archives-44aacd.html.
- [6] Digitization of Audio-visual Documents of the National Archival Fund: Guidelines [Otsyfruvannia audiovizualnykh dokumentiv Natsionalnoho arkhivnoho fondu: metodychni rekomendatsii], in: L. V. Didukh, T. M. Kovtanyuk (Eds.). Kyiv, 2021. URL: https://undiasd.archives.gov.ua/doc/mr\_ozif%20avd%20naf.pdf. [In Ukrainian]

- [7] I. Tiurmenko, L. Bozhuk, Yu. Smolnikov, Yu. Syerov, Digital Communications of Ukraine Archival Institutions, CEUR Worhshop Proceedings 2616 (2020) 296-307. URL: https://ceurws.org/Vol-2616/paper25.pdf.
- [8] IASA-TC 06 Guidelines for the Preservation of Video Recordings, International Association of Sound and Audiovisual Archives, in: C. Fleischhauer, K. Bradley (Eds.), 2019. URL: https://www.iasa-web.org/tc06/guidelines-preservation-video-recordings.
- [9] J. Toman, The Protection of Cultural Property in the Event of Armed Conflict, Dartmouth, Legal Monographs and Treatises, 1996. URL: http://digitalcommons.law.scu.edu/monographs/11?utm\_source=digitalcommons.law.scu.edu%2 Fmonographs%2F11&utm\_medium=PDF&utm\_campaign=PDFCoverPages.
- [10] Kh. V. Kravtsiv, Basic Arrangements for Forming Electronic Information Resources, Master thesis, Ternopil, Ternopil National Economic University, 2017. URL: http://dspace.wunu.edu.ua/bitstream/316497/17618/2/%D0%9C%D0%90%D0%93.%20%D0%9 A%D0%A0%D0%90%D0%92%D0%A6%D0%86%D0%92.pdf. [In Ukrainian]
- [11] L. P. Khaletska, Digital preservation of e-documents based on an example of the Bibliothèque nationale de France, Library Science. Document Science. Informology 4 (2015) 26-34. URL: https://er.nau.edu.ua/bitstream/NAU/19820/1/%d0%95%d0%bb%d0%b5%d0%ba%d1%82%d1%80%d0%b5%d0%bd%d0%b5%20%d0%b7%d0%b1%d0%b5%d1%80%d0%b5%d0%b5%d0%b6%d0%b5%d0%b6%d0%b5%d0%bd%d0%bd%d1%8f%20%d1%81%d1%82%d0%b0%d1%82%d1%82%d1
  %80%d0%b5%d0%bd%d0%bd%d1%8f%20%d1%81%d1%82%d0%b0%d1%82%d1%82%d1
  %81.pdf. [In Ukrainian]
- [12] L. Yaremenko, Activities of Scientific Archives in the Conditions of Martial Law [Diialnist naukovykh arkhiviv v umovakh voiennoho stanu], in: O. Vasylenko (Ed.), Proceedings of the International Scientific Conference "Library. Science. Communication. Innovative Transformations of Resources and Services", National Library of Ukraine named after V. I. Vernadsky, 2022. URL: http://conference.nbuv.gov.ua/report/view/id/1541. [In Ukrainian]
- [13] M. Nakamura, S. Fujioka, T. Ishikawa, Digital Archive Systems Hitachi. URL: https://pdf4pro.com/amp/view/digital-archive-systems-hitachi-44aad1.html.
- [14] M. Terras, Cultural Heritage Information: Artefacts and Digitization Technologies, in: G. Chowdhury, I. Ruthven (Eds.), Cultural Heritage information, Facet, London, 2015.
- [15] O. Levchuk, Archival Electronic Information Resources as a Source of Historical Information, Archives of Ukraine 4(325) (2020) 52-70. URL: https://tsdea.archives.gov.ua/wpcontent/uploads/2021/10/AU-4\_2020\_52-70\_Левчук.pdf. [In Ukrainian]
- [16] Public Report of the Head of the State Archival Service of Ukraine, Anatoliy Khromov [Publichnyi zvit Holovy Derzhavnoi arkhivnoi sluzhby Ukrainy Anatoliia Khromova], 2023. URL: https://www.ukrinform.ua/rubric-presshall/3668335-publicnij-zvit-golovi-derzavnoi-arhivnoisluzbi-ukraini-anatolia-hromova.html. [In Ukrainian]
- [17] R. O'Keefe, C. Péron, T. Musayev, G. Ferrari, Protection of cultural property: military manual, UNESCO, Paris, 2016. URL: https://unesdoc.unesco.org/ark:/48223/pf0000246633.
- [18] Report on the Work of Ukrderzharkhiv, Archive Institutions, and Special Institutions of the Documentation Insurance Fund in 2022 and Priorities of Ukrderzharkhiv for 2023 [Zvit pro robotu Ukrderzharkhivu, arkhivnykh ustanov i spetsialnykh ustanov strakhovoho fondu dokumentatsii u 2022 rotsi ta priorytety Ukrderzharkhivu na 2023 rikv]. URL: https://www.kmu.gov.ua/storage/app/sites/1/17-civik-2018/zvit2022/Zvit\_2022\_archiv.pdf. [In Ukrainian]
- [19] Report on the Work of Ukrderzharkhiv, Archive Institutions, and Special Institutions of the Documentation Insurance Fund in 2021 and Priorities of Ukrderzharkhiv for 2022 [Pro robotu Ukrderzharkhivu, arkhivnykh ustanov i spetsialnykh ustanov strakhovoho fondu dokumentatsii u 2021 rotsi ta priorytety na 2022 rik]. URL: https://www.kmu.gov.ua/storage/app/sites/1/17-civik-2018/zvit2021/zvit2021-arhiv.pdf [In Ukrainian]
- [20] S. Puglia, J. Reed, E. Rhodes, Technical Guidelines for Digitizing Archival Materials for Electronic Access: Creation of Production Master Files – Raster Images, 2004. URL: https://www.archives.gov/files/preservation/technical/guidelines.pdf.
- [21] State Archival Service of Ukraine. In the database "Ukrainian martyrology of the XXth century" information on the 93 475 repressed individuals is now available. URL:

https://archives.gov.ua/en/2022/09/13/in-the-database-ukrainian-martyrology-of-the-xxth-century-information-on-the-93-475-repressed-individuals-is-now-available/.

- [22] State Archive Service of Ukraine, "Destroyed and damaged documents in the war", Anatoly Khromov in Studio ČT24 Česka Televize [«Znyshcheni ta poshkodzheni dokumenty u viini», Anatolii Khromov u Studio ČT24 Česka Televize]. URL: https://archives.gov.ua/ua/2022/05/09/знищені-та-пошкоджені-документи-у-війні/ [In Ukrainian]
- [23] T. H. Kruchinina, Yu. H. Chernyatinska, Creation of Archive Collections of Websites within the Framework of Initiative Documentation at the Central State Electronic Archives of Ukraine [Stvorennia arkhivnykh kolektsii veb-saitiv u mezhakh initsiatyvnoho dokumentuvannia v Tsentralnomu derzhavnomu elektronnomu arkhivi Ukrainy], Archives of Ukraine 5-6 (2015) 61-67. URL: https://archives.gov.ua/wp-content/uploads/04-3.pdf. [In Ukrainian]
- [24] The National Archives of Australia, Preservation Digitisation Standards, 2021. URL: https://www.naa.gov.au/about-us/ourorganisation/accountability-and-reporting/archival-policyandplanning/preservation-digitisation-standards.
- [25] V. V. Bezdrabko, Electronic Archive: Are We Ready for New Challenges? [Elektronnyi arkhiv: chy hotovi my do novykh vyklykiv], in: Proceedings of the 7th International Scientific Conference on Information, Communication, Society, ICS-2018, Lviv-Chinadiyevo, Ukraine), 2018, pp. 123-124. URL: https://ena.lpnu.ua/items/fcf2e104-777f-42de-80e0-78ec45497ebf. [In Ukrainian]
- [26] War Archive: Collect and Preserve [Arkhiv viiny: zibraty ta zberehty], 2022. URL: https://dako.gov.ua/%d0%b0%d1%80%d1%85%d1%96%d0%b2-%d0%b2%d1%96%d0%b9%d0%b8-%d1%82%d0%b8-%d1%82%d0%b8-%d1%82%d0%b0-%d0%b7%d0%b1%d0%b5%d1%80%d0%b5%d0%b3%d1%82%d0%b8. [In Ukrainian]
- [27] War Archive: Collect and Preserve Testimonies of Events in Ukraine [Arkhiv viiny: zbyraty i zberihaty svidchennia podii v Ukraini]. URL: https://ukrainer.net/arkhiv-viyny/. [In Ukrainian]
- [28] Work of Archives in the Conditions of Martial Law in Ukraine [Robota arkhiviv v umovakh voiennoho stanu]. URL: https://archives.gov.ua/ua/робота-архівів-в-умовах-воєнного-стан/. [In Ukrainian]
- [29] Ya. Kalakura, M. Paliienko, The Conceptualization of Electronic Archives in the Context of Digitalization of Ukrainian society, Archives of Ukraine 3(328) (2021) 36-65. URL: http://au.archives.gov.ua/index.php/au/article/view/121. [In Ukrainian].