

Panorama Ukraine 2023 – IABR (Working on Water)

Introduction

The workshop Working on Water marked the beginning of Panorama Ukraine, a multidisciplinary project aimed at the reconstruction of Ukraine. Working on Water was a week of knowledge sharing and collaboration in which architects, urban designers, policymakers, and academics explored the role of water in the reconstruction of Ukraine. The focus was on the region of the Dnipro River delta: the area around the destroyed Kakhovka Dam. The workshop took place at the Keilepand in Rotterdam from 27 November to 1 December 2023.

The reconstruction of Ukraine has to begin, even during the war. The Russian invasion calls for solutions to current and urgent problems and for plans for a sustainable future. Panorama Ukraine also aims to give the Ukrainians a sense of hope in uncertain times. Drawing on Dutch expertise in water management and reconstruction, participants and experts that attended the workshop worked on the future of a resilient Ukraine.

Panorama Ukraine is a Ukrainian-Dutch collaboration that brings Dutch knowledge of water and reconstruction to the reconstruction of Ukraine and, most importantly, allows participants to learn with and from each other. The Netherlands has a history of innovative water management and infrastructure development and can offer valuable lessons for Ukraine's reconstruction efforts. Floris Alkemade initiated Panorama Ukraine after receiving the Maaskant Prize, and he asked the IABR to organize it. The IABR is organizing and coordinating the project in collaboration with the Ukraine Netherlands Urban Network (UNUN), with the support of the Dutch Board of Government Advisors (CRa), Vereniging Deltametropool (VDM), the Independent School for the City, the City of Rotterdam, Het Nieuwe Instituut, and local Ukrainian partners including ReStart Ukraine. For this workshop, the IABR also collaborated with Archiprix International.

Objective

The focus of Panorama Ukraine is on the reconstruction of Ukraine, using research by design and a participatory, inclusive approach to develop a shared vision of the future. Drawing on design, art, and culture, participants work on solutions and frameworks for the future of Ukraine with an eye on sustainability, healthy and future-proof districts, energy production, circular economy, mobility, biodiversity, regenerative agriculture, and regenerative water management.

Working on Water focused on the role of water in reconstruction. Water plays an important part in Ukraine's climate-proofness and resilience: as the climate changes,

droughts and flooding will become more common. In addition, agriculture is the motor of Ukraine's economy; its fertile soil is an important aspect of the country's identity. The destruction of the Kakhovka Dam represents a drastic change in Ukraine's water infrastructure. In addition to the identity of the area, the irrigation systems located on the Dnipro River, the generation of hydroelectric power and the *water current* have changed dramatically. The dam has artificially maintained the course of the river for decades; the workshop explored new possibilities. Future plans also have to address current problems, such as the lack of clean drinking water.

This program was created in collaboration with various social organizations, designers, and government agencies involved in the reconstruction of Ukraine. The country's needs were clear: a window to the future, a foundation for a new Ukraine, hope for the road to freedom. Panorama Ukraine aims to create a framework that will support the country's reconstruction. Supporting Ukraine with concrete ideas, knowledge, and the necessary network will offer the country a positive perspective.

Participants

The IABR and the UNUN, in collaboration with Archiprix International, invited young architects from around the world who had won or had been nominated for this award to come to Rotterdam. The participants came from Bangladesh, Mozambique, Tonga, Serbia, Syria, and other countries, representing many different ethnic backgrounds. The young architects participated in the Working on Water workshop together with a young generation of Ukrainian architects. Seven young Ukrainian professionals traveled to Rotterdam and five participants worked online from Ukraine.

Supervised by architects and urban designers (from, among others, West 8, Echo Urban design, One Architecture & Urbanism, CRa, Felixx Landscape Architects & Planners, PosadMaxwan, KuiperCompagnons, KOTSIUBA Landscape Architecture, Urban Reform, Buro of Initiative Architecture (GA), Urban Curators, Urban Council of Union of Architects of Ukraine, LIAG, Delft University of Technology, and Studio Space Station) and water experts (including Carola Hein, Delft University of Technology, and Daria Malchykova, Kherson State University) worked on different cases in eight groups, each with their own challenge and expert guidance. Some of the experts are originally from Ukraine and now work in the Netherlands as architects or researchers, such as Pavlo Gorokhovskiy, architect and advisor to the Board of State Advisors (CRa), and Lesia Topolnyk, founder of architecture studio Space Station and the winner of Prix de Rome 2022.

The participants each had their own reasons and motives to come to Rotterdam. Teodora Spasić is from Serbia, a country that hosts a large Russian community but has seen an increase in Ukrainian residents since the war. She came to Rotterdam because

here, she could help shape a new system for Ukraine while simultaneously reflecting on the social implications of hosting rival peoples on her territory.

Program Schedule

Monday:

- [Introduction Lecture](#): Welcome and Introduction
 - *IABR + Archiprix + UNUN, moderated by Saskia van Stein*
- [Lecture](#): Context and Method
 - *Floris Alkemade*
- [Lecture](#): The Horrific Disaster at the Kakhovka Dam: Environmental, Economic and Social Dimensions of the Global Catastrophe in Ukraine
 - *Daria Malchykova, professor at Kherson State University*
- [Lecture](#): Consequences of a Dam in a Landscape: Investigating the Relations between Engineering Infrastructures, Space and Society.
 - *Luca Iuorio, assistant professor at Delft University of Technology*

Tuesday:

- Lecture: The Global Technical Response to the Destruction of the Kakhovka Dam
 - *Florian Witsenburg, CEO Tygron*
- [Lecture](#): The Experience of Coastal and Aquatic Areas Planning in Ukraine
 - *Yurii Palekha, Dipromisto*

Wednesday:

- Field Trip: Keilehaven Tidal Park
 - *Marcello Corradi, landscape architect De Urbanisten*
- [Lecture](#): Water Systems Design
 - *Carola Hein, professor at Delft University of Technology*

Thursday:

- [Lecture](#): Designing through Scales in Relation to Water Systems
 - *Taneha Kuzniecowa Bacchin, associate professor at Delft University of Technology*
- [Lecture](#): Hidden Waters: Historical Water Systems in the Netherlands and Iran
 - *Nasim Razavian, PhD candidate Delft University of Technology; Jens Jorritsma, founder OBSCURA*

Friday:

- [Presentations of Workshop Results](#)

All linked talks have been filmed and can be viewed on YouTube. A comprehensive visual report of the week's activities is also available.

Parallel to this week's Working on Water workshop, the City of Rotterdam invited a delegation from three Ukrainian cities: Odessa, Mariupol and Mykolaiv. This delegation came to Rotterdam to exchange knowledge, especially in the field of technological developments. How can these be used for urban climate adaptation and urban design? The IABR invited the delegation to attend the final presentation. Representatives from both embassies were also present.

The Region around the Kakhovka Dam

On Monday morning Daria Malchykova, a professor at Kherson State University, explained the situation around the Kakhovka Dam and Reservoir. On 6 June 2023, the dam was bombed and destroyed by the Russian army. Subsequently, the Dnipro River delta was flooded, and the Kakhovka Reservoir drained. This completely destroyed the area, flooding many villages and towns, making them uninhabitable, and killing many civilians.

The area became unrecognizable. Water determined what was possible in terms of agriculture, where people could live, and where clean drinking water was available. In addition, the dam had played a role in generating electricity for the region. Water had embodied the region's identity; its economy had depended on it. The disaster was forcing Ukrainians to rebuild the area, but the reconstruction of the dam would take at least five years and it is far from clear that this is the best solution. Malchykova stressed the importance of restoring the region's dignity and humanity.

Ambitions

Floris Alkemade, former Dutch Government Architect and founder of FAA, opened the week by explaining the ambitions: to give hope to the people of Ukraine and to change the current status quo. For too long, architects have been busy coming up with better solutions to the same problem, acting like engineers. That is what architects are good at. In times of great change, however, this is not enough; in the face of great complexity, the strength of architects lies in their imagination. It is their creativity that distinguishes architects from other professionals. So, the goal is not to find answers to questions, the goal is to ask the right questions.

Asking the right questions requires a new way of thinking, a new framework to guide Ukraine's reconstruction. Panorama Ukraine is about developing this framework; this workshop was its first step. Setting the tone, Alkemade also issued a challenge to all those present: 'Are you strong enough to live in this time?'

So, the challenge this week was to work together, because the case was too big to tackle individually. Listening to each other, asking each other questions and dreaming. 'In dreams begins responsibility,' as Alkemade quoted W.B. Yeats: if you can dream, then you must act on it. This is a step toward a transforming city, socially, economically, and technologically. The method refers to Kintsukuroi, the Japanese artform in which the shards of broken ceramics are glued together with gold-colored lacquer to emphasize the beauty of the cracks. This is meant to underline the resilience of Ukraine, a country that will be marked, not by the invasion, but by the way it dealt with it.

The Cases

Reconstruction of Ukraine, and of the Kakhovka region in particular, is not a linear process: both the immediate future and the period beyond are uncertain. Although the war is still ongoing, planning for reconstruction must begin today. Ukraine is a country in transition, with a long history and a specific culture. To come up with a design, each group had to develop a proposal that incorporated social, economic, and technical aspects into a new spatial plan. The young architects' systemic thinking was exactly what was needed. Each group was working on its own challenge, namely the following:

1. *Independent Eco-Agri-UA-Culture* (Experts: Lot Locher, Pavlo Gorokhovskiy // Participants: Benedikt Zeller, Javier Nadal, Lucia Juambeltz, Daryna Pasyuta)

How can the use and ownership of land remain sustainable in a postwar period? The land in Ukraine is very fertile. Civilians may not have the resources to rebuild what they had. Companies have a lot of economic interests in the area. How can we uphold the importance of biodiversity and ecology with a spatial design that incorporates economic interests and preserves Ukraine's identity? And how can we do this while at the same time creating a strategy for de-mining the agricultural land, based on water and ecology?

2. *Water Care: Sviatohirska hromada* (Expert: Anastasiya Ponomaryova // Participants: Kateryna Lopatiuk, Mariia Leonenko, Liudmyla Shvets)

This group worked from Ukraine (online) and focused on the drinkwater crisis on a smaller scale. City municipalities are struggling to restore the central water supply, which was heavily damaged during the Russian aggression against Ukraine. Even if they succeed, the risk of new damage remains. How can design solutions help create a resilient community that can deal with (temporary) water shortage problems?

3. *Rain Is for Free* (Experts: Maria Andriienko, Deborah Lambert, Eduardo Marin // Participants: César Barbarán, Guido Farabollini, Sebastian Leon, Aadll Patel, Mariia Semibratova)

The destruction of the Kakhovka Dam restored the natural course of the Dnipro River. This provides the opportunity to design a new river landscape. Can we visualize a new landscape that offers natural solutions to rainwater drainage?

4. *The Space That Water Leaves Behind* (Experts: Shelley Long, Nazar Dutko, Ben Kuiper, Anastasiia Palii // Participants: Clément Tardivet, Carolina Neuhaus Buzaglo, Tongay Dango, Carmen Bistuer, Cinthia Olate, Chiara Pasqualini)

How can we use natural processes to prevent floods and droughts? After the destruction of the Kakhovka Dam, the landscape changed, and many areas dried up. This case focuses on the resilience of the area. What strategy can we develop for the

natural restoration of the area, including good conditions for recreation, clean drinking water, security, and agriculture?

5. *Впливай / (не)впливай (Vplyvay / (ne) vplyvay) – Influence / De-Influence* (Experts: Lesia Topolnyk, Robbert Jan van der Veen) // Participants: Karina Hernandez, Corentin Morgan de Rivery, Piotr Kalbarczyk, Svitlana Usychenko)

The disappearance of the Kakhovka Dam was a disaster, but so was its construction in the past. The reconstruction of the landscape reflects the new definition of the Ukrainians and the world around them. How can we spatially articulate the new era of a free Ukraine, based not on control, but on the recognition of freedom and the rights of human and other beings? And how do we design beyond the perspective of humanity?

6. *Future Fertile Land* (Experts: Lidiia Chyzhevka, Ruut van Paridon // Participants: Icao Tiselli, María Martínez-Morón, Constanza Jara, Nataliia Butyrina, Tetiana Hlushchenko)

Ukraine's land is fertile, but overexploitation is causing the country to lose an estimated 500 million tons of soil each year. Existing irrigation systems are inefficient and emit high levels of CO₂. As the country warms, it needs a new agricultural plan. How do we design a new sustainable food and water system for the Dnipro River region?

7. *System –Mind-Mapping* (Experts: Elena Chevtchenko, Nazar Gresko // Participants: Mohammed Enfarad Chowdhury, Shahd Suliman AlNaami, Teodora Spasić, Hasan Hashas)

To design a new system for Ukraine, it is important to understand what factors and interrelationships exist. The objective is to analyze the Dutch water system and create a visual overview that can then be employed in Ukraine. How can we use this to identify what we know, but more importantly, what we do not know?

8. *The Freedom Land: The Place Where You Can Become Free* (Experts: Tetiana Breurs, Wouter Vos, Vlodco Zotov // Participants: Akshara Mundada, Chin Yan Yong, Ivo Fuenzalida Pino)

According to environmental researchers, rebuilding the Kakhovka Dam would be as harmful as destroying it was. Moreover, the destruction of the dam shows how vulnerable we became by depending on mega structures. What new technologies, sustainable research methods, and renewable energy sources can we use to empower the region?

The Program

The workshop consisted of daily lectures for the participants and experts. At the request of the IABR and the organizing partners, a variety of researchers, architects, and entrepreneurs held presentations. In the short time available, the presentations provided the project participants with the support and knowledge to substantiate their assumptions and use existing knowledge as a basis for spatial design.

The History of the Dam

On Monday afternoon Luca Iuorio, assistant professor of Urbanism at Delft University of Technology, shared his research methods on dams and dikes. While dams are often considered static objects, they are in fact the opposite. Dams have a limited lifespan and require constant maintenance. They should therefore always be seen as part of a dynamic system that in turn plays a part in a chain of natural processes and human interventions. The construction and demolition of dams is also an important reflection of the current state of a country or government.

This presentation was an important starting point for several of the groups. The construction of the Kakhovka Dam in 1955 in the then Soviet Union was a demonstration of the power of Stalin's government, while it was a disaster for the ecology and environment of the dam, causing nature, villages, and people to suffer. Its destruction on 6 June 2023 reflects the current oppression. New designs should reflect the new identity of a future-proof and free Ukraine.

Practical Examples

In the following days, the groups were given tools to work with. On Tuesday morning, Tygron CEO Florian Witsenburg presented the software used to predict the course of the flooding in the 20 days immediately following the bombing. This software can also be used for new urban designs, gauging their impact on potential flooding or precipitation.

On Wednesday morning Marcello Corradi, landscape architect and urban designer at de Urbanisten, presented several projects that demonstrated the role of water in spatial design. Next, the participants visited the Keilehaven Tidal Park. This design, which is currently under construction, features different layers that are submerged depending on the tides, providing different spaces for different vegetation. Two goals were important to the participants: first, the diverse vegetation provides a fertile habitat for fish and birds, and second, the different levels in the design bring the city and the water closer together. Rotterdam, a city shaped by the Meuse River, has almost no places where people and water interact; connecting the two will strengthen its identity as a water city.

Anticipating the natural rise and fall of water also featured in a presentation by independent landscape architect and one of this week's 'table experts' Ben Kuiper, who spoke about the 'de-poldering' of the Noordwaard in the Biesbosch. In this area, a piece of land has been redesigned as a nature reserve that will flood at high tide, making room for the water rather than trying to stop it.

New Ways of Thinking

This reverse thinking fits with the week: the systems of the future must be designed *for* water, not against it. Taneha Kuzniecowa Bachhin, an urbanism researcher at Delft University of Technology, presented her research on water-sensitive design. Her novel approach uses transcalarity to explain the impact of water on a society. It considers the part water plays in society at the individual, social, and natural levels. She approaches water through the history of the land: How did the water move before humans intervened? Using this approach, it is possible to design water landscapes on the basis of their own identity, rather than use innovation as a driver. Jens Jorritsma and Nasim Razavian showed the example of their project Hidden Waters, which explored the lessons of the history of an Iranian lock for their contemporary relevance.

The Results

Over the course of five days, all the participants became close, creating a free and concentrated atmosphere in the Keilepand space. A space in which there was an awareness of the urgency of the topic, but also the freedom to develop new ideas and perspectives. A lack of ego characterized the space. 'The real tension of the situation we are working on pushes us beyond the discomfort of not knowing each other,' said participant Icao Tiselli from Tonga. There was an awareness that this case was too big to think about individually. Given the short time frame, the focus was on simply listening to each other. The final presentation brought together the various insights of the week. It was attended by the delegation from Ukraine, with staff from the cities of Odessa, Mariupol, and Mykolaiv.

Presentation

All groups were challenged to ask the right questions, rather than come up with specific solutions. Daria Malchykova's expectations were therefore primarily focused on new ways of thinking. 'This is not a project that will last only for five days, this will be going on for years. This week is all about creating new perspectives.' The groups presented their work collectively.

The new perspective was presented immediately. *Rain Is for Free* presented the Kakhovka Dam as a central cog in an old machine, a machine that will not work without the dam. As an alternative, they presented a decentralized system in which other interventions achieve the same positive effects, such as flood control, electricity generation, and irrigation, through local solutions. The group *Water Care*, which presented via a livestream from Kiev, suggested using heritage and landmarks for this very purpose. This way, the new system will immediately become part of the Ukrainian identity.

The reconstruction and preservation of the Ukrainian identity played an important part in many of the presentations. The group *Vplyvay / (ne) vplyvay* presented a game that challenges players to consider the identity of a new free Ukraine from the perspective of humans and non-humans.

The consideration of the interests of nature also played an important part, guided by images of the recovery of nature in the now parched areas. This resilience was evident in the presentation of *The Space That Water Leaves Behind*, a guide to the natural recovery of the riverbeds where the creation of different land levels can foster different types of new vegetation, as seen in the Keilehaven Tidal Park.

Innovative Rainwater Management demonstrated the transcalarities involved in many projects, ranging from small-scale rainwater harvesting interventions that even a household could do, to large-scale regional interventions that could contribute to the

use of rainwater for irrigation in times of drought. This bridged the gap between the short and long term, addressing the current shortage of clean drinking water and providing solutions for Ukraine's agricultural future.

The *System Mind-Mapping* presentation took a step into the future, with a design for a digital tool that displays the different factors of specific problems and a plan to develop it further in the future. During the workshop, the tool was tested on the projects of the other groups – a cross-pollination that is a promising sign for the future of Panorama Ukraine.

Reflection

The goal of the week was clear from the results presented by all groups: they did not include plans to rebuild the dam. 'Being a hero is being counterintuitive,' as Floris Alkemade shared during his opening lecture. After all, listening is counterintuitive, thinking not from one's own point of view, but always from the point of view of the other. All groups showed that an alternative system is possible; each presented an alternative solution, based on the nature and identity of Ukraine.

Within a week, the participants created an atmosphere that left room for everyone to contribute. Participant Tongay Dango from Mozambique shared his interpretation of this atmosphere: 'In Africa we call this atmosphere *Ubuntu*, it means that we are human, because of our humanity towards others.' In these terrible circumstances, hope lies in humanity.

The Future

This workshop at the Keilepand was the kick-off of the long-term project Panorama Ukraine. Both the partners that attended and the delegation from Ukraine have already seen the results of the project and can now take the next steps. Together with VNG International, UNUN organized online webinars with local municipalities in Ukraine to share the results of the workshop. In addition, there have been several publications in Ukrainian media about the project. The necessary network, which was established during the preparations for Working on Water, will now be used for the further development of Panorama Ukraine.

With so many wars going on in the world today, it is important to disseminate both the lessons learned and the framework. Over the next few years, several similar workshops will be held, each focusing on and collaborating with people from Ukraine, architects, landscape designers, and urban designers, using creativity as a guide. The insights gained here will find their way into the Panorama, for Ukraine, but also for all other countries at war.