SUCHO Report for March - December 2022

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Overview

Saving Ukrainian Cultural Heritage Online launched on March 1, 2022, and brought together 1500+ volunteers from more than 38 countries who are collaborating online to preserve Ukrainian digital cultural heritage. During Phase 1 of the initiative, we saved over 51 TB of data from 5,400+ websites of Ukrainian cultural heritage institutions. In Phase 2, we began coordinating aid shipments of digitization hardware, identifying resources for training Ukrainian cultural workers in digitization methods, curating Ukrainian culture in an online exhibit, and archiving Ukrainian war memes. During this period, we have served as a digitally oriented partner for UNESCO, IFLA, and the Ukrainian Library Association in their discussions about developing a National Digital Library of Ukraine.

Equipment

In Phase 2, we partnered with NFDI4Culture to offer support to Ukrainian cultural heritage institutions in digitally preserving material heritage on the ground. Dr. Maryna Nazarovetz coordinated institutional donations of equipment and assisted in the logistical process of shipping equipment to Ukraine. Ekaterina Malygina has been establishing connections with Ukrainian museums, archives and libraries needing support. Together they are identifying solutions to help the institutions, primarily in the area of digital preservation of collections. In addition to support with the acquisition of digitization equipment, Ukrainian institutions receive, on request, the necessary competent support for the use of digitization techniques.

In-kind equipment donations
- National Library of Sweden donated two Zeutschel book scanners to the Vernadsky National Library
- Amazon Community Poland donated the following equipment in-kind to the Vernadsky National Library:
    - 26 all-in-one desktop computers
    - 64 desktop screens
    - 18 external hard drives
    - 12 high-end laptops
    - 36 laser printers
    - 5 high-end reference monitors

Equipment purchased and donated
- Laptops for Kharkiv State Archive -€2,615.03
- Laptops for the Taras Shevchenko National Museum -€3,635.72
- Donation to the Cherkasy Regional Library -€9,776.11
- Large power stations for Ukrainian cultural institutions (10pcs) -€21,990.00
- Camera for Regional Museum in Kropyvnytskyi -€1,060.00
- Two laptops for a museum in Novhorod-Siverskyi -€1,052.73
- Two laptops for a museum in Boyarka -€1,811.54
- Laptop for a museum in Zaporizhzhia -€794.56
- Laptops for Cherson State Archive -€2,352.56
- Power Stations for cultural institutions (20pcs) -€11,599.80
- Book scanner (Cherkasy Regional Library) -€12,545.00
- Donation to Taras Shevchenko University Library to address critical facilities damage from Russian attack -€5,000.00

34 Institutions received equipment from SUCHO:
- Astronomical Museum / Astronomical Observatory of Taras Shevchenko National University of Kyiv
- Boyarka Local History Museum
- Center for Urban History, Lviv
- Cherkasy Regional Library
- Chernihiv Regional Library for Children
- Chernihiv Regional Universal Scientific Library
- Dnipro Central City Library
- Kharkiv Regional Universal Scientific Library
- Kharkiv State Archive
- Kherson Regional Library for Children
- Kherson Regional Universal Scientific Library named after Honchar
- Kherson State Archive
- Kivertsi Local History Museum
- Kropyvnytskyi Local History Museum
- Library of Ivan Franko State University
- Malyutyanka Local History Museum named after Pymonenko
- Museum of Books and Printing of Ukraine
- Museum of Local Lore in Rivne
- Mykola Lysenko Lviv National Music Academy
- Mykolaiv Central Library naned after M.L. Kropyvnytskyi
- National Library of Ukraine for Children
- National Scientific Agricultural Library of the National Academy of Agrarian Sciences
- NGO After Silence
- Novhorod-Siversky Local History Museum
- Poltava Regional Universal Scientific Library named after I. P. Kotlyarevsky
- Poltava State Archive
- Priluky Local History Museum named after V.I.Maslov

- Rivne Regional Library named after V. G. Korolenko
- Sumy Regional Universal Scientific Library
- Taras Shevchenko Literary Memorial House
- Taras Shevchenko National Museum
- Taras Shevchenko University Library
- Vernadskyi National Library
- Zaporizhzhia Regional Universal Scientific Library

Total cost: €74,233.05

Finances

As of December 31, 2022, SUCHO
- Raised **€218,240** in cash donations from **243 individuals, institutional sponsors, and organizations** including the Swedish Library Association, Pearl Jam Vitalogy Foundation, Music Library Foundation, IAML, ACH, Europeana, Amazon Web Services, British Columbia Museums Association, Canadian Association for Information Science, Coherent Digital, and Tufts University.
- Disbursed **€74,000+** for the purchase of digitization equipment, server space, generators, software, and materials for repair/protection of collections donated to cultural heritage institutions in Ukraine.

Media, Publications, & Talks

Since March 2022, SUCHO has been covered in **over 60** news articles published in 14 languages in 17 countries.

Between March and November 2022, SUCHO volunteers and co-founders have participated in more than
- **26 academic presentations** (hybrid, virtual, and in-person) at institutions across the globe; and
- **20 interviews** on radio and television programs, podcasts, and media publications.

A bibliography of news coverage, press, and academic talks can be found at https://www.sucho.org/press.

Curation

Gallery

In May 2022, the newly assembled gallery team began construction of an Omeka gallery to support curated content from archived websites and content submitted by our partner

institutions in Ukraine. The gallery, titled [Exploring Ukrainian Cultural Heritage Online](#), was made public in July, with regular updates of new items added weekly. The threefold goal of the gallery is to: 1) raise awareness of Ukrainian cultural heritage by featuring objects from institutional websites archived by the SUCHO project, 2) raise funds for digitization equipment needed by Ukrainian institutions, and 3) provide Ukrainian educational institutions and community groups both inside and outside Ukraine with materials that can be used for teaching and learning about Ukraine that may be otherwise unavailable. For this project, Prof. Yuliya Ilchuk translated all elements of the Omeka interface into Ukrainian for the first time, a translation which is now available to anyone who wishes to use Omeka as digital infrastructure for Ukrainian digital galleries.

The first stage of the project involved the design and construction of a Dublin Core-based application profile for item-level metadata, integrating both Ukrainian and English in the design, including documentation and training guides. The fields included in the application profile have evolved over the course of the gallery's eight months of existence as we refine the descriptive information we include and improve the workflows used by the volunteers who are hard at work adding more items every week.

Currently, the gallery features 144 items from 77 organizations, representing 20 oblasts across Ukraine. The items span from 20,000 BCE at the earliest all the way to 2022 CE. They encompass intangible and tangible heritage including, but by no means limited to, audio of songs, images from theater performances, digitized and born-digital artwork, digitized documents and manuscripts, and images of buildings, monuments, and other places and physical objects. Every item in the gallery includes descriptive metadata in Ukrainian and English with a URL linking to the original host of the item so users can continue to explore and interact with the institutions we are supporting. The metadata is structured to provide discovery and searchability not only with the full text search feature, but also between items by selecting values within linked metadata fields.

In December, an overhaul of the subject headings used in the gallery began. The headings currently in use were applied from LCSuggest, an Omeka plugin that provides autofilled Library of Congress Subject Headings, which proved too large in size to yield consistent headings applied across the items in the gallery. This was still a valuable step in our process, as it allowed us to see what types of terms are applied in the gallery frequently, and what semantic inconsistencies need to be addressed. We are currently assessing the terms that have been applied thus far to design a custom vocabulary that will improve discoverability across the gallery. This new vocabulary will also enable us to create a matching vocabulary of Ukrainian subject headings that will expand our Ukrainian-language metadata.

Work is also underway to create exhibits within the gallery, featuring material from our partner institutions presented with greater narrative context than the regular item collections. The gallery will act as a platform for our partner institutions to share content that they want to make public but may not currently have the infrastructure to do so.

Internet Archive Metadata

The metadata team's purpose is to create useful metadata that describes the digital items in the SUCHO Internet Archive collection. This metadata has two audiences: 1. those browsing the collection in Internet Archive and 2. the cultural heritage institutions whose items we have preserved in the collection. In the event that the servers storing the items are destroyed or institutions cannot access their items, our work means that we should be able to restore their items to them accompanied by the metadata originally assigned to the item by the institution (if present) as well as metadata that describes the item and identifies where we found it online.

During Phase 1, the metadata team:
- Developed metadata guidelines and video tutorials both for direct upload of individual items with metadata to Internet Archive and for the group editing of metadata in a spreadsheet for items bulk uploaded by web-crawling team to Internet Archive
- Selected metadata elements to be used in describing items. These consist of:
  - Elements required by the Internet Archive
  - Elements useful to navigating the collection on Internet Archive
  - Elements essential to the preservation and restitution of digital objects and metadata to Ukrainian institutions in the case of destruction or inaccessibility
    - Source URL
    - Host institution
    - Host institution location
    - Original subject headings
    - Original description
- Created a custom, limited controlled vocabulary of subject headings based off of Library of Congress Subject Headings (LCSH) to describe items. After an initial set of headings was instituted, volunteers could propose additions as new subjects appeared in the items being described which were then added to the approved controlled vocabulary, modified in some way (e.g., to match LCSH wording, broader/narrow term), or rejected.

This initial element set and guidelines were tested on 1,000 items from the collection by volunteers. The metadata team revised the guidelines according to issues that came up in this test set, and then work began to describe the rest of the items in the collection, which at that point stood at slightly under 15,000 items. During this phase, the team also noted that in addition to the desired images, videos, and textual documents (digitized books, sheet music, dissertations, conference proceedings, etc.), many HTML, XML, and other data files were also part of the Internet Archive collection. These were not the focus of the metadata team's efforts, and in some cases were better preserved in other ways (e.g., submitting links to HTML pages to the Wayback Machine). These undesired items were eventually systematically removed from the spreadsheet where the metadata work was being conducted, drastically reducing the group's workload from 15,000 items to 6,000 (plus the 1,000-item test set).

The goals of the group in Phase 2 remain the same as in Phase 1: describe the items in the Internet Archive collection. However, at this point, no further changes are anticipated to the

element set, few new subject headings have been added, and most changes to the guidelines are clarifications to volunteers' questions on implementing the guidelines. At the end of 2022, almost 4,500 items of the 6,000 have been described. 328 items have been noted as low priority and maybe described after the rest of the items are finished. 138 are in progress and 213 are noted as needing assistance to complete the description. This leaves about 1,000 items that have not been described. In addition to finishing describing these items, the future tasks of the group will include the revision of 1,000-item test set metadata to the improved guidelines, removal of undesired items from actual Internet Archive collection, and finally, bulk upload of the metadata work to Internet Archive, resulting in the final collection.

Meme Wall

At the end of April 2022 SUCHO began building a curated archive of internet memes related to the Russo-Ukrainian war, recognizing the importance and the fragility of these memes as an element of contemporary culture. Since the beginning of the war, they have been shared widely on social media as a sharp commentary on a variety of war-related subjects. Memes use wit and humor to provide Ukrainians with a welcome relief, to effectively convey to the Western audience the importance of supporting Ukraine, and to create powerful weapons in internet battles with pro-Russian opponents. At the same time, memes are ephemeral by their very nature and if not purposefully preserved, they lose their meaning and are quickly forgotten.

The SUCHO meme archive is being collected by crowdsourcing. Volunteers and members of the public submit memes they find on the internet via a [Google form](#). The answers to the questions on the form create metadata for each meme. That metadata includes the following elements: the URL and the date when the meme was posted, the transcription of the text inside the meme in the original language and in English translation (if the original language is not English), the meme's subject and template, names of people and animals prominently featured, country the meme refers to and the meme's language.

The submissions are curated and published to the interactive online meme gallery (The [SUCHO Meme Wall](#)), built by Simon Wiles (Stanford University) and hosted on [GitHub Pages](#). The wall uses the archive's metadata elements (with exception of URL and date) as content filters. At the time of writing, the wall contains over 1541 memes that cover 94 subjects, 103 personalities, 38 countries/world areas and use 85 templates and 10 languages (with Russian, English and Ukrainian dominating the collection). The primary sources for the memes are Twitter, Telegram and other social media.

The SUCHO meme collection is fully using the advantages created by the project's collaborative workflows. The international community of volunteers submits memes from various countries and in various languages. In order to ensure seamless communication between volunteers involved in collecting memes, we created a #memes_collection channel on SUCHO Slack. We have also produced a [Meme Sourcing Tutorial](#) for SUCHO wiki and held a few co-working sessions, both group and individual ones. In order to clarify memes origins we have started the [Ukrainian Meme Glossary](#).

By building the Ukrainian war meme archive complete with metadata we not only attempt to preserve the extraordinary spirit of creativity as means of resistance during the horrible war, but also to create a unique resource for research and teaching about the war discourse that could be used both in Ukraine and internationally. In the Fall 2022 semester the collection was in fact used as a basis for teaching at these academic institutions:

1. University of Illinois Urbana-Champaign (SourceLab at Department of History): SUCHO Meme Anthology project (work in progress).
2. Taras Shevchenko National University of Kyiv (Ethics, Aesthetics and Culture studies department, Faculty of Philosophy): Visual Anthropology Seminar.

Situation Monitoring

In an effort to more formally provide SUCHO volunteers actionable and frequent awareness of real-time events affecting archiving efforts, the Situation Monitoring (SitMon) team was started in early March 2022. Since that time SitMon, a group of 50 volunteers, has worked to provide up-to date information by aggregating air siren alerts and open-source information to all of SUCHO, in order to prioritize the most at-risk areas in the country, both for hosting Ukraine-based websites, and the physical institutions themselves.

During Phase 1, SitMon provided support for archiving efforts by:

Standardizing "Google Sweeps," i.e., touring Ukrainian locations to find smaller institutions, or ones not on aggregate sites, to add to the "gigantische spreadsheet" of all the cultural heritage websites SUCHO had identified.
- Nearly 400 additional cultural sites were found and added to the list to be archived.
- Searches also resulted in more localized aggregate sites being found and investigated for inclusion on the spreadsheet.

Using THIRA principles, sites already included on the "gigantische spreadshee"t were routinely added to the Priority [Archiving] List, based on criteria related to exposure of both institution and servers to various risks on the ground at any given time.
- Expedited approx 110 sites at either 'Medium," "High," or "Critical" risk.

SitMon also met with other monitoring and InfoSec groups to exchange information and lessons learned to improve workflows going forward during this war and during future crises.

Moving into Phase 2, SitMon also transitioned from the active archiving effort to refining, curating, and actualizing information backed up by SUCHO to work with partner organizations that respond to cultural heritage in crisis areas/warzones to monitor the future of Ukrainian cultural heritage and educate and prepare GLAM institutions to respond to future incidents.

SitMon also began working to design and compile "actionable" metadata that addresses the needs of many different stakeholders and partners supporting our colleagues in the country.

Wikidata

Many of the cultural heritage websites identified for web archiving were identified by querying Wikidata entries about Ukrainian cultural heritage organizations, institutions and sites of cultural significance, scientific publications and more. Additional ones were retrieved from OpenStreetMap. Altogether this process provided the URLs of 1,904 websites that were then assessed and when possible preserved by the SUCHO volunteer community.

The information about the collections and institutions has been enriched with additional data by the volunteers in the process, and these additions will be imported back to Wikidata when it is clear it poses no risk to the original collections.

Web Archives Catalog

After phase one (Web archiving March 1 - July 15, 2022) we did a migration of the enormous Google Sheet – the "gigantische spreadsheet" – that was the heart of SUCHO's coordination and metadata recording to a self-hosted instance of [Baserow](#). Even though the use of Google Sheets was a key to a successful coordination of our web archiving, Baserow, an open-source no-code database offers more advanced features that are useful in a web archiving context, like linking tables and making custom views for public access from the one data source.

From late October 2022 a small group of volunteers started merging, refining and normalizing the metadata from the original Google Sheet as well as from other sources generated by SUCHO volunteers, including metadata from web archive files (WACZ), and uploading forms into a small but "good enough" metadata schema that will help us link records between the SUCHO Gallery, SUCHO Memes and other external resources like the Internet Archive, the [Art Loss Register](#) and other databases of stolen art as well as the Ministry of culture and information policy of Ukraine's registries over destroyed cultural heritage and recorded evidence of Russian aggression and war crimes.

The overall and most important purpose of the SUCHO Catalog is finding and retrieval of archived data so they can be given back to Ukrainian institutions if the original websites.

Stats
By the end of 2022 the catalog contained a total of over 4,600 web resources records archived by SUCHO volunteers; they are either saved locally to our storage servers, to the Internet Archive or both.

Total number of web resource records: 4,600
Total number of locally stored WACZ files: 3,740
Wacz files linked to an institution record: 1,170
Total number of authority records: 1,350

UNESCO / National Digital Library of Ukraine

Since April 2022, SUCHO has participated in meetings organized by UNESCO about protecting Ukrainian cultural heritage, as the only invited partner with an explicit focus on digital cultural heritage. In collaboration with Stanford Libraries, SUCHO advised on the framing and scope of a proposal for UNESCO to fund an exploratory project that would lay the groundwork for a long-term National Digital Library of Ukraine initiative. While that proposal is still pending final approval, SUCHO has been working with the Ukrainian Library Association on setting up a DSpace digital repository for their members.