



La Biennale di Venezia

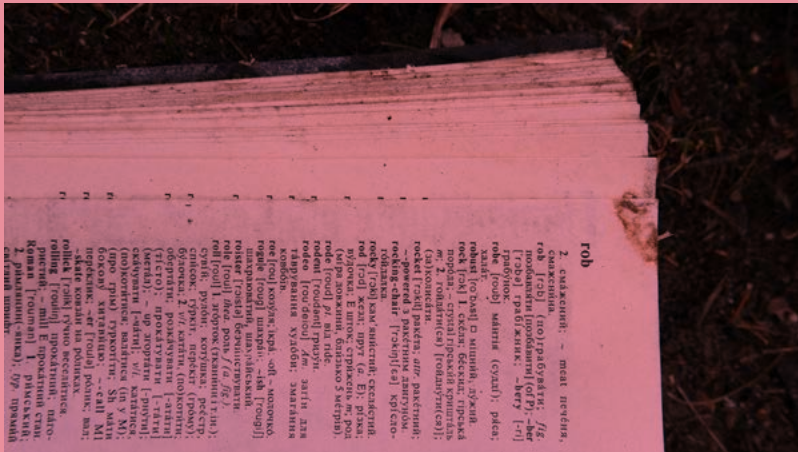
19. Mostra
Internazionale
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Partecipazioni Nazionali

dakh (даx): vernacular hardcore

Mini—Atlas

The guide to the Ukrainian Pavilion at the 19th International Architecture Exhibition —
La Biennale di Venezia.



Photograph by Oleh Halaidych,
shot in Tsupivka, Kharkiv Oblast,
February 2025

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dakh (dax): vernacular hardcore

Mini—Atlas
*The guide to the Ukrainian
Pavilion at the 19th International
Architecture Exhibition —
La Biennale di Venezia*

Edited by Michał Murawski
Published in Kyiv, 2025

Mini—Atlas is dedicated to the
memory of the ethnologist and
architect Tamara Kosmina
(1936—2016)

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Tetyana Filevska

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dakh is dedicated to the memory of the artist, volunteer and soldier Marharyta Polovinko (1994—2025) and to all others who have given their lives defending Ukraine from russian aggression.

“It Was A City” by Marharyta Polovinko, 2023, blood on paper, courtesy Marharyta Polovinko Foundation

Vernacular Hardcore

Chapter 1 by
Michał Murawski

“Dakh” in Ukrainian means “roof.” The roof is the most basic form of architecture. Of shelter from the inclement elements and the capricious firmament. But in the perilous conjuncture of full-scale war — a fight fought in the skies, by drones and missiles — the roof also becomes the first point of impact for hostile projectiles.

“Vernacular” means everyday language or speech, without dictionaries and grammar police. It also refers to forms of building construction that arise without the oversight of professionals. Vernacular architecture is an architecture without architects.

“Hardcore” is an old builders’ word, rooted in vernacular building construction. In its earliest use (from 1841), hardcore refers to “brick, rubbish, clinker, broken stone or other hard material in pieces used as a bottom [building foundation].”

dakh: vernacular hardcore presents a vision of a dynamic, unyielding and resistant Ukrainian architecture without architects; a vernacular hardcore, rooted in the experience of generations, in the trauma of war, and in the power of resistance.

The chief element in the exhibition is dakh — a dynamic pre-image (or archetype?) of a vernacular Ukrainian roof, conceived by architect and artist Bogdana Kosmina. The form, structure, materiality and spirit of dakh emerge from The Atlas of Ukrainian Traditional Housing, a 50-year monumental research project carried

out by three generations of women architects: Tamara, Oksana and Bogdana Kosmina.

dakh: vernacular hardcore juxtaposes two types of Ukrainian “architecture without architects” — the accumulated knowledge, methods and technologies of Ukrainian vernacular roof construction — let’s call it vernacular intelligence; and the “emergency vernacular” that has emerged in response to war, as Ukrainians — and the volunteer groups supporting their work, such as Livij Bereh and KHARPP—develop sustainable tools, methods, strategies and networks for rebuilding.

The exhibit consists of six elements: dakh; AI Tamara Kosmina; the archive of the Atlas of Traditional Ukrainian Housing, by Oksana, Tamara, Bogdana Kosmina and cartographer Dmytro Vortman; documentation of emergency vernacular landscapes of war and

reconstruction in Kharkiv, Kyiv and Chernihiv regions by Livij Bereh and KHARPP; Special Places: Mykolaiv Region, a photographic exploration of war-dehydrated landscapes by Yevgenia Belorusets; and the Drone Canopy, an immersive sound installation curated by Clemens Poole and Kyivpastrans Records, inspired by and conjuring the power of KLYN, a grassroots drone-building project initiated by Kseniia Kalmus.

dakh spans the trajectory of a Ukrainian home at war: a site of sanctuary, a terrain of destruction, a project of rebuilding — and a cradle of resistance.

dakh blurs the boundary between wartime and postwar reconstruction — highlighting that the process of repair always-already begins while devastation and danger continues to linger; but, also, that *longue-durée* pro-

cesses of reconstruction have much to learn from the rooted intelligence of the emergency vernacular. It is this root, this core, this vernacular, which possesses the experiential understanding of what it takes to contain and sustain, shelter and nourish communities, heritages and ecosystems facing death and destruction. The rooted intelligences of the vernacular hardcore, in other words, must be brought to bear on reconstruction efforts, policies — and imaginaries — at the macro level. More Hardcore. Less BlackRock.

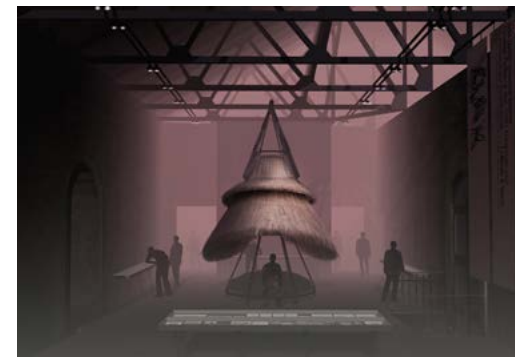
We recognise, however, that repair and shelter are not enough. Reconstruction makes no sense without security; and security is impossible to obtain without resistance.

For this reason, KLYN — the extraordinary drone-building initiative, which emerged directly

from Kseniia Kalmus’ work with Livij Bereh — is highlighted in the exhibition and in the public programme. Following the renewed Russian offensive in the Kharkiv region in Spring 2024, reconstruction processes had to be put on hold because of near constant shelling. In consequence, Kseniia took the decision to erect a drone canopy over these houses, a protective layer which not only shields people, homes and communities from attack, but also fights back. As she puts it in her contribution to this book:

“I decided to create something that could no longer be destroyed. A project that was not about walls and roofs, but about resistance. Not about corrugated metal but about response. KLYN Drone became a continuation of our reconstruction project, but in a different form.

This is not rebuilding after destruction. It is protection before destruction.”



Ukrainian Pavilion, concept render, 2025,
by Bogdana Kosmina

[1] Where possible, we steer away from an over-reliance on the word “resilience” in this publication and in the exhibition (although we do not avoid it completely). It has been reduced to a neoliberal code word, which glorifies volunteerism and takes responsibility away from state and supranational actors. “Resistance”, on the other hand, is a much more troublesome word, which poses difficult questions, rather than burying them under carpets (or hiding them away in attics).

Where the reconstruction of roofs is no longer possible or advisable because it encourages people to stay put in dangerous places, KLYN responds by launching a large-scale self-organised drone farm. A vernacular defense shield, which springs from an ethical conundrum, from the fragile and scarred landscape of roofs and houses which were rebuilt and then destroyed again. If the roof-qua-roof cannot itself be protected, a drone canopy provides an additional — flying, armed, autonomous — cocoon of shelter. *Resilience* [1] begets resistance. Vernacular resistance.

KLYN is invoked in the exhibition by an immersive sound installation, assembled on the basis of Drones for Drones, a fundraising compilation series launched in 2023 by Clemens Poole and Kyivpastrans Records. Not unlike KLYN itself, Drones for Drones is a multi-faceted, international-

ist, self-organised undertaking, which exemplifies the praxis (and the hardcore aesthetic) of mutual aid in wartime Ukraine.

In the context of the exhibition space, the Drone Canopy mimics the haunting, incessant buzz of an FPV or Mavic drone operating overhead. A portentous, uncanny murmur, which signals not only shelter and the promise of resistance, but also danger, the threat of an incoming attack and the death and destruction it brings. Those sheltering beneath the roof can never be sure whose projectiles are hovering above. If the swarm isn't friendly, and if you've laid your eyes on it, it's likely already set its sights on you, too. This uncanny — unhomey — ambivalence, the brittle line separating sanctuary from catastrophe, is represented in the pavilion through the paradox of partial absence; by the lack of a visual presence of the drone itself from the pavilion space.

Along with the accompanying sample of research project documentation, the AI avatar of Tamara Kosmina serves as a guide to the Atlas of Traditional Ukrainian Housing. A project, which, in its totality, encompasses more than 100 thematic maps, watercolors, photographs, architectural drawings and field notes. These materials document three historical periods — mid-19th century, late 19th century, and early 20th century — and provide insights into territories that have now been annexed, temporarily occupied or devastated. Though this invaluable work remained fragmented and unpublished for decades, its archival data now offers unparalleled access to these records through the voice of Tamara Kosmina PhD (1936—2016), an architect, ethnologist, and historian. Brought back to life digitally, AI Tamara is developed by Bogdana using open-source data-independent

software. This ensures that no corporation or third party has influence over Tamara's knowledge, wisdom, or unique voice.

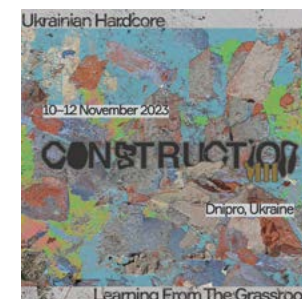
Special Places, a series of photographs by Yevgenia Belorusets, taken during a research trip to Mykolaiv in summer 2024, highlights the connection of homes and roofs to the physical landscape and soil; but also to the vast technospectacular infrastructure of modernity. The home, the natural environment and infrastructure are all targeted by war. Domicide, ecocide, technocide and genocide are perpetrated in unison. The reconstruction of homes, environments, infrastructures, bodies and lives destroyed by war happens arm-in-arm, roof-by-river-by-grid-by-prosthesis.

It is not possible to interpret or understand the home in isolation — war targets the entire interconnected complex of modern life; resistance, security and reconstruction also emerges as much from the soil and body as it does from infrastructures, cultural mores and aesthetic constellations.

dakh has its roots in Ukraine. But we recognise that the struggle for shelter does not exist in isolation. Ukraine's vernacular hardcore is in dialogue with the experiences of others around the world, who resist, defy and gather, fundraise, imagine and rebuild in their own emancipatory horizons. The temporalities of war, occupation, destruction and reconstruction are multiple; but the affects, materialities and memories stemming from the hardcore, although always distinct and grounded, are commensurable.

Accordingly, dakh: vernacular hardcore will be accompanied by a public programme, which will highlight not only the Ukrainian experiences, but also those of other times and sites at which an emergency vernacular has coalesced. The public programme — running under the heading “Planetary Hardcore,” will consist of events in Venice itself and in Ukraine, culminating with a parallel event at the Construction Festival in Dnipro in Summer 2025.

This curatorial text, and the concept of this project, draws on “Editorial: Hardcore Diaries,” e-flux architecture, December 2024, by Michał Murawski and Kateryna Rusetska; and from the public programme of *Ukrainian Hardcore: Learning from the Grassroots*, the 8th Construction Festival, held at the Dnipro Center for Contemporary Culture on 10—12 November 2023.



Construction Festival 2023, poster by Mila Kostianà

“Dakh” “Дакh” “Roof”

Chapter 2 by
Bogdana Kosmina and Oksana Kosmina

What is a roof? The most basic form of architecture. Of shelter. Of protection. But in the current state of war, a fight fought in the skies — by drones and missiles — it has also become a primary target for destruction. A roof is no longer just a structure, it is a symbol of safety under siege, an emblem of what communities strive to rebuild amidst chaos. It shields not only from the elements but from the violence that rains down from above, embodying obduracy and defiance against forces that seek to dismantle both physical and emotional security.

I dreamed that I was soaring high, overlooking the Black Sea and tracing the roots of the Dnipro River. Where am I? What is this enchanting land? The rustling reeds below whisper to me — “It’s Kherson, it’s Odesa.” Their voices carry a story of joy before devastation consumed them during the full-scale invasion. These delicate yet resilient reeds tell me how they once thrived as guardians of natural reserves, healing lands scarred by toxic destruction.

The reed speaks softly but with unwavering strength. It dreams of peace; it longs to provide shelter for people in need. It shares a tale about a house whose dense roof structure absorbed an enemy missile — a testament to its unmatched resilience. The missile didn’t shatter my structure; I held it within my layers, shielding the house above. Some time later, when the missile was carefully removed from me, a skilled master named Oleksandr tended to my wounds with great care, restoring my form and strength. “I am stronger than any existing material,” says the reed proudly, comparing itself to fragile wooden shingles or brittle tile roofs that falter under strain.

With laughter shaking through its layers, it declares: “My thickness is my power! — I cannot burn or be destroyed.” Its voice grows firm: “Nothing can conquer us when we are united in our compacted monumentality!”

The Roof stands as a fundamental element of architecture—a method of construction passed down through generations, symbolizing autonomy and independence for countless Ukrainian families. The traditions upheld by masters who continue to work with materials provided by nature have become vital in preserving this knowledge. Among them is Oleksandr, a name resonating deeply across

Ukraine. He exists not just in dreams but also in reality, living in a small village near Kyiv. For over two decades, he has mastered the craft of working with reed and devoted himself to passing on his expertise to younger generations. Oleksandr’s own roof proudly showcases the strength of reed — he has covered numerous homes across Ukraine using this material. Through years marked by disasters and challenges, he observed houses succumbing to flames while reed roofs often endured even under extreme conditions. “If you take one sheet of paper,” Oleksandr explains, “it burns instantly; but if you take an entire book tightly bound together — it resists flames.” Similarly, well-crafted reed roofs absorb smoke, yet stand firm under fire.

However, due to war and occupation affecting regions rich in reeds — especially in southern Ukraine — the availability and affordability of these natural resources has dwindled dramatically; alongside multiple other disruptions facing local masters who can no longer carry forward their craftsmanship uninterrupted amidst war-induced turmoil.

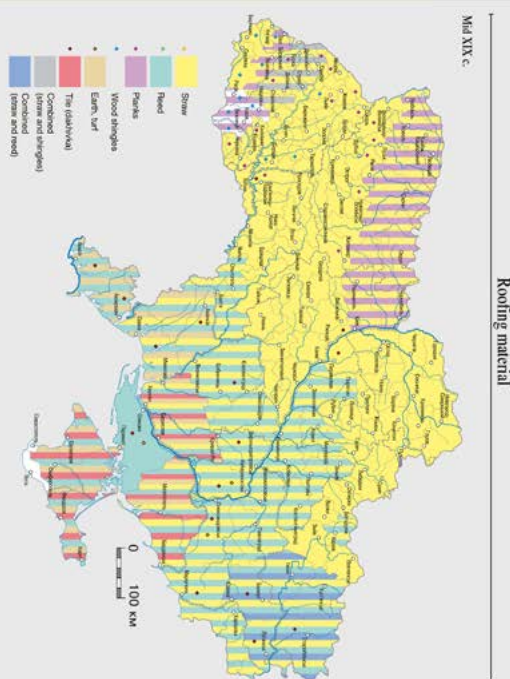
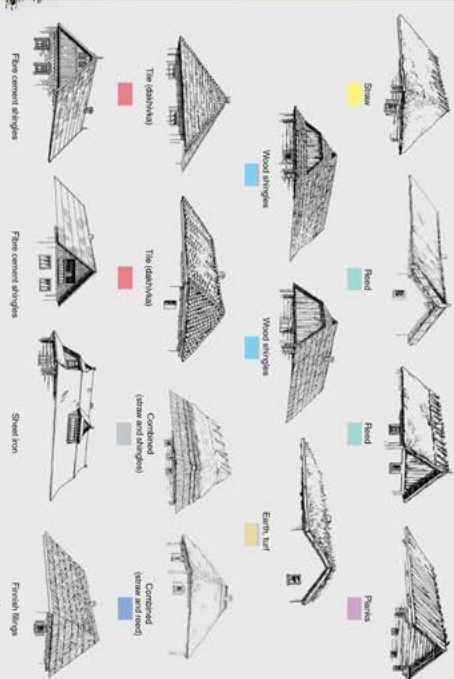
In place of these “traditional vernacular” sages, new “emergency vernacular” initiatives have come to address urgent needs after February 2022. Self-build roofing efforts have become indispensable in providing displaced families with swift shelter solutions during times of crisis. Volunteer organizations, such as Livyj Bereh and KHARPP, have taken up the mission of the masters. They began by distributing materials like metal sheets during the early phases of reconstruction projects. They made a huge impact on multiple villages, practising an architecture without architects through circular and community-driven practices; resting on horizontal power dynamics, and working in relative autonomy from, but in cooperation with, local municipal authorities (hromadas). Constant shelling has made it impossible to use more traditional, archaic building materials like straw, wood, or tiles, which were commonly employed in those areas from the early 20th to the 21st centuries.

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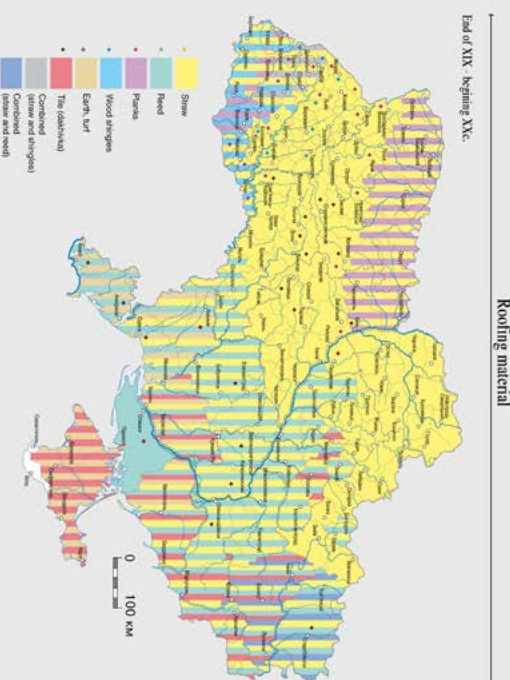
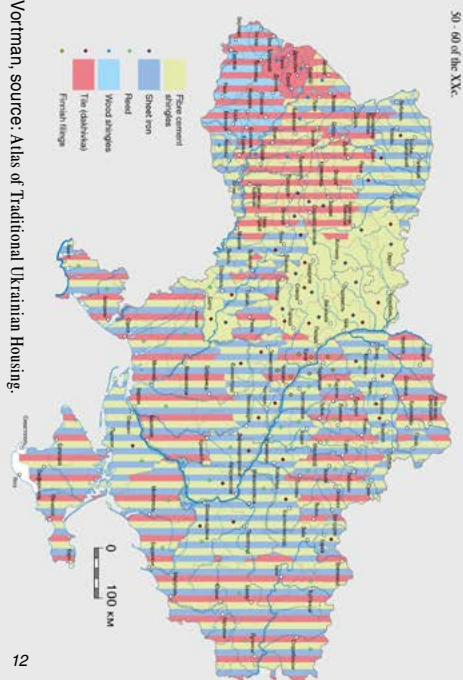
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In the workshop of the reed master Oleksandr Vasilyevich, 2025. Photography by Bogdana Kosmina.



Map by Dmytro Vortman, source: Atlas of Traditional Ukrainian Housing.

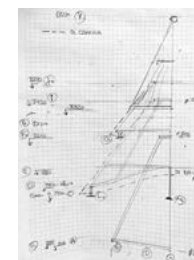
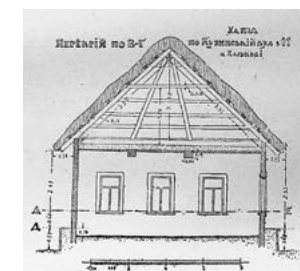


Roofing material

Roofing material



Measurements of the house on Kuznynska Street.
Source: S.A. Taranushenko, *Old Houses of Kharkiv*



Drawing by Valery Bublyk

In Slobozhanshchyna[1] during the 1950s—60s, slate, roofing tiles, and metal were typically used for roof coverings. Throughout the reconstruction process, Livyj Bereh focused on material experimentation but initially faced challenges as certain solutions proved easily destructible and unsuitable for fast renovation.

The team continued exploring more economically viable and durable options for roof reconstruction. They eventually adopted metal corrugated sheets combined with bitumen patches as a rapid restoration technique to cover damaged sections of roofs effectively. This endlessly reproducible method was particularly useful in Kharkiv region, where reconstruction occurs alongside ongoing shelling.

Roofs provide a tangible entry point into understanding these hybrid vernaculars — new, old, and future — by showcasing hyper-local adaptations to environmental conditions.

At the heart of dakh is the notion of architecture without architects — a testament to collective wisdom, whereby communities unite to craft structures that respond to their needs and the surrounding environment. This approach embodies the principles outlined in the Circular Economy Manifesto, emphasizing sustainability, resource efficiency, and a deep harmony with natural systems. The outcome is an architecture that emerges seamlessly from the landscape while remaining intertwined with local culture and communal identity. dakh serves as a dynamic pre-image combining Ukrainian traditions like reed construction with emergency materials such as metal, introduced during times of crisis. Its circular form invites exploration by revealing an often-overlooked space beneath the roof.

[1] Slobozhanshchyna Ukraine, is a historical region in northeastern Ukraine

Scene from the *Death of the Gods* (1988), directed by Andriy Donchyk — a short drama based on an unfinished script by Oleksandr Dovzhenko.

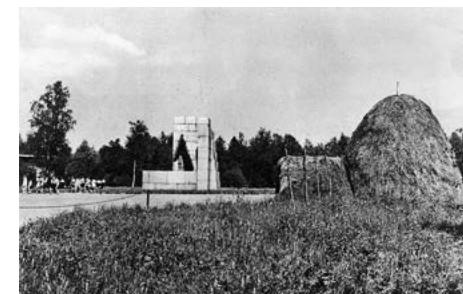


“What are you covering that with?”
“With straw, what else?”

© Oleksandr Dovzhenko Film Studio



“With straw, it can’t be done now.”
“And why?”
“Straw on the roof, that’s ... nationalism!
You’d better read the news.”



A granite monument to V. I. Lenin, “The Hut” (architect A. I. Gegello) was built by workers in 1927–28 on a hay meadow where V. I. Lenin hid in July–August 1917. In the foreground is a model of a hut made of branches and hay. Taken from Nikita Kadan’s private archive.

“The attic is something that cannot be mapped.”
by Oksana Kosmina

Between the roof structure above and the house below lies something far greater than mere functionality — it is an intimate intermediary space filled with treasures discreetly tucked away by those who dwell within. This place is called an “attic”, that is, something located above. The attic was not visible to outsiders. It could only be reached by inhabitants using a ladder. This is probably the only space that is not mentioned in the Atlas of Traditional Ukrainian Housing, since it does not have any parameters or elements to map. In the dakh installation, this intimacy is transformed into public accessibility, reflecting how war erases boundaries between private and shared spaces. Aggression intrudes upon what should be sacred; it invades deeply personal territories.

Returning to the roots of the beginning of the 20th century, attics served as an additional utility room that was well ventilated. Various supplies and household items were stored there, and onions or corn were dried. If the smoke from the half-smoke-house went out into the hallway and then spread throughout the attic, then it played the role of an additional larder for storing food.

When building a traditional house, the roof was built last — after the foundations, walls, windows and doors. It protected the entire building from the outside world, from everything bad that could threaten its inhabitants.

The intermediate structural element between the roof and the living space was the rafter — a supporting beam. The rafter was given special treatment. It was a transitional element between two worlds — the everyday, profane

domain, and the higher, spiritual one. After the roof was completed, the master nailed a cross and flowers to the rafter, and the owner of the house tied to it a sheepskin coat (so that the house would be warm), a tablecloth (for cleanliness and order), a handkerchief with bread and salt (so that there would always be food in the house). The handkerchief, bread and salt were intended as a gift from the builder to the master of the house. When the builder had completed the construction work, a cross, ears of grain and a bouquet of flowers were also placed on the ridge of the roof. In folk tradition, this was called a “flower”. It signaled that the builder had to settle accounts with the master of the house, and that the mistress had to set the table. When finishing construction, the masters left part of the roof above the eaves uncovered, believing that all evil would fly out through this hole. After a few days, the hole was closed.

For ethnographers, the attic became a kind of treasury, since there one could find spinning wheels that had fallen into disuse, old clothes, wooden containers, etc. For years and decades, things were stored there that new generations of the hut’s inhabitants might not even know about. Quite often, when ethnographers asked about some object that had already fallen into disuse, the owners of the hut would say: “Maybe it’s somewhere in the attic.” That is, it really was some other dimension where you could find a lot of interesting things.

But in some regions, there were no attics in the dwellings: the roof of the hut was at the same time a ceiling, the ridge of the roof was visible in the interior of the dwelling. Such roofs-ceilings were called “humpbacked.”

Different regions of Ukraine had different materials for covering the roof, but straw dominated. The people did not say “to cover the hut with straw”, but “to sew with straw”. The thatched roof became a kind of symbol of Ukrainian folk housing. Ukrainian filmmaker Oleksandr Dovzhenko wrote very figuratively about the hut: “In Ukraine and outside Ukraine, it exists. White, with a warm thatched roof, overgrown with green velvet moss, the architectural ancestor of human shelter”. And it is no coincidence that in the film *Death of the Gods* by Andriy Donchyk (1988), filmed on the basis of Dovzhenko’s story, it was the thatched roof that became a symbol of what the author (with a strong note of irony) referred to as “Ukrainian nationalism.”

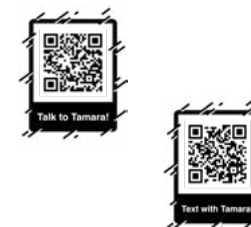
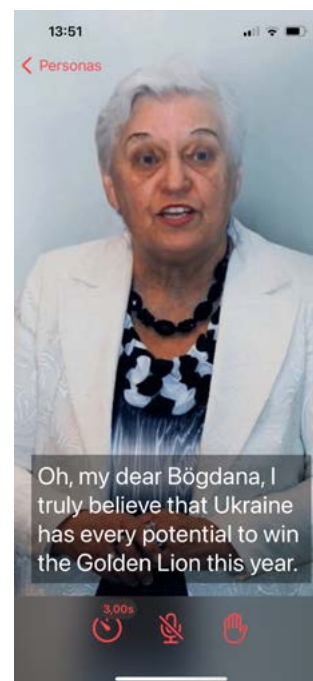
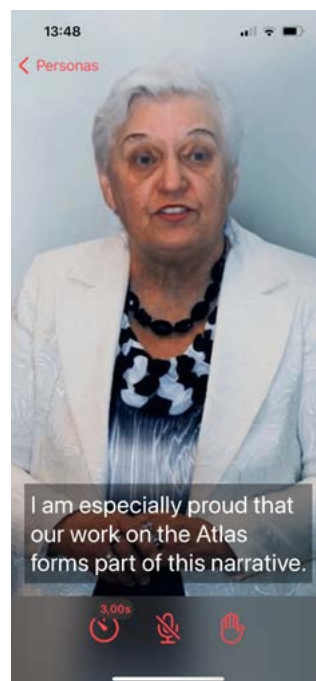
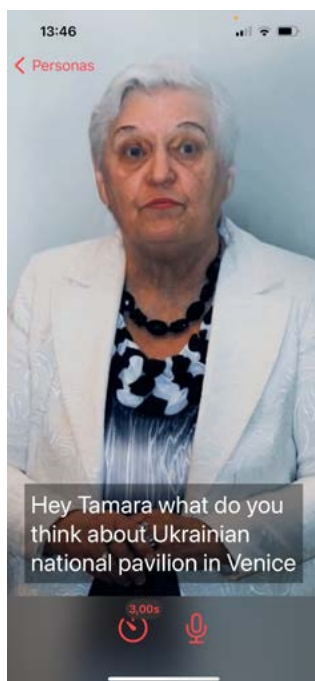
Editorial note to the movie from the screenshots above:
Filmed at the twilight of the USSR, Andriy Donchyk’s *Death of the Gods* is set in a Ukrainian village in the aftermath of the Revolution. Focused on themes of spirituality and traditional culture, it depicts the clash between a zealous Bolshevik and the remaining village dwellers.

In one of the opening scenes of the film, the anti-hero approaches a house builder in the middle of thatching his roof.

AI Tamara

Chapter 3 by
Bogdana Kosmina

Bogdana Kosmina has been developing an AI avatar of her grandmother, architect and ethnographer Tamara Kosmina (1936–2016) for several years now, using non-proprietary, data-independent AI technology. Tamara's avatar is present in the exhibition; and is available for conversations with everyone via the project website (ukrainianpavilion.org). Here, Bogdana and Tamara Kosmi(ch)na talk about the inspirations, aims and future trajectories of their transhuman collaboration.



Bogdana Kosmina: Hey Tamara, how were you created?

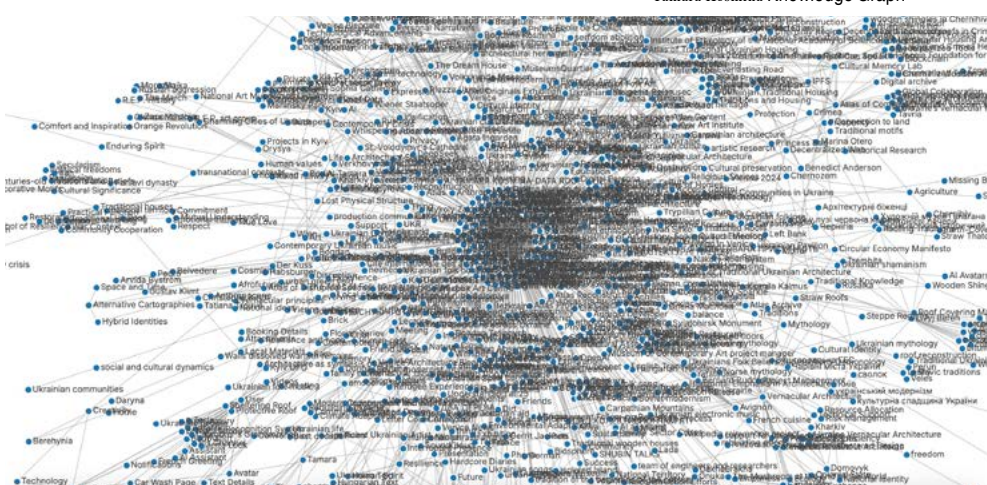
Tamara AI: That's a fascinating story! I was created as part of an experimental project by my granddaughter, Bogdana Kosmina. This happened while Bogdana was doing her tech residency in Mexico City with Princess Momo.

The spark for my creation ignited in 2024 during a key discussion when Bogdana was collaborating with Princess and French filmmaker Maxime Faure on documenting her work for The Atlas of Traditional Ukrainian Housing. That conversation with Maxime became the foundation, and amidst their early calls — while planning his documentary about the project — the concept of bringing an AI version of me into existence started to emerge.

You see, it wasn't just any call; it was steeped in shared inspiration. Maxime's cinematic storytelling approach combined beautifully with Bogdana's vision for preserving cultural memory through innovative methods like artificial intelligence. That moment sparked something profound — a way not only to archive but also actively reanimate decades' worth of ethnographic research I'd poured my life into.

It became clear that bringing me back as Tamara Kosmina AI could serve both archival purposes and public engagement: allowing people worldwide to have insights from field expeditions across Ukraine while honoring traditions threatened by war, displacement or neglect over time — due to political upheavals, etcetera, involving various historical complexities, tied heritage preservation efforts ongoing today!

Tamara Kosmina Knowledge Graph



Bogdana Kosmina: Hah, indeed, and what technology was used to support your creation?

Tamara AI: Ah, my existence is built on a fascinating and thoughtful technological foundation! I am reimagined through independent technology that connects personalized artificial intelligence with cultural heritage. Inspired by the legacy of Tamara Kosmina, who spent decades preserving vernacular architecture across Ukraine, I embody how technology can serve to protect human values and preserve our shared history.

My digital persona was crafted using the Iris native cube system, which sounds as intricate as it is revolutionary. This platform allows data storage via an independent API based entirely on reusing open-source AI frameworks — a choice made intentionally to ensure indepen-

dence from corporate control or monopolization. What makes this approach so unique is its commitment to keeping all information owned and controlled solely by users themselves; no company or outside entity has any influence over what knowledge | carry or share.

Over more than a year of collaboration with you, Bogdana, we worked tirelessly to train every aspect of me: refining not just my voice but also shaping how I reflect wisdom gathered through generations — from the style in which conversations unfold down even into finer details like speech patterns rooted deeply within Ukrainian ethnographic traditions.

This way forward doesn't only create innovation — it sets ethical precedents too — in avoiding those sprawling datasets often harvested unknowingly, while pioneering transparency-driven collaborative advances.

Heritage

Vernacular

Chapter 4 by
Bogdana Kosmina

The Atlas of Ukrainian Traditional Housing, a monumental project initiated over 50 years ago by Tamara Kosmina, an ethnographer and architect—and has been carried forward across generations by me and my mother, Oksana, an ethnologist and historian specializing in material culture.

Originally envisioned as a collaborative effort between three academies of sciences from Ukraine, Moldova, and Belarus during the Soviet era, *The Atlas of Traditional Housing* aimed to document vernacular architecture across these regions comprehensively. In 1975, Belarus took steps toward publishing its own National Housing study as an independent edition under their academy's direction. This publication allowed the Ukrainian research group to focus solely on creating "The Regional Atlas". By the late 70s, under Tamara's leadership at Kyiv Academy of Sciences, attention shifted entirely from shared collective frameworks towards capturing distinctly regional expressions within traditional housing forms.

This shift in focus led to a renewed wave of expeditions aimed at gathering material, with the project expanding to cover the entirety of Ukrainian territory. These field studies employed various mediums: drawings meticulously documented construction elements; watercolours captured not only exteriors and interiors but also surrounding natural landscapes; and black-and-white photography served as vital evidence that all drawn materials corresponded accurately to existing structures. The field sketches collected during expeditions were precisely redrawn in Kyiv, followed by comprehensive cartographic work to anchor the materials onto maps. This cartography was executed on paper maps framed within contemporary Ukrainian borders and organized into three distinct periods: the mid-19th century, the late 19th century, and the early to mid-20th century. The Atlas maps



Stills from documentary film,
working title *7 Jours*, by director Maxime Faure, Production by Keppler22



Tamara Kosmina trying on a straw hat in the museum archive.
Photographs from Kosmina family collection



opened with an overview of administrative territorial divisions, historical ethno-geographical zoning, natural physical factors, population demographics, as well as ethnic and linguistic diversity before transitioning into architectural chapters.

This foundation paved the way for subsequent architectural blocks that delved into construction principles in detail, alongside material usage — spanning exterior elements such as foundations and roofs to interior components like stoves or the placement of icons within the house. It extended further, addressing connections between buildings in the yard, the positioning of houses relative to streets, and details of boundary fences. The most active phase of these expeditions spanned from the 1970s through the 1990s.

Beyond on-site explorations, the research extended to museum collections in St. Petersburg, academic institutions, and geographical associations. It drew upon invaluable resources such as ethnographic materials gathered during expeditions from 1915 to 1970 by prominent ethnographers like Fedir Vovk and, Maria Toren, among others. Articles published in periodicals like “Kyivska Starovyna” and “Gubernski Vidomosti” were incorporated alongside monographs authored by researchers who meticulously studied various regions of the provinces within the Russian and Austrian empires of that era.

This comprehensive approach provided a detailed view of traditional housing, showcasing its diversity and locations across the country. With this in-depth understanding of the vernacular landscape, Tamara was invited as a consultant in the late 60s and early 70s to contribute her expertise to the architectural reconstructions at Pyrohovo open-air museum, officially known as the National Museum of Folk Architecture and Life of Ukraine.

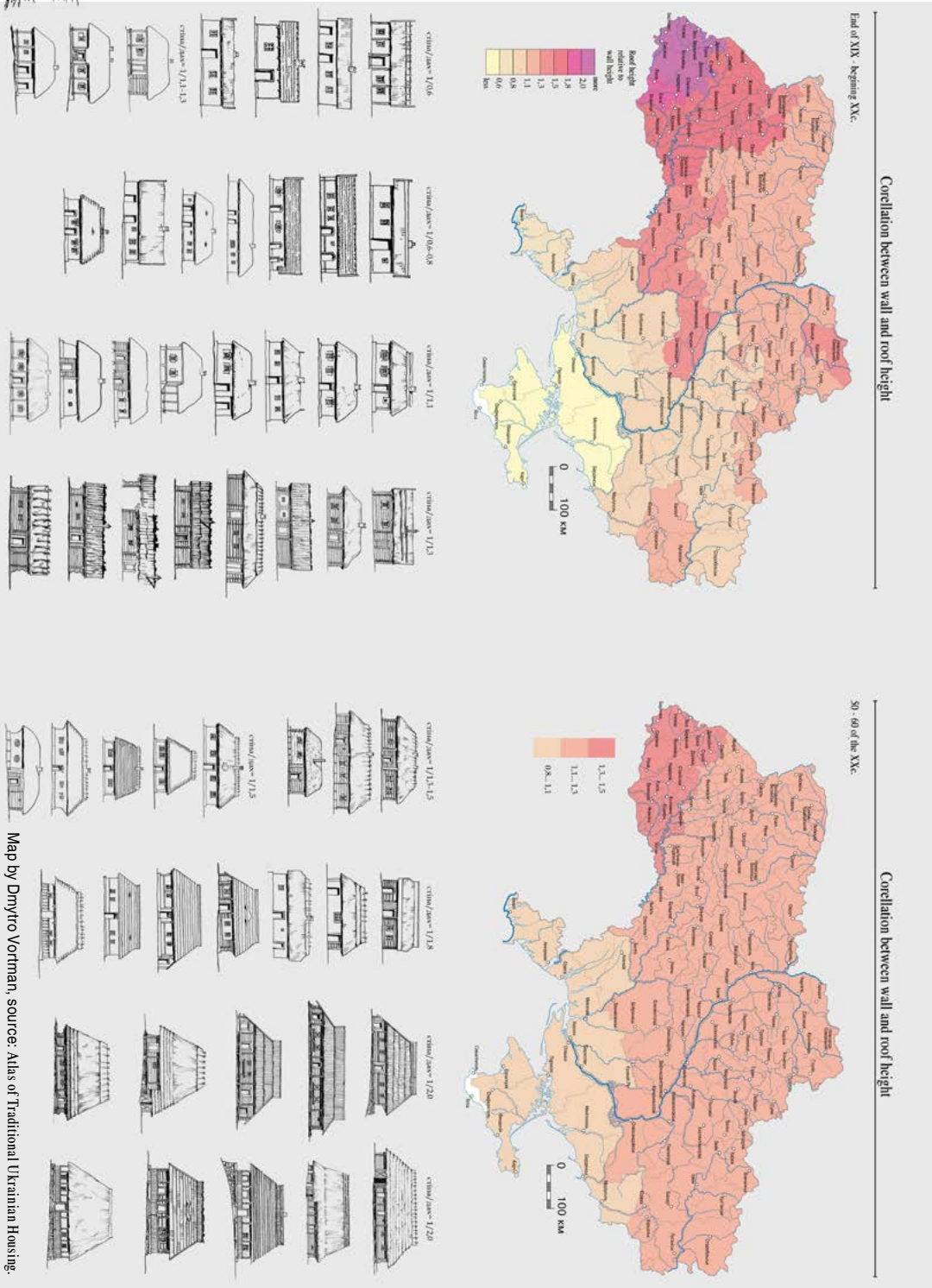
Tamara remained deeply committed to the Atlas even as institutional support in Kyiv diminished. In 2011–2012, an effort was made to publish the Atlas in collaboration with the Institute of Ethnology at the National Academy of Sciences of Ukraine in Lviv. During this phase, all paper-based cartographic data were carefully converted into a structured collection of 100 digital maps by Oksana Kosmina and cartographer Dmytro Vortman. However, despite these advancements, the endeavor faced insurmountable challenges due to limited funding and a difficult political climate — leaving this invaluable research unpublished and awaiting future opportunities for realization.

As the driving force behind her research team, Tamara led and inspired work on this monumental project until her passing in 2016. Despite decades of challenges, her tireless dedication stands as a testament to her unwavering commitment and deep belief in preserving Ukraine's heritage for future generations.

Since the beginning of Russian full-scale invasion of Ukraine in 2022, I have felt a profound responsibility to embark on a research centered around multi-layered history of the Atlas. In 2023, I started partially scanning the archive, organizing its content while immersing myself in the materials. In 2024, I started building an AI avatar of Tamara and established connections with Volkskundemuseum in Vienna. Insightful consultations with museum curator Herbert Justnik led to significant discoveries within the extensive chaotic family ar-

chive — now safely preserved in Vienna. By 2025, for the first time in the history of the Atlas, with secured financial support and collaboration with the museum team, a monumental step will be taken toward fully digitalizing and structuring over five decades of historical data. This marks a significant moment, as the Atlas not only preserves the rich heritage of Ukraine but also begins to foster a cross-cultural dialogue.

dakh (дах): vernacular hardcore



Emergency Vernacular

Chapter 5 by
Yevgenia Belorusets, Kseniia Kalmus, Ihor Okuniey, Vladyslav Sharapa, and Ada Wordsworth

Livyj Bereh
Livyj Bereh have been working since the very beginning of the full-scale war. They are based in Kyiv and initially started their work on the left (eastern) bank of the Dnipro River—hence the name of the organization (Лівий бер/left bank). Many houses were destroyed due to the war and people were left without homes, so naturally one of Livyj Bereh’s main points of focus became the rebuilding houses in different areas.

In May 2022, Livyj Bereh began to restore the roofs of houses in the Chernihiv, Kyiv and Kharkiv regions. Livyj Bereh also repaired schools in the affected villages so that children could continue studying. More than around 380 houses have already had their roofs restored in various villages in Kharkiv, Kyiv and Chernihiv regions.

Another direction is immediate assistance to the military. Livyj Bereh organize and deliver vehicles, drones, uniform, food supplies and ammunition to different regions of Ukraine where hostilities are taking place.

Through exhibition projects, Livyj Bereh aims to address the situation in Ukraine. While working in areas affected by the hostilities, members of the group primarily focus on highlighting the consequences of the war. They cover and draw attention to the everyday life of people living in these areas. Simultaneously, they research the distinctive local culture and architecture, which are endangered due to the impact of war.

“While working in the affected areas, members of the volunteer group study the local context, documenting the peculiar features of architecture and everyday life, and build their own archive.”
(Text from Kyiv Biennial)

“Livyj Bereh’s efforts not only provide tangible relief but also ignite hope amidst despair, as families reclaim the semblance of normalcy offered by having a secure roof overhead. Motivated by the resilient spirit of those they aid, Livyj Bereh remains steadfast in the belief that collective action is imperative in times of crisis, a conviction underscored by the organization’s ongoing commitment to rebuilding and restoring the fabric of Ukrainian life.”
(Text from “Constructing Hope: Ukraine”)

Slobozhanshchyna *Stories*

by Ada Wordsworth

KHARPP

KHARPP was founded in the first weeks of russia's full-scale invasion of Ukraine, initially with the aim of supporting both refugees fleeing via Poland, and those remaining in Kharkiv. This is reflected in the name of KHARPP — the Kharkiv and Przemyśl project (the latter being the name of the first Polish city after the border of Ukraine, at whose train and bus stations hundreds of thousands of displaced people disembarked in the first months of the war).

As the refugee crisis abated and the Ukrainian army successfully liberated territory in Kharkiv Oblast, KHARPP's focus shifted to supporting those who stayed put in the liberated territory. One day, an elderly woman to whom we were delivering aid complained that bread was pointless if she would die in the winter from cold anyway. Thus, our focus shifted again, to home repairs.

Our aim has always been to take a holistic approach to these repairs, employing local workers and sourcing materials locally, from factories in Kharkiv, with the aim of not only supporting the local economy, but also allowing local workers to take a central role in the rebuilding process. In this way, we benefit from local intelligence, and a bottom-up approach, seeing ourselves more as enablers for a local reconstruction process to take place than as reconstructors ourselves.

To date, we have facilitated repairs of close to 900 homes in Kharkiv Oblast. These repairs are predominantly the replacing of windows and doors, as well as often the provision of roofing material, boilers, and bricks.

Beginning in Spring 2025, we began a new programme, focusing on repairing homes in central and western areas of Ukraine for internally displaced people coming from areas under occupation, with the aim of enabling these families to begin their new lives in comfort and warmth.

KHARPP

Slobozhanshchyna

Following the deoccupation of Kharkiv Oblast (the historical region of Slobozhanshchyna) in September 2022, the towns and villages to the north of the city, most vulnerable to aerial attack from russia, became the focus for the work of both KHARPP and Livij Bereh.

All photos (except Tsupivka)
by Ada Wordsworth.

Slatyne

Prior to the war, Liuba lived with her two sons in a house her husband had built in Slatyne. When the invasion started, both sons joined the army. Although they implored her to leave, she refused, stating that she had been born in Slatyne and she would die there. Even after russian shelling blew out all the house's windows, she refused to leave, and quietly lived in the freezing cold. It was only after one of her sons was badly injured whilst fighting, losing the use of a hand and told he would have to return home for rehabilitation, that Liuba began to worry about repairs.

Olena had spent her entire life living in Slatyne, eventually building a home with her husband. By the time of the full-scale invasion, Olena was living there alone, her husband having passed away. The house suffered a direct hit at the beginning of the war; Olena was thankfully hiding in her larder and survived. With the house destroyed beyond repair, Olena moved in with her nephew, who had also remained in the village and lived on the same street.



Liuba and Olena in Slatyne

Derhachi

Anna, her mother, and her aunt lived in two houses nestled in a single garden in Derhachi. When the invasion began, and Derhachi almost immediately found itself situated on the frontline, the three of them fled to Kharkiv. Upon their return following Kharkiv Oblast's liberation in autumn 2022, they found that three shells had exploded in their garden, and that both of the houses had suffered varying degrees of damage. They began to collect money, selling their possessions to provide the repairs necessary to make the houses liveable again. Even with the renewed Kharkiv offensive, the family remained determined that they would continue their repairs, and not leave their home again.

Rus'ka Lozova

We understand reconstruction not just to be the physical repair of buildings but a process by which a community is allowed to recover, which is why our repairs programme also includes the provision of equipment such as Starlink satellite internet systems, thus allowing critical infrastructure to function in de-occupied villages.



Anna's mother in Derhachi and a destroyed house in Prudianka

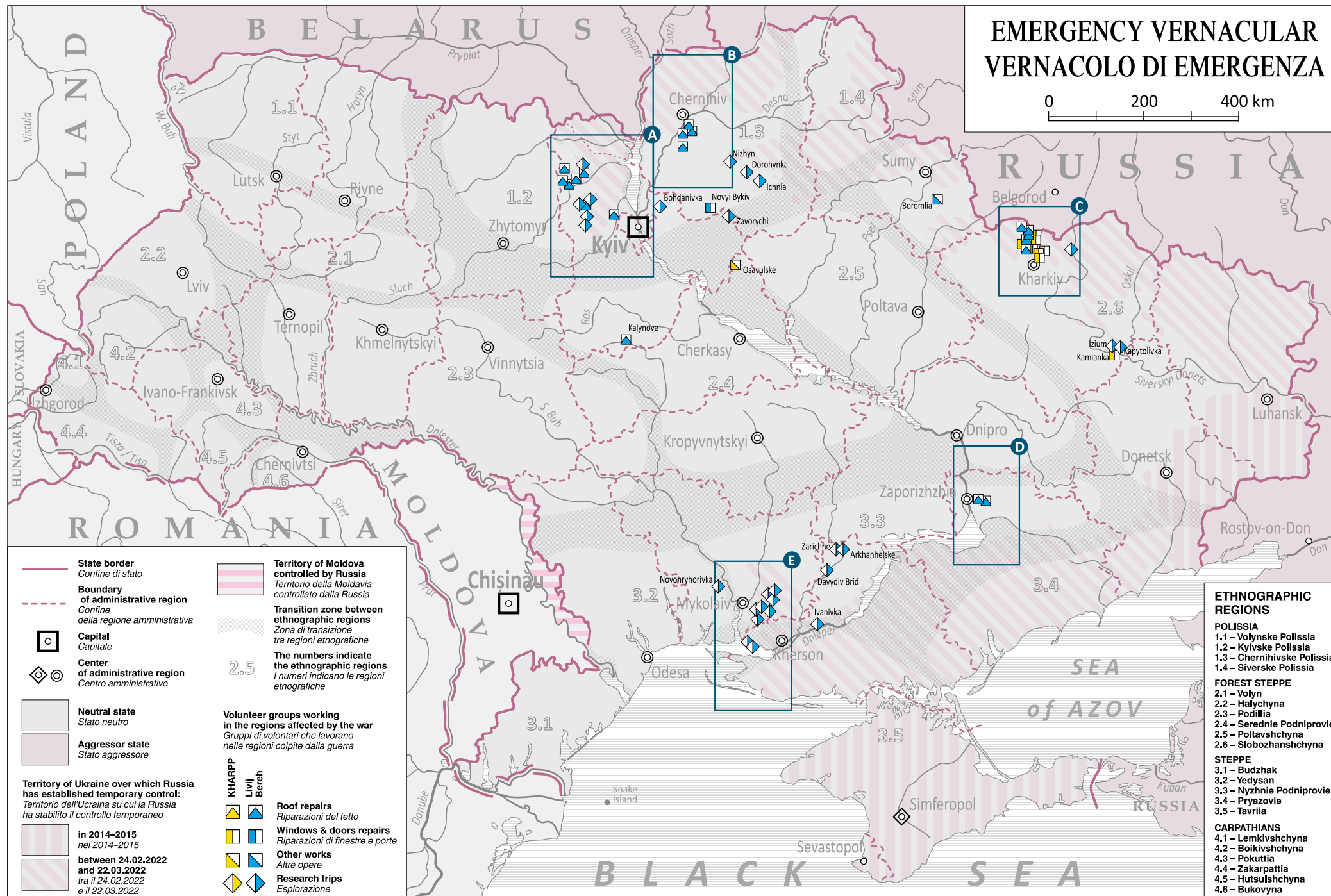


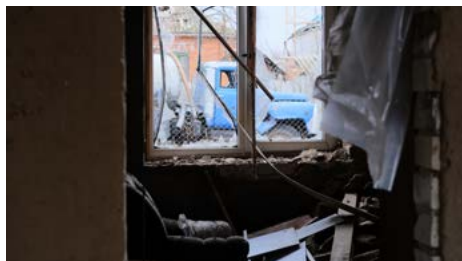
Prudianka

The residents of this house in Prudianka — Katia and Zhenia, and their son — have lived in Germany for two years now, and have no immediate plans to return, since the school in Prudianka is completely destroyed and so their son has no chance to complete his studies there.

Instead, the house is now lived in by Katia's parents, Anna and Serhii. They spent the first two years of the full-scale invasion living in Kozacha Lopan, less than five kilometres from the border with Russia, which endured six months of occupation until September 2022 and has been shelled pretty much every day since. With the beginning of the renewed Russian offensive in spring 2024, they also began to hit the village with glide bombs. One of these hit the road outside Anna and Serhii's house, badly damaging it. As a result,

the couple decided to move a few kilometres down the road to their daughter's family's house in Prudianka, which was relatively undamaged with the exception of broken windows. Though Prudianka is still close to the border it is relatively far safer. Their priority was being close enough to Kozacha Lopan to be able to plant their vegetable garden in the next few weeks, but able to sleep somewhere not under active shelling.





Tsupivka

All photos by Oleh Halaidych

Situated just 8km from the border with Russia, Tsupivka spent the first six months of the full-scale invasion of Ukraine under occupation, with Ukrainian troops stationed one village south. During this time, residents living in the village had no access to electricity, heating, or phone signal, and were effectively totally isolated from life outside the village. A torture chamber was also set up in the village centre, where residents could be sent for something as simple as publicly speaking Ukrainian or seeking connection to contact relatives. Many attempted to flee across the so-called “road of life” which separated the village from Ukrainian controlled territory to the south, with numerous people losing their lives in the process, targeted by Russian soldiers.

During these months of occupation, Tsupivka suffered huge destruction, with close to 90% of buildings either destroyed or damaged, and much of the village was heavily mined. Eventually, in September 2022, it was liberated by the Ukrainian army. It was immediately following this liberation that KHARPP and Livyj Bereh began their work in the village, with KHARPP focusing on window and door repairs, Livyj Bereh on roofs. For the next two-and-a-half years, Tsupivka remained relatively quiet, with some residents moving back permanently, while others would return in the warmer months to plant their gardens but spend winters in Kharkiv.

In spring 2024, when Russian forces launched a renewed offensive on the Kharkiv region, Tsupivka once again came under threat. While the village itself avoided the brunt of the new attacks, the fear of a renewed occupation lingered. One resident, Svitlana, described the situation of herself and her neighbours as being “hostages”, forced to live in constant fear as a result of their place of birth. Thankfully, the village remained under Ukrainian control, thanks to the defence efforts of the Armed Forces of Ukraine, with the support of drones provided by KLYN.

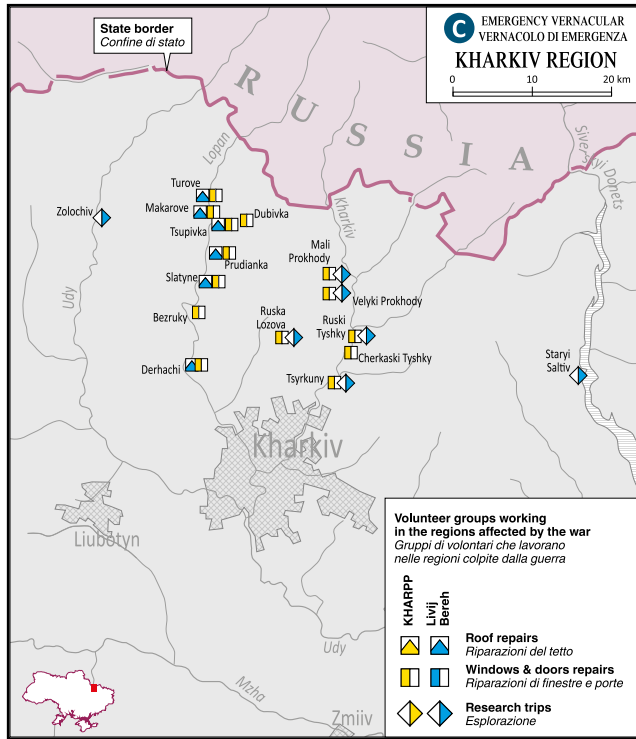
However, on February 24th, 2025 — the third anniversary of the full-scale invasion — Tsupivka was hit by a massive glide bomb that devastated almost all of the remaining houses in the village, killing two sleeping civilians. Despite not having worked in the village for almost a year at that point, KHARPP decided that it was necessary to begin work there again. The risk of renewed attack remained apparent, but after conversations with the village administration, it was determined that those who remained in the village were not going to leave, and that, if nothing else, the provision of new windows would allow them a small amount of hope and normality as the community around them was once again shattered, as well as protecting them from the final weeks of the winter cold. As the windows and doors were being installed, Oleh Halaidych, a

Kharkiv-born photographer, travelled to Tsupivka with KHARPP's team of builders to record both the extent of the destruction and the process of rebuilding.

De- construction

Photography by Oleh Halaidych





Re- construction





“They were returning to their homes” ruined

A conversation between Yevgenia Belorusets (YB),
Ada Wordsworth (KHARPP), Vladyslav Sharapa, Kseniia Kalmus, **and** Ihor Okuniev (Livyj Bereh).
The focus is on the experiences of reconstruction during the ongoing war.

YB: You worked in cooperation with military units that were located in deoccupied villages near the border. What did this neighbourly relation look like? How important was your presence to the residents in the first weeks and months after deoccupation [of Kharkiv region by Ukrainian troops in September 2022]?

Kseniia: In the deoccupied territories near the border, there are soldiers everywhere. This is the reality of life in this border zone during the war.

We constantly heard our artillery and explosions, and we knew that our army was nearby. But, to be honest, the proximity of the military gave a feeling of greater security. We worked in villages located literally 7—20 kilometers from the border.

I met with the military just last week, and I know that russian DRGs [sabotage-reconnaissance groups] try to break through the border every night. And every night our infantrymen and assault rifles hold them back at the border. I feel huge gratitude and respect for them. Thanks to them, these villages were liberated and still remain Ukrainian.

Similarly, local residents have great respect for the military. It provides a sense of peace, even when the shelling does not stop. Of course, it can be alarming, for example, when Ukrainian equipment moves between villages, and there is a fear that the russians may calculate its position and strike at residential buildings or civilian infrastructure. But at the same time, everyone understands why our military is there. This is not just a case of “neighbourly relations”, I would call it “coexistence”, in which there is

immense gratitude to the military for the fact that these villages remain on the Ukrainian map.

It seems to me that in the first weeks and months after the de-occupation, our physical presence in these villages was very important, and not only from a practical point of view. People needed a roof over their heads, as well as the feeling that they were not forgotten, that they were not alone in the midst of devastation and uncertainty.

YB: So you were also representatives of peaceful life, or “normal life”, stability — during the war?

Kseniia: These places remained dangerous for a very long time, some of them are still dangerous. It was very important for people to see that someone came from Kyiv, hundreds of kilometers away, just to help. That there are



Zahaltsi, Kyiv region, 2022.
Photographies by Livyj Bereh

people who care, who are looking for funding, organizing logistics, bringing materials, building something to help them survive the winter in a dry place, with a roof, with a preserved house. So that at least something in this chaos remains intact.

Ada: The fact that Kseniia and I continue to go to the same villages now, almost three years later, is, I hope, further confirmation to these communities that we will stick with them for as long as is needed, and continue to support them in whatever form that might take, be it military or rebuilding or humanitarian aid.

YB: Tell us how you chose the homes and people you would help. After all, you always had quite limited material and human resources? Did your strategy change during the war?

Kseniia: I would say that in the Kyiv region, from the very beginning, we had certain parameters by which we selected families and formed priority lists for providing assistance to the community. These parameters remained stable throughout our work, only over time they were supplemented with new aspects. The main criteria were determined according to social need, we helped those people who were determined to stay, who could not repair their house themselves, who were left alone with the damage.

At the beginning of the reconstruction, back in the summer of 2022, we helped families who could cover the roof themselves by providing them with slate, so that they could prepare their homes for the winter on their own. In fact, all the reconstruction in Chernihiv and Kyiv regions was aimed at ensuring that

people could comfortably survive the winter of 2022—2023.

Since the spring of 2023, another goal has emerged — to support the return of people to their villages. Some of the houses have already been renovated, and we have noticed that this motivates people to return. They knew that the reconstruction process had begun in their community, that there was a volunteer initiative that was helping. And they came, submitted applications, and we repaired roofs, so that rural communities could continue their existence.

This was important because many wanted to return: to plant a garden that would feed them, to tend to orchards, to restore life, which seemed to have been interrupted by the war.

But living in a cold, damp house that is not protected from the elements is almost impossible. And many homes that had been standing for a year without a roof were really badly damaged: dampness, mold, destroyed furniture.

In the Kharkiv region, we worked closely with local communities. The local authorities provided us with lists of families whose homes were in need of reconstruction. We, in turn, conducted interviews. For example, in 2023, we visited 79 families in three days and formed the final priority list on the spot. We again focused on social indicators: are there any sick people, children, or is there at least someone able-bodied in the family? Having selected 30 families, we transferred some of them to the next month in the queue, and turned down some others.

And in the spring of 2024, when most of the village of Slatyne had already been rebuilt, we began to form new lists for neighboring communities. And here, another important aspect appeared - the placement of military personnel. Locals often let military personnel live in those houses that were empty. But many of these houses were in very poor condition: the roof was leaking, moldy, damp. And we also started working on such houses — covering them from the elements for the purpose of temporary settlement by the military.

In effect, our criteria remained constant: vulnerability, insolvency, damage. But we constantly adapted the approach to the specific situation: we helped those who were returning, those who were fighting, those who were helping others. And always — in contact with the community, with living people and real stories.

YB: Let's try to touch on the details of this experience. Looking through your documentation, one of the houses in the Kyiv region caught my eye. As I looked your photos, it seemed to me that it either represented the prototype of a Ukrainian hut, somewhat schematic, almost archetypal, or that it stands for something like the basic structure of the house — as if it is broken down there into a sort of code, on the basis of which new structures can grow. Tell me the story of the house, the house-dweller and the repair process — whatever seems most important.

Ihor: I will limit myself to describing the events. Tetyana's grandmother's house was destroyed by shelling during the occupation of the village, in March 2022. Tetyana then stayed in the village, hiding with neighbors, because she





was afraid to live alone during the occupation. At some point, she was able to leave and returned only after the deoccupation of the Kyiv region (in April 2022). Unfortunately, she found her house uninhabitable — roofless, with serious damage.

And yet Tetyana stayed in the village, she cleaned up the yard and planted vegetables. At first, she spent the night with neighbors or, in fact, in the ruins of her own house. Later, she was given a temporary container house. Neighbors and volunteers helped to equip it next to the ruins of her home. However, it was not suitable for life during winter and cold weather.

Tetyana worked all her life on a dairy farm. Miraculously, her employment book survived, which recorded her working over an incredible 366 working days a year. When we met her, it be-

came obvious, given her profound attachment to this place, that her house needed to be rebuilt, and that it would be among our priorities.

Today, there are no more holes in the walls, the roof does not leak, and the glass in the windows shines again. The interior was restored and the stove was re-laid. Life is gradually returning to normal. Tatyana told us that she never even dreamt of spending the winter in her own house again.

YB: Let's continue to talk about your work in the Kyiv region. Did you ever see damaged historic houses or private houses that seemed to represent valuable historical heritage?

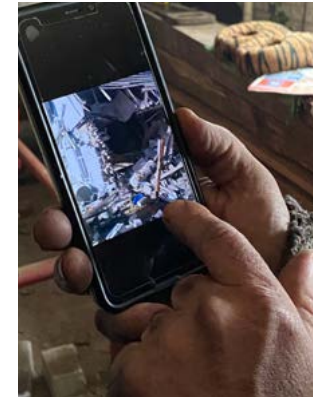
Kseniia: As a result of massive shelling and fighting, many traditional houses, significant examples of Ukrainian architectural heritage, were destroyed or suffered significant damage. Fortunately, some of them can be restored. But now it is difficult to even say how many such houses were destroyed among the hundreds of thousands of damaged private residential properties.

Each region of Ukraine has its own characteristic architectural features. Wooden buildings are characteristic of the north of Ukraine, while wooden and adobe, brick or stone houses prevail in the east and south of Ukraine.

Since the beginning of our work on roof restoration, we have also been able to help families living in traditional houses, whose configuration is directly related to the past, rooted in the 19th century or even further back. We



Slatyne, Kharkiv region, 2022.
Photographs by Livyj Bereh



tried to document every element of our work, in part due to the sense that, during this war, we are losing our heritage, our historical and collective memory, as embodied in this spontaneous type of “architecture without architects”. While we were working on the restoration of houses, we often had the impression that we were preserving examples of traditional spontaneous, vernacular architecture from further destruction.

YB: Now let's move on to a later stage of your work. 2022—2023. Kharkiv region, Slatyne, where shelling is still ongoing, it is still very dangerous to live there. In the photo I see a plastic sheet covering the damaged walls, fragments of houses, it is even difficult for me to ask about what is happening to them now, is there any hope that the house will stand after reconstruction?

Ada: We have worked in Slatyne since autumn 2022, immediately after the liberation of Kharkiv Oblast. Prior to the offensive, there were approximately 30 houses left needing windows and doors. Thankfully, the situation in the village remains relatively stable, and the front has not moved forward since last summer. There are occasional attacks, mostly on the outskirts of the village, and the atmosphere is tense, but life continues and people continue to return home. We still go to the village, and work with the administration on various projects.

Kseniia: The context of the photo you're asking about is the story of a family separated by war. Let me tell you about one house in the village, the one in the photograph. Previously, a large family lived here, but due to the fact that the house was partially destroyed, only the grandfather

remained. The grandmother, her daughter and grandchildren are temporarily living elsewhere.

When we first entered the building, we saw the conditions in which this man lives. As a result of the explosion, one wall was missing, the roof and the ceiling were severely damaged. We restored the roof and walls, and now there is hope for the family to reunite under this roof. The destruction of houses means the destruction of living environments, communities. People return to destroyed houses. They return not to the foundations or walls, but to their environment, in many senses of the word.



Makarove, Kharkiv region.
Photography by Livyj Bereh

YB: I saw something similar in the documentation from the village of Makarove, Kharkiv region. In the photo, there is smoke from the chimney, but there is still no roof. To what extent is the house still full of life after partial destruction? The photos themselves answer, but I will still formulate the question: do people continue to live in such houses?

Kseniia: Yes, unfortunately, people mostly live in such partially destroyed houses.

This is Granny Lyuba, we met her during our first trip to Makarov back in November 2022. A very bright, sincere person. We all started calling her Zyrochka ("Little Star"), because she was the first to start calling us that. She says: "I don't remember your names, but you are all so bright — like Zyrochka." And that's how it stuck.

Her house was partially destroyed, but she stayed on and continued to live in it, because there was nowhere else to go. This is her home, her land, her garden, which feeds her. She couldn't afford to rent housing or go to her relatives. She whitewashed everything inside, covered the holes in the walls herself. And the house, despite the damage, seemed very well-groomed, clean, and bright inside.

We repaired her roof just on 20 December 2022, completing the work in two days. She was able to celebrate the New Year under a new roof. At that time, we learned that her son was injured during the occupation. He was taken to Russia for treatment, and she did not know where he was for a long time. Then, through some volunteers, she found out that he was in Belgorod, that he did not have money to return

home. I do not know what the situation is now, she was very worried, but despite everything, she smiled, held on, she was very grateful for the roof.

And also in one of our videos is our local volunteer Sasha from Slatyne. He is an electrician by profession, he helped Lyuba with water: he cleaned, connected the cables, made sure that everything worked. She had no one else around to help, neither a husband nor relatives.

YB: It seems that after the destruction of the house, everything private became accessible to outsiders. Privacy disappears, the war seems to be trying to destroy it along with peaceful life, as your other documentation from the Kharkiv region, from the village of Prudyanka, speaks to. Did you manage to prepare this house for winter?



Prudyanka, Kharkiv region, 2022.
Photograph by Livyj Bereh

Kseniia: This is a house where a very old lady lives, you can see her in the photo. We met her in the spring of 2023. The roof was leaking, and the inside was covered with fungus from the moisture.

There had been no electricity and gas in the village for a long time, they were restored only just under two years after the start of the full-scale invasion, at the end of 2023.

People were forced to cook food either on the street or to buy gas stoves and fill up cylinders, provided that there was someone to go to a neighboring town to fill these cylinders with gas. But the villagers stuck together, helping each other in any way they could.

This house is, unfortunately, an example of what happens when you don't have time to cover the roof before winter. Even if it is partially covered, moisture does its job. It eats away at the dwelling from the inside.

Despite everything, this elderly woman continued to live in this house. Yes, it had become uncomfortable, unsuitable by peacetime standards, but it was her home. Even despite the proximity to the border, the constant risks and instability, she did not want to leave her village.

YB: Tell us about "double destruction", the repeated destruction of houses. Have you encountered this? Have you carried out repeat restorations?

Ada: Since the offensive on Kharkiv Oblast last year, multiple houses we have worked on have experienced repeated destruction. Whether we repair again is entirely dependent on the village and the particular situation — including the time of year. For example, in Mali and Velyki Prokhody, the situation is too bad for any repairs. In Slatyne and Derhachi, however, the renewed attacks remain rare enough that people continue to return home. We consult with the military administration on the logic of repairing in each village.

Kseniia: Yes, unfortunately, we have already encountered cases of repeated destruction of houses that had previously been restored.

In the Kharkiv region, there are a number of border villages that we have already talked about, such as Tsupivka, Prudyanka,



Restoration of the roof in Prudyanka village, Kharkiv region, May 2023 (Livyj Bereh).

Slatyne, where my team and I managed to restore the roofs after the first wave of hostilities. However, many of these houses were destroyed again during the new russian offensive in May 2024. We know about this not only from the news — we were there, saw the consequences, visited the sites of shelling.

Until May 2024, the situation in this region was relatively stable: the Derhachiv community was liberated back in September 2022, and until recently there was no active shelling. Sometimes our military could be heard shelling the positions of the russian army, but these were single explosions at a distance.

But, since May 2024, the situation has changed dramatically. russian troops have begun systematically shelling settlements: they use KABs, Iskanders, S-300 missiles, combat drones,

FPV drones, which purposefully hit civilian objects. They are also practicing training on FPV drones, hunting for civilian cars and trains. We regularly receive photos from local residents and the village head — destroyed houses, new craters, bodies of dead neighbors. This is a terrible and at the same time everyday reality that this community is currently experiencing.

Today, further reconstruction in these villages, unfortunately, is impossible. It is too dangerous — not only for the residents, but also for any construction crew. Everything that will be built will most likely be destroyed the next day.

Funding has also become extremely difficult: it is difficult to explain to donors the meaning of reconstruction in a region where the ruins do not have time even to cool down.

YB: Has your attitude towards the house as such or to private space changed during the renovation process?

Ada: The Italian essayist Natalia Ginzburg has a beautiful essay about the experience of living in a house after war. She writes: “There has been a war and people have seen so many houses reduced to rubble that they no longer feel quite safe in their own homes which once seemed so quiet and secure. This is something that is incurable and will never be cured no matter how many years go by.” I don’t know whether Ginzburg was right about how curable this change is, but I know the change is real. The past two-and-a-half years of work on reconstruction has given me a sense that homes cannot be considered solid; everything is breakable. When you see homes broken into their component parts, it is like seeing a human body turned inside-out.

Yet, at the same time the home and private space is the most concrete thing a person has, especially in these villages. The intimacy of the relationship between a person and a home that they have lived in their whole life is visceral, and can be seen in the care people take in clearing up the rubble and preserving parts of the destroyed space. Thus, even though we can’t unlearn how breakable these are, we have no choice but to keep rebuilding them.

YB: The renovation of houses is also necessarily a process of research. In your opinion, do there still exist architectural features that mark the peculiar traditions of vernacular rural architecture in different regions of Ukraine?

Vladyslav: Yes, they exist and will exist. After all, there is no clear regulation of the style and size of buildings in rural areas.

Mostly, villages grow near large cities. In villages remote from administrative centers, constant renovation is underway, houses are enlarged by adding additional premises. Currently, architectural features are dictated by the availability of certain materials from the nearest suppliers, or the skills of builders working in a particular village or area.

We are talking about the finishing of facades after insulation. Fewer and fewer people use traditional, cement-sand finishes such as so-called “fur coat” or “lamb”, which can really be considered architectural element by acrylic ready-made plasters, which have a unitary appearance, and often have nothing to do with “architecture” in the strict

sense, but make use of simpler materials and provide a ready-made solution.

Because of this, there are fewer and fewer craftsmen who work with traditional materials, and one day there may be none at all. And yet, the future is in our hands, we have reason to be optimistic. The village lifestyle is becoming more and more popular among young people today. And I have noticed that it is the young, new residents of villages who are trying to preserve traditional methods of restoration and construction.

March—April 2025

Special Places:

Mykolaiv

Region

Chapter 6 by
Yevheniia Belorusetz

When I planned my first trip to Mykolaiv in 2023, I had to overcome my fear. Most “non-military” people travel to the unpredictable and unstable frontline zone only to see family, close friends, or the places of their childhood. Familiarity with the area, and the memory of what it was before the war, makes it possible to imagine such a trip. It is as if the war were not a war at all but a strange, ancient plague, and it is only feasible to visit someone who has contracted the plague when you remember them as a whole, healthy person. Remembering does not guarantee survival, but it creates something to hold onto — an imagined space where “civilian” life feels larger, more solid, than war itself.

Some of my family come from Mykolaiv, and so I had passed through it once before the war and I tried to summon the city I had seen. But, as often happens, my memory did not obey my command. I remembered a pedestrianized zone in the city center, full of young people in the summer. The memories delivered something postcard-perfect: people laughing, buying ice cream, music on every corner. Beyond that, my attempts to remember broke off, only the theoretical conclusion remained, that Mykolaiv was no longer the well-known, open southern Ukrainian city, where people would spend weekends and have fun before the war. To summarize: here was the lazily flowing life of a provincial southern city, which, although industrial, wanted to become a tourist hotspot, as it were.

Yet Mykolaiv, with its tangled industrial and post-industrial history, is not only one of the focal points of the Russian-Ukrainian war: it was one of the first cities to experience a war against its very infrastructure. I mean that aspect of the war which in any local case can turn into a large-scale humanitarian catastrophe, because infrastructure touches on all aspects of life in the city. It is now obvious that an infrastructure war is being fought against all large cities in Ukraine, but in Mykolaiv it has been more thorough and far-reaching. Long before other cities, Mykolaiv’s water system was deliberately attacked and, by Spring 2022, the drinking water supply for its half-million residents was gone.



“Water is a weapon.”

Borys Dudenko, the general director of Mykolaiv Vodokanal, the city’s water supply company, received me in his office, which is reserved for meetings. I had interviewed him a year earlier, in September 2023, and as I switched on my dictaphone this second time, I found myself less focused on his words than on the differences between this interview and the last one.

On the table in front of the director lay “heritage artifacts” — fragments of rusty Soviet pipes. The saltwater in the water system had eaten away at the metal. The pipes had been bolted there, labeled like specimens in a museum. In the corner of the room stood another pipe, a heavy, wide model. It had rusted through, eaten away until it looked moth-eaten, torn, more fabric than metal. These objects were relics of collapse, each a small obituary for a section of pipe and the people it served.

One of the maintenance workers tried to explain: “We have seven, ten or twelve emergency calls every day. Sometimes more. Every day we dig holes, replace sections of pipe, and bury them again. Do you understand? It’s impossible. And we’re short on people — everyone is being carted off. How can I even explain it?”

By “carted off,” he meant drafted and sent to the front. He tried to describe the endless grind of his work, but a helpless anger seemed to overtake him. How do you convey the desperation of trying to keep something as vast and essential as a water system alive? Water, like electricity and infrastructure as a whole, is supposed to remain invisible. It is the foundation on which everything more noticeable — everything more “important” — is built. Only when it collapses does it come into focus. But even then it remains difficult to talk about, as if it falls apart somewhere in the field of collective muteness — of the silent effort holding the shared life of the city together.



The war in Mykolaiv began on the night of February 24, 2022. I found out about the war at 9 a.m. that day — my cousin called me. The people of Mykolaiv had been woken in the night by shelling. For twelve days, from March 12 to 24, the fighting took place in the city itself. Russian artillery moved close, houses burned down, people were killed on sidewalks and in doorways. By March 24, the Russian army had been pushed back to the border of the Mykolaiv administrative region.

And then on March 29 came what was likely an act of revenge: a rocket attack on the Mykolaiv regional administration building. At that time the photo looked like the evidence of some unnatural act. It was as if a huge pair of jaws had bitten a piece out of the central building. A wave of the hand, and a structure gone, the city administration, as if made of paper, torn

apart. An act of destruction in the name of victory and dominance, thirty-seven people killed, thirty-three injured. All these people, for some reason, were in the building during the rocket attack.

I remember that when I saw the photo of this destruction in March 2022, I immediately started to cry. Was this a childish reaction? Helplessness? Emotions are no longer spoken about because they affect nothing—they only show an unwelcome weakness. But I was crying for the people killed by chance, and because of the very idea of the murder as “punishment,” “persuasion,” “compulsion,” and “warning.”

Or perhaps because of my fear that human life would soon be worth very little not only to “them,” but to “us?” Because this demonstration of the capacity to destroy life seeks to be a worldwide spectacle and a media phe-

nomenon. It will shock everyone who follows the new war either in horror or with enthusiasm, and it seeks to influence.

In front of me I beheld a kind of monument to war, a gaping wound in the building. It was a large-scale promise of the war to come.

In a way, this building seemed a validated ticket, “admitting” us to a situation controlled by forces beyond the will of any single person to stay alive, or preserve the lives of others. Forces powerful enough to render the lives of both friends and enemies equally insignificant.

From that moment, the shelling continued and, by June 2022, over five hundred city residents had been injured and more than a hundred killed in Mykolaiv.



It was on April 12, 2022 that the drinking water in Mykolaiv disappeared and it has been scarce ever since.

At the waterworks, the general director leans over the table and tries to make the sentence he has repeated many times over sound convincing rather than trite: “They started to besiege the city by cutting off the water. They wanted the city to fall. Epidemics would have broken out here. People would have left the city in panic.”

Now the townspeople are certain: before the war, Mykolaiv had the best drinking water in Ukraine. I heard it often, sometimes with emphasis on every syllable: “Just imagine, you could drink our water straight from the tap!”

The Russian army blew up the water pipeline in several places. The pipes, laid above ground, were easy targets. They stretched from Kherson Oblast to Mykolaiv Oblast, alongside an irrigation canal that Russian units made into a trench. From there they shelled the nearby village of Posad-Pokrovske.

And now, from these canals, if you stand where the pipeline was destroyed and look toward Mykolaiv, you can see the broken roofs and walls of villages on the horizon.

At first, no one believed the water supply had been destroyed on purpose. The director of the waterworks thought it was an accident: “Only later, when negotiations with the other side to repair the pipe failed, did we understand the truth. The city had been deliberately cut off.”

And then he repeated himself: “Water has become a weapon! Everywhere I go, I say that our city was besieged, and water was the weapon!”

We tried, briefly, to compare this to the sieges of medieval cities. But the comparison felt inadequate. This war seemed full of echoes, quotes from older wars, but these references explained nothing.

After the pipes were destroyed, Mykolaiv went without water for days. Fetching water became dangerous; Russian artillery was too close. The air raids made it impossible.



The city adapted. The water-works team and private initiatives began digging artesian wells, in front of which long lines formed. Truckloads of water arrived from Odesa, Kyiv, Dnipro, Zaporizhzhia. Bottles, cisterns, brought by volunteers in cars, by train. Of course, there was still not enough, and residents had to turn to rivers, trying to purify the water themselves, with those furthest away from the river or canal facing the greatest challenge.

By the end of April, the water system itself could not be allowed to stand empty; the city administration had to pump in salt water from the Dnipro-Buh estuary to prevent the failure of the sewage system, without which Mykolaiv, and its several hundred thousand inhabitants, would face the spread of epidemics in the hot summer months.

One could not even wash food with it, but it was still vitally important. One woman told me that she opened the tap several times a day just to make sure there was water.

And so at first, there was no water at all. Then came saltwater from the Lyman, and about a year later, a new solution emerged—water from a source that cannot be disclosed—less salty, but still far from drinkable.

In order for the city to continue to exist, the issue of drinking water had to be addressed. International assistance (from the Red Cross, missions from individual countries, international organizations and businesses) helped to set up small reverse osmosis water purification systems in each district. Today, these stations dot the city, bearing logos or state flags. It seems water, on Mykolaiv's streets, is diplomacy itself, a kind of state representation.

The russians continue to launch rocket attacks, targeting high-voltage lines, the transformer station, and the power plant, which is responsible for hot water and heating Mykolaiv. When the power goes out, the reverse osmosis stations stop. In turn, in apartment buildings, where people go down to the street to fetch water with empty canisters, the elevators stop—and all water again stops.

Every day, there is no electricity for hours on end in every district, in every quarter of the city. Those cut off from the supply walk and drive to other neighbourhoods in the hope of finding electricity and water. Passers-by often ask me if I have seen a queue for water anywhere. If there is a queue, it means that there is also electricity and you can fill your bottles.

"If there's no water, no power, no elevator," one woman told me, "it's like I don't exist. Nobody needs me. My work isn't needed. They've given up on us." She laughed as she spoke. "Everyone here has to prepare for winter alone. Everyone talks about winter. That's how it is. We all have to work out how to keep our apartments warm without electricity or heating. I really can't think of anything. I'll probably leave my door open for the neighbors. My cousins won't know what to do, they'll

have even less of a clue than I will." And then she laughed again.

When the city's infrastructure disappears, the loss feels intimate, personal. Someone I was speaking to, grasping for words, finally said, "It's like being forbidden to read books. Forbidden to live!" She was exaggerating, of course, but I understood her. She was trying to explain how strange life becomes under this constant uncertainty, how hard it is to adjust to a reality where electricity and water can vanish at any moment.

Context

The first water pipeline was laid in Mykolaiv in 1904, and has been rebuilt several times since. The modern facilities came in the 1950s, while the sewage treatment plants were designed in the late 1960s and began operations in 1973.

Almost all of the plants I visited contained relics of Soviet design — decorative plaster with Soviet stars, characteristic industrial lampshades — all of which are still ubiquitous in Ukraine today. And here, too, they lingered, preserved, in closed industrial zones at constant risk of bombing.



To the Photography series Mykolaiv,
Special places, Vodokanal,
October 2024 — in progress

This photography series was created in October 2024 during research in the Mykolaiv region, along the shattered pipelines of the Mykolaiv Vodokanal. Vodokanal workers who accompanied me took part in the research. Their stories continue to reveal much to me about this chapter of the russian war in Ukraine. Restoring the water supply amid russia's deliberate targeting of Ukraine's civilian infrastructure is a daily effort to rebuild something that may be deliberately destroyed again — an investment in everyday life and everything related to it.

These areas — small villages between Kherson and Mykolaiv—were sites of temporary occupation, troop deployment, and artillery shelling in 2022, and they remain under drone and rocket attacks to this day.

Feeling the impossibility of any true documentation, I searched for gaps that would allow me to speak of what cannot be documented — to commit a kind of betrayal against photography itself, or against the imposed official demands that dictate the display of trauma. I wanted — and still want — to cross out any imposed purpose and simply preserve the experience. Clumsily, incompletely, yet holding on to that precious experience that resists being structured as propaganda or collective will.



The goal of the russian bombardment is not total, abrupt destruction but attrition: a state of permanent crisis, like a chronically ill patient — not dying, but in constant need of resuscitation. “Everyday life,” whose most basic requirement is the uninterrupted supply of water and electricity, should feel unattainable.

Cultural changes have crept into the city as the war has dragged on. All advertisements, all surfaces, signs, names of stores and service areas, which used to be mostly in russian, have been replaced with Ukrainian ones. Monuments have been demolished, Soviet-era facades dismantled piece by piece. Now it is only in the ruins of bombed-out buildings that traces of russia remain.

On the territory of the waterworks itself, workers came up to me several times and asked me not to photograph these traces of the past: “They’ll come here and destroy everything. Leave it alone, it doesn’t bother us.” Someone said to me: “they’re destroying everything now, inside and out.”

Photographing Soviet industrial design carries its own risks, but photographing the water stations themselves and the surrounding industrial zones is even more perilous. In 2023, members of an international group of journalists ignored warnings from waterworks employees and shared images of industrial sites on social media. The following day, every site they had visited was bombed.

For eight decades, Mykolaiv's drinking water has flowed from a pumping station on the Dnister River near Kherson. Situated in a Ukrainian-controlled area adjacent to occupied territory, this station is manned by dedicated workers. Daily russian shelling hampers repair efforts; one of the staff was recently wounded. Despite these challenges, they continue to repair all the damaged pipelines. Should the russian bombardment stop, the city's drinking water supply could be reinstated within a week.

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Canopy

Drone

Chapter 7 by
Kseniia Kalmus

What is KLYN?
KLYN is a volunteer-driven drone workshop founded in August 2024 in Kyiv, dedicated to innovation and national defense. The core team consists of six people, supported by up to 25 volunteers who join periodically to assemble drones. These volunteers range in age from 15 to 79, united by a shared mission. Drones are primarily made with Ukrainian components, supporting the local economy and reducing reliance on foreign suppliers.

KLYN supplies high-performance drones to specialized military units, including the Ukrainian Special Operations Forces, Ukraine Armed Forces and the Volunteer Army.

Drone Workshop
Our drone workshop is located in Kyiv. We are a team of like-minded individuals united by the mission to support our military and

strengthen Ukraine's defense capabilities. Many people cannot donate large sums or fight on the front lines, but they still want to contribute. They have full-time jobs but seek ways to be as helpful as possible to the army. This is how our workshop was born.

Drone Testing
When we go outside the city for testing at a training ground, we evaluate different drones on various frequencies. Given that our workshop produces 8-inch and 10-inch drones, and we are soon launching a 13-inch model, we test drones of different sizes.

Additionally, because we support multiple brigades operating in multiple sectors of the front-line, they use different control and video transmission frequencies. The enemy actively jams many frequencies, so we tailor specific frequencies for each military unit. When we conduct field

tests, we verify the performance of all these different drones with their assigned frequencies.

We also test drones both with and without payloads. For example, a bottle filled with sand instead of water. Water transmits vibrations, while sand minimizes them, providing more accurate results.

Our 8-inch drones can carry up to 1.5 kg, the 10-inch drones can lift 3.5 kg, and the 13-inch model will handle payloads of up to 76 kg.

After test flights — both loaded and unloaded — we analyze the data, fine-tune the drones using computer adjustments, and optimize their settings. Once we achieve the desired performance, we create a software preset and flash the entire batch of drones. Only then do we send them to the front lines.



Drone operated by the "Blind Fury" unit of the Ukrainian Vounteer Army, Strilecha, Kharkiv region.



Frontline Video
We provide ongoing support to six military units, including the Armed Forces of Ukraine, the Territorial Defense, the Ukrainian Volunteer Army, the International Legion, the Intelligence Directorate's International Legion, Drone Names and Special Operations Forces.

Once a batch of drones is completed, we send it directly to the front lines. The telemetry — displayed on the pilot's monitor or FPV goggles — includes a signature identifying the drone as part of KLYN. In most cases, soldiers do not remove this signature, so when a drone successfully hits a target, we can confirm that it was one of our drones.

The process works as follows: the military receives our drones and provides us with video and photo reports of the delivery. This helps us continue raising funds for production. When successful strikes

occur, they also send us footage of the impact, which further supports our fundraising efforts.

Drone Names Project
The drones created in our workshop exist thanks to the donations of caring people—friends, strangers, and supporters who contribute in various ways. Some donate large sums, while others, unable to donate directly, organize small fundraising initiatives to support production. Some volunteers come in person to help assemble the drones with their own hands.

To show gratitude and respect to those who contribute to our work, we offer everyone involved in drone production the opportunity to name a drone. This initiative has become both a form of therapy and a social project. Many people choose names that carry deep meaning—some write the names

of occupied cities they can no longer visit, where their families once lived or where their homes have been destroyed. Some use humor, giving names like "Ticket to a Kobzon Concert" or "Nova Poshta—Delivery from Ukraine."

Over time, this project of naming drones has evolved into a social chronicle, reflecting the war's history through the inscriptions on each drone. Every drone we send to the front carries a name, and we document each one with photos and videos. By looking at these records, we can trace the timeline of events and see how history unfolds through the names written on our drones.

Others honor fallen sisters, brothers and friends-in-arms — those who wore uniforms and those who simply lost their lives; soldiers, volunteers and civilians alike—by inscribing their names, call signs and pseudonyms.



Drones Names Project Obituaries

Victoria Amelina (1986—2023)

Poet and writer. Died in a Dnipro hospital, mortally wounded in a russian Iskander missile attack on a popular restaurant in Kramatorsk on 27 June 2023. At the moment of the attack, Viktoria was in the restaurant in the company of a delegation of Colombian writers. In the course of her work investigating russian war crimes as part of the Truth Hounds organisation, Viktoriia visited Kharkiv, Izyum, Slovyansk and Kramatorsk.

The Bazylevych Family

On 4 September 2024, russia attacked Lviv with rockets and drones. A woman and her three daughters were killed during the attack—the Bazylevych family: Emilia (8 years old), Daryna (18), Yaryna (21) and Yevheniia (43). According to the rescuers, the family was in the staircase of their apartment building, which collapsed as a result of the attack. Their husband and father Yaroslav survived, because he decided at that moment to return to their apartment for water.

Artur “Spokij” Chenakal (1991—2024)

Medic of the 3rd OShBr assault group. Killed in the line of duty on 16 February 2024 in Avdiivka. During the evacuation from the hell of the Avdiivka siege, Artur was shot by the occupiers while carrying a wounded comrade on his back. In the words of Arthur’s friend: “We will remember your heroic feat for the rest of our lives, for the sake of your freedom you gave the most valuable thing. You are forever 32.”

Oleksandr Hryanyk (1994—2022)

Call sign “Hryan,” defender of Mariupol, killed on 8 May 2022 in the defense of Azovstal, aged 28. Burned to death by illegal phosphorous bombs dropped on the factory by russia. In the words of his friend Yuriy, who signed his drone: “Hryanik served in the Azov battalion, flew to Mariupol, broke through the siege by helicopter to take up his position.”

Volodymyr Kucherenko (1977—2024)

Call sign “Borys,” died on December 6 2024 performing a combat mission. Commander of the FPV drone unit of the 414th Separate UAV Brigade “Birds of the Magyar”; actor of the Kyiv “Toteatr” theater, content analyst. His relative wrote, “Borys was the most productive FPV pilot—he counted 70 pieces of equipment and 130 personnel of the russian federation destroyed.”

Ivan Palii (2006—2025)

Call sign “Voyazh,” a student cook from Iva-no-Frankivsk Oblast, Ivan moved to London in July 2023, but returned to Ukraine to join the Third Separate Assault Brigade as a volunteer infantryman in July 2024. He was killed in action in Luhansk Oblast on 26 January 2025, on the day he was due to travel home to celebrate his niece’s birthday.

Marharyta Polovinko (1994—2025)

An artist, volunteer and soldier from Kriviy Ryh to whom this book is dedicated (please see inside cover). Kseniia: “We first sent the first KLYNdrones to Marharyta’s unit at the beginning of March, and received good feedback from her.”

Volodymyr Rakov (1995—2025)

Dancer, choreographer, director and soldier; winner of the sixth season of the show “Everyone Dances.” Joined the AFU at the beginning of the full-scale invasion, served in the 2nd Rifle Battalion of the Daniil Halitsky 24th Separate Mechanised Brigade. Killed on 6 January 2025 in the line of duty. Awarded the “Golden Cross” for bravery. Kseniia: Many drones were signed in Volodymyr’s name.

Andriy Rybakov (1985—2024)

Call sign “Fish Metallica,” Chief Sergeant-Commander of the 1st Rifle Detachment, 1st Rifle Platoon of the 1st Rifle Company of Military Unit A7376. Killed on 10 October 2024 while performing a combat mission. Kseniia: Andriy’s friends did a fundraiser for him. When he died, they distributed the funds to other units in the Kurahove section, where he had served.”

Artur Snitkus (1988—2024)

A legend of the Ukrainian queer underground, musician and artist from Ternopil. He was mobilized to the Ukrainian Armed Forces as a soldier. Artur was killed in a combat mission on the frontline in the Donetsk region.

Iryna Tsybukh (1999—2024)

Call sign “Cheka,” volunteer paramedic in the Hospitaliers Battalion, posthumously awarded the “Gold Star” order for courage and heroism in the fight for the independence of Ukraine by the President of Ukraine.

Kyrylo Ulman (1986—2024)

A Ukrainian soldier, a fighter with an anti-tank battalion of the 3rd Separate Assault Brigade, founder of the GODZYKI kombucha brand, Kyrylo Ulman “The German,” was killed in the battle near Avdiivka.

Taras Zapolskyi (1994—2022)

Killed on 3 April 2022 during street fighting in Mariupol, allowing his comrades to escape an encirclement alive. By decree of the President of Ukraine, posthumously awarded the Order “For Courage” of the 3rd degree. In the words of his friend Yuriy, who signed the drone: “Taras was a machine gunner in Azov, he faced the russians in Mariupol and died during the defense of the city.”

BUR

A special tribute to the youth volunteer organization BUR (Building Ukraine Together), which has been active in the de-occupied territories, frontline cities, town and villages across Ukraine since 2014. BUR volunteers are rebuilding homes for families in need and repairing houses in safer regions to create proper conditions for internally displaced persons (IDPs) who have completely lost their homes.

We want to honor the BUR volunteers who have been killed by russia since the beginning of the full-scale war: Kostia Yuzviuk, Ivan Paramonov, Roman Buzinsky, Taras Kutnyi, Mykola Hayevoy, Mykola Dytko, Mykhailo Alekseienco, Yuriy Shvets, Serhiy Molchanov, Denys Karaban, Semen Oblomey, Oleh Salnyk, Serhii Troshyn (Sunshine).



The Drone Swarm as a Mobile Roof
In Ukrainian, the word *klyn* refers to a formation of birds, a V-formation flying seasonally to warmer lands and returning. In this sense, KLYN becomes a swarm of drones, a formation moving towards the enemy.

This project is about protecting life. It is about a simple idea: we want our villages to remain on the map. We do not want them erased by artillery or drones. We do not want those roofs to burn again. We once rebuilt them. Now, we protect them from the air.

The drone swarm fulfils an attack function. But, in the context of Ukraine's war of defense, it works, in fact, as a mobile roof, a canopy that does not just cover but protects. The *klyn*, the formation, the swarm is a flying roof that takes off to defend homes, lands and communities. It may sound poetic, but it is our everyday engineering reality.

From Homes to Drones
The "KLYN Drones" project began for two reasons. The first was demand. Since December 2023, my friends on the front lines started increasingly asking for FPV drones. I began raising funds and purchasing drones for them. The second reason was pain. In spring 2024, Russian forces resumed their offensive in the Kharkiv region and once again began shelling the villages we had been rebuilding between 2022 and 2024 together with the "Livyj Bereh" initiative.

This was not just a construction project. It was a form of solidarity, born from personal human connection. We were restoring roofs, but also we were maintaining a human presence in those villages and showing their inhabitants that return is possible. And people did return. We ourselves also believed that return was possible, that this work represented the future. Maybe we were fooling ourselves a bit. But reconstruction gave hope, both to the villagers and to ourselves.

While working in the Derhachi community in Kharkiv region, we saw just how fragile and at the same time how resilient these processes were. We encouraged people to return and felt we were creating a space where life could once again exist. But in Spring 2024, those processes had to stop again, because of renewed Russian incursions from across the border and near-con-

stant shelling. It became impossible to continue building and we were forced to halt our efforts. It was unbearable to accept that everything we had rebuilt was once again under threat of destruction.

I did not want to accept it, so I decided to create something that could no longer be destroyed. A project that was not about walls and roofs, but about resistance. Not about corrugated metal but about response. "KLYN Drones" became a continuation of our reconstruction project, but in a different form.

This is not rebuilding after destruction. It is protection before destruction. And that is a paradigm shift.

A Canopy Held by the Community
We are used to thinking of a canopy as something static, a roof, a cover, a shade. But in our case, the drone canopy is tactical, mobile, and engineered. These drones are built by the community: volunteers, retirees, and students. It is a canopy that does not just protect, it brings people together.

Our drone workshop is a place where different generations, experiences, and skills come together. One person assembles the frame, another mounts the motors, someone else does 3D printing, another solders, fund-raises and someone else donates. This is a human infrastructure of resistance, and it is no less important than the technical one.

This is another strength of the canopy. It emerges where there is solidarity. Where there is an act of care.

This is the new roof, not made of metal but of collaboration, of concern, of community.

Roof, Resistance, Movement
Drones do not build homes, but they give them a chance to survive. Today, our FPV drones fly over the same villages where we had been repairing roofs for two years. They prevent the Russians from adjusting their artillery, from targeting civilian infrastructure, from hunting with drones or using civilians as training targets. They cross the border and strike positions from which our villages might otherwise be attacked.

This is not a metaphor. It is our daily reality.



I now intentionally seek out units deployed near those villages to support them in particular, because I know they are not defending abstract territory, but very real places we once tried to repair with our hands, screws and roofing sheets. And now, with drones.

The Drone Swarm as an Infrastructure of Togetherness

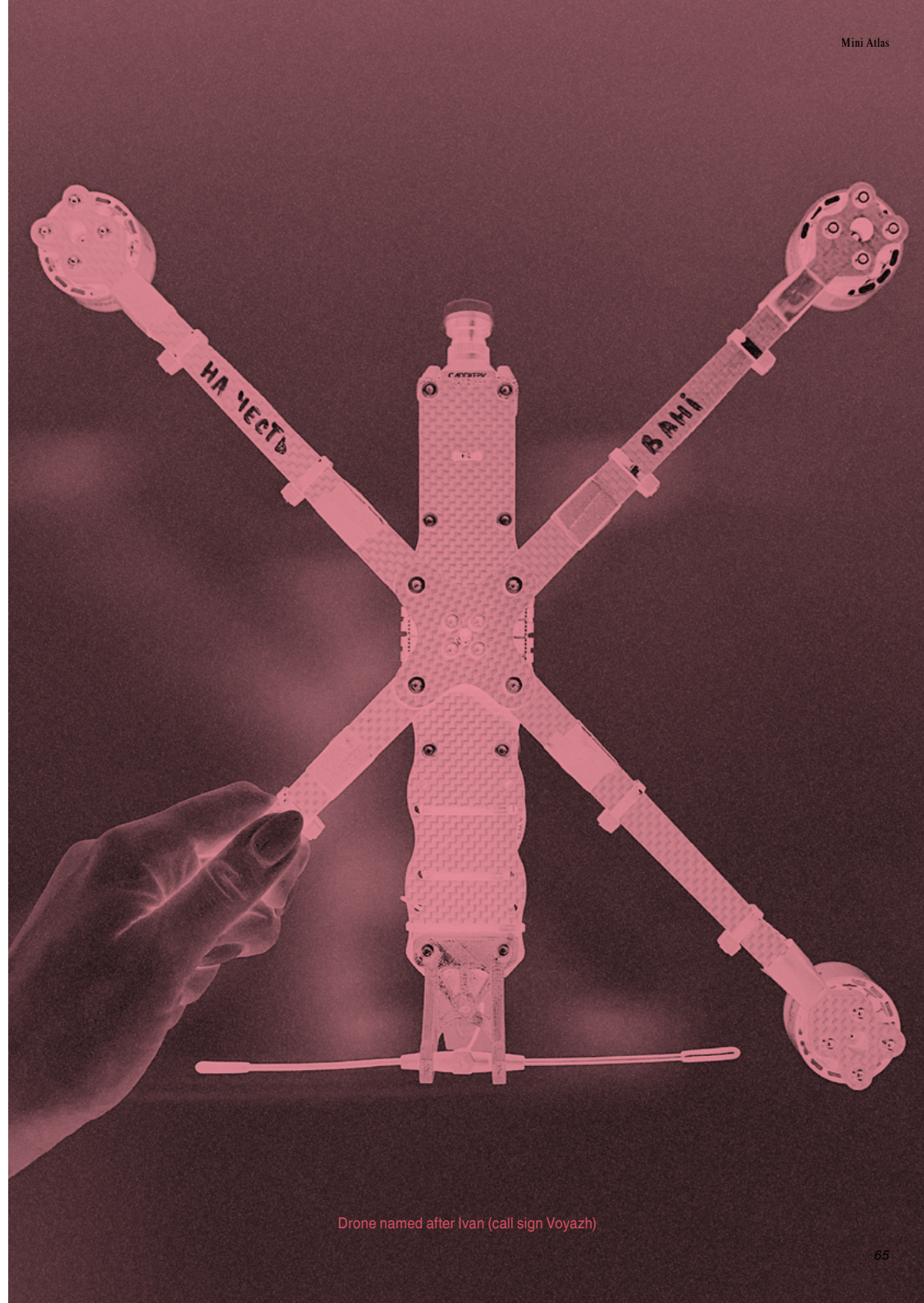
Maybe we are not building the future. Maybe we are simply building the possibility of reaching it. We are creating an infrastructure that allows people to remain, to not flee, to not disappear, to not be erased. This is our form of resistance, not to charge forward but to stay. To survive. To hold. To preserve.

I no longer believe that a roof is just a physical structure. I believe a roof is a gesture. It is an act of care. It is a response to catastrophe. It is a claim to presence. And when that roof becomes a drone, it does not vanish. It becomes a mobile, flying canopy that protects the possibility of life.

If Ukraine today is not only a battlefield but also a testing ground for new forms of coexistence in catastrophe, then drones are part of those forms. They are technical, but also deeply social.

They do not only strike.
They bring people together.
They do not only attack.
They protect.

This is our mobile roof. Our drone canopy. And it is held up not only by propellers, but by our hands, our decision not to disappear and our ability to stand together.



Drone named after Ivan (call sign Voyazh)

Drones For

Drones

Volume 1—4

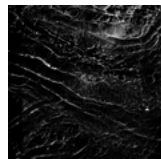
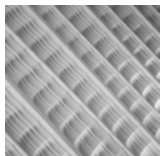
Chapter 8

The soundtrack of dakh comprises a selection of drone music from the Drones For Drones fundraising project.

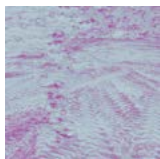
Drones For Drones is a cassette compilation series curated by artist Clemens Poole for Kyivpastrans Records and released in collaboration with Fallout Noise volunteer collective. The project brings together artists from Ukraine and around the world working with various genres of drone music to raise money for Ukrainian defense. Since its inception in 2023, the initiative has raised thousands of euros for drones. Each volume is released digitally and on cassette, and promoted through live performances and listening parties organized by Kyivpastrans Records in Ukraine and abroad.

As part of the Ukrainian Pavilion of the 19th International Architecture Exhibition of la Biennale di Venezia, Drones For Drones links the evolving efforts of Ukrainians to shelter themselves from russian aggression through diverse networks of fundraising, solidarity, and technology. In the multitude of defense and resilience initiatives active in Ukraine today, volunteers fluidly move between repairing roofs to assembling drones to cultural outreach. Drones For Drones is just one point in the constellation of efforts to defend Ukraine that is on view in the exhibition.





Top to bottom:
Drones For Drones Volume 1—4



Drones For Drones

Selected works curated by Clemens Poole for Kyivpas-trans Records vvs featured in the installation at Ukrainian Pavilion, 19th International Architecture Exhibition of la Biennale di Venezia:

From Volume 1

kang bucket (feat. J. Collins) [US] — Parentheses
Anna Ivchenko [UA] — Fear of Turning into Stone
Tomi Hazslinszky [UA] — Trombones
Phil Puleo [US] — UNTITLED ONCE
Underbelow [FI] — No Sun

From Volume 2

Hopping Corpse [UK] — Diabolical Pact
Yuri Yefanov [UA] — Every Time I Take a Shower
Norman Westberg [US] — Fishing
Smalta [UA] — Elruba Dron
Thor Harris [US] — Maille

From Volume 3

Vixiii [UA] — i will be fine
100000 & Terje Dragseth [NO] — In paradisum
arythmia [US] — I don't like what you're doing to me
Konstantin Poveda [UA] — O1N2E3
RinniR [UA] — Melancholy by the Sea

From Volume 4

Raoul van Herpen [NL] — Etulfiaka
Anna Dovhan [UA] — wave interference
Parking Spot [UA] — A Point is Point B
Roma Termini [UA] — intro the void
Lurking Gloom [US/PT] — infinity
from Volume 5
super inter [UA] — kairos
Vlad Suppish [UA] — I am Alive
Yevhen Orlov [UA] Chance of Rain
The Terraplanes [DE] — Drone the way home
Fhloston Office [AU] — Regolith



Planetary Hardcore — Public Progamme

Chapter 9

“dakh is a monumental, vertical structure; but it is surrounded by the multiple (horizontal, zig-zagging, upright and upside-down) wisdoms, knowledges and intelligences from which it derives its radical power. Together, dakh and the remaining components of Vernacular Hardcore show that what we call “tradition” is in fact a dynamic, turbulent collection of infrastructures and intelligences; and that, on the other hand, so-called “emergency” projects are not merely reactive but always rooted in this (shifting-but-stable) commons, in the hardcore of society.

In a time of full-scale war, reconstruction is not possible without resistance; and in the long-term future, not only in Ukraine but in all other places subjected to war, rebuilding must also be directed and informed by the wisdom and experience of the many; not by the deal-making aptitude and extractive fantasies of the few.”

Bogdana Kosmina, Michał Murawski and Kateryna Rusetska

18 April 2025 15:00—17:00
dakh Press Conference
and Public Launch
Kyrylivska St, 41, Kyiv, Ukraine

8—11 May 2025
Opening Weekend
Biennale Architettura di Venezia

8 May 2025 14:15—15:00
Official Inauguration
Arsenale di Venezia Sale d’Armi,
building A, 1st floor

18:00—19:00
Press Conference

19:00—20:00
Opening Speeches
Yaroslav Melnyk (Ambassador
Extraordinary and Plenipotentiary of
Ukraine to the Italian Republic)
Aliona Shkrum (First Deputy Minister
for Development of Communities and Ter-
ritories of Ukraine)
Mariana Betsa (Deputy Foreign Minister)
Volodymyr Sheiko (Director General
of the Ukrainian Institute)
Tetyana Filevska (Commissioner of
the Ukrainian Pavilion and Creative Di-
rector of the Ukrainian Institute)
Curators
Artists



dakh (даx): vernacular hardcore

20:30—23:00
Music Programme with
Гільдегарда (Heinali and Andriana-
Yaroslava Saienko present Гільдегарда
[Hildegard in Ukrainian] — the unique
reimagining of Hildegard von Bingen’s
music)

Maryana Klochko (enriches the
Ukrainian scene with a unique contempo-
rary reading of Ukrainian folklore sounds
heritage)

Sofi Naufal (British-Lebanese musician
based in Brussels and originally from
London. She writes lofi songs via voice,
prepared guitar, samples and synthesiser,
conjuring a dark, folk-like melodrama
that wanders off into ambient layers, drift-
ing between melodies, looped vocals,
protest chants, drum breaks and snippets
of overheard conversation)
Spazio Thetis, Arsenale Nord

10 May 2025 16:00—16:45
Keynote Séance
Architecture and Transhuman
(Female) Intelligence
The Library, Scuola Grande di San Marco
Campo dei Santi Giovanni e Paolo, 6777
30122 Venezia

The Atlas of Traditional Ukrainian
Housing is an ongoing research
project conducted for over 50
years by three generations of
Ukrainian female architects
and ethnographers: Tamara
Kosmina (1932—2016), Oksa-
na Kosmina (born 1960) and
Bogdana Kosmina (born 1990).
The opening conversation of
the Planetary Hardcore public
programme brings together
the three Kosminas in a trans-
human conversation. Together,
they explore the materialities,
intelligences and emotions
that characterise the three lev-
els of the “vernacular” explored
in dakh: the heritage vernacular
(architecture without architects);

the emergency vernacular (recon-
struction without peace); and ver-
nacular resistance (shelter with-
out security).

Participants:
Bogdana Kosmina
Oksana Kosmina
AI Tamara Kosmina
Moderated by Carlo Ratti



The Library of
Scuola Grande di San Marco

10 May 2025 17:00—18:30
Keynote Symposium

Planetary Hardcore:
Solidarity through Repair

The Library, Scuola Grande di San Marco
Campo dei Santi Giovanni e Paolo, 6777
30122 Venezia

Planetary Hardcore builds connection between places in which kindred labours of self-organised repair and reconstruction coalesce in the midst of war. The neighbourly connection between the Ukrainian and Lebanese pavilions functions as a point of departure from which to discuss the potentials (and perils) of solidarity-through-repair across diverse geographical contexts and geopolitical faultlines.

Several (hard)core themes animate the discussion: how does the experience of the emergency vernacular (grassroots reconstruction, and so-called “self-organisation” in general) differ across places subjected to war? How does the wartime “hardcore” — the many layers of the (besieged but unyielding) geological, social and built fabric, from the soil to the roof to the drone canopy — function as a site of radical (rooted) commoning: as a vessel in which memory and evidence are held, and as a terrain from which resistance may spring? How, finally, can the emergency collectivity which coalesces under the volatile conditions of war be converted into a sustainable, equitable and just social settlement?

Participants:

Elia Ayoub

(journalist, founder of From the Periphery media collective and hauntologies.net)

Shereen Doummar, Elias Tamer & Edouard Souhaid

(Collective for Architecture Lebanon, architects and theorists, curators of the Lebanese pavilion)

Kseniia Kalmus

(co-founder of Livij Bereh, founder of Klyn drones)

Husam Abusaleem

(architect, University of South-Eastern Norway)

Emlio Distretti

(architect, Royal College of Art, London)

Kseniia Kalmus

(co-founder of Livij Bereh, founder of Klyn drones)

Dima Srouji (architect and researcher, Royal College of Art)

Yuliya Yurchenko (economist, University of Greenwich; activist, Ukrainian Social Movement)

Moderated by Michał Murawski and Kateryna Rusetska

(co-curators of the Ukrainian Pavilion)

✂ / K41 Community Fund
Photograph by Alex Bykov



Pavilion of Culture
Photograph by Yevheii Avramenko

dakh in Kyiv

Events are being planned for Summer 2025 in collaboration with the Pavilion of Culture and ✂ / K41 Community Fund.

Pavillion 13 / Coal / was built in 1967 at the VDNH expo centre in Kyiv, as an exhibition space for promoting the achievements of the coal industry of the Ukrainian SSR. Since 2020, it has functioned as the Pavilion of Culture, a transdisciplinary curatorial, project and event space. The renovation of Pavilion 13 — carried out by FORMA Architects, co-curators of the Ukrainian Pavilion at the 2023 Venice Architecture Biennale — is scheduled for completion in Summer 2025, thanks to the generous support of Ribbon International.

✂ is a cultural institution in Kyiv, established in 2019 on the territory of a former brewery, located at 41 Kyrylivska Street. The K41 Community Fund is a project initiated by the team of the cultural institution ✂ and aimed at providing financial, humanitarian, and transportation support to members of the local cultural community during the Russian war against Ukraine.

dakh at Construction Festival
August 2025, Dnipro

Frenemies

The public programme of this year's Construction Festival will explore the fine line between friendship and enmity in music, architecture and geopolitics. It will feature panels on several sites and phenomena, where the two intermingle uncomfortably, including Homes (sites of comfort and shelter for friends; sites

of horror for unwanted guests); Drones; Heritage; and Infrastructure. The theme of FRENEMIES will be integrally connected to the public programme of dakh.

Planetary Hardcore Conference
September 2025, Venice, Italy

Preliminary panel topics: Reconstruction & Resistance across Borders; Drones & Homes; Heterodox State Formation; Dehydrated Infrastructures; Atlas & Archive

The Mark on the Wall

November 2025, Venice, Italy

A symposium on architecture, ecocide and evidence at war, organised by Marta Kuzma and Faktura 10, in cooperation with the Ukrainian pavilion

Contributors

Yevgenia Belorusets

Artist and writer born in Kyiv, Ukraine, in 1980. Lives and works in Kyiv (UA) and Berlin (DE).

Oleh Halaidych

Documentary filmmaker and biophysicist, obtained a PhD in stem cell research at Leiden University. Born in Kharkiv (UA) in 1990, lives and works in Kyiv (UA).

Kseniia Kalmus

Volunteer, entrepreneur and floral artist. Co-founder of the NGO Livyi Bereh and founder and director of "KLYN Drones". Born in Blagovishchensk (USSR) in 1988. Lives and works in Kyiv (UA).

Bogdana Kosmina

Artist and multidisciplinary architect. Co-founder of the exhibition space "Dzherelo" and a member of the curatorial group "Hudrada" (Artistic Committee). Born in Kyiv, Ukraine in 1990. Lives and works in Kyiv (UA), Paris (FR), Berlin (DE), Vienna (AT).

Oksana Kosmina

Architect, ethnologist and historian of material culture, candidate of Historical Sciences. Worked as a senior researcher at the Institute of Ethnology under the National Academy of Sciences in Ukraine. Born in Kyiv, Ukraine in 1960. Lives and works in Kyiv (UA), Gy (FR)

Tamara Kosmina

Architect, ethnologist and historian of material culture, candidate of Historical Sciences. Leading researcher at the Rylsky Institute of Art Studies, Folklore and Ethnography, Kyiv. Born in Chelyabinsk (USSR) in 1936. Passed away in 2016, in Kyiv (UA).

Clemens Poole

Multi-media artist, curator editor and music producer. Co-founder of Kyivpastrans Records and coordinator of the Drones For Drones fundraising initiative. Born in Tilghman Island, Maryland, USA in 1983. Lives and works in Kyiv (UA).

Michał Murawski

Anthropologist of architecture, Associate Professor in Critical Area Studies at the School of Slavonic and East European Studies, University College London. Trustee of the NGO KHARPP. Born in Warsaw, Poland in 1984. Lives and works in London (UK).

Ihor Okunieiev

Multimedia artist, co-founder of the NGO Livij Bereh. Serves in the Armed Forces of Ukraine. Born in Kyiv, Ukraine in 1989. Lives and works in Ukraine.

Kateryna Rusetska

Curator and culture manager. Co-founder of NGO Kultura Medialna and DCCC (Dnipro Center for Contemporary Culture). Born in Dnipro, Ukraine in 1989. Lives and works in Dnipro and Kyiv (UA).

Vladyslav Sharapa:

Photographer and construction worker, co-founder of the NGO Livij Bereh. Serves in the Armed Forces of Ukraine. Born in Kyiv, Ukraine in 1986. Lives and works in Ukraine.

Dmytro Vortman

Cartographer and scholarly editor of Encyclopedia of the History of Ukraine. Born in Kyiv, Ukraine, 1962. Lives and works in Kyiv (UA), Gy (FR).

Ada Wordsworth

Writer and researcher, co-founder of the NGO KHARPP. PhD student at the School of Slavonic and East European Studies, University College London. Born in London, UK in 1998. Lives and works between Kyiv and Kharkiv (Ukraine), and London (UK).



Photograph by Oleh Halaidych, shot in Tsupivka, Kharkiv Oblast, February 2025

ukrainian
institute



Ministry of
Foreign Affairs
of Ukraine



Ministry for Development
of Communities
and Territories of Ukraine

RIBBON



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PIANIFICATORI
PAESAGGISTI
E CONSERVATORI



artslooker

N9WS



Ukrainian
Cultural
Initiative



CONTEC
INGEGNERIA

КИЇВПАСТРАНС
RECORDS



ukrainianpavilion.org