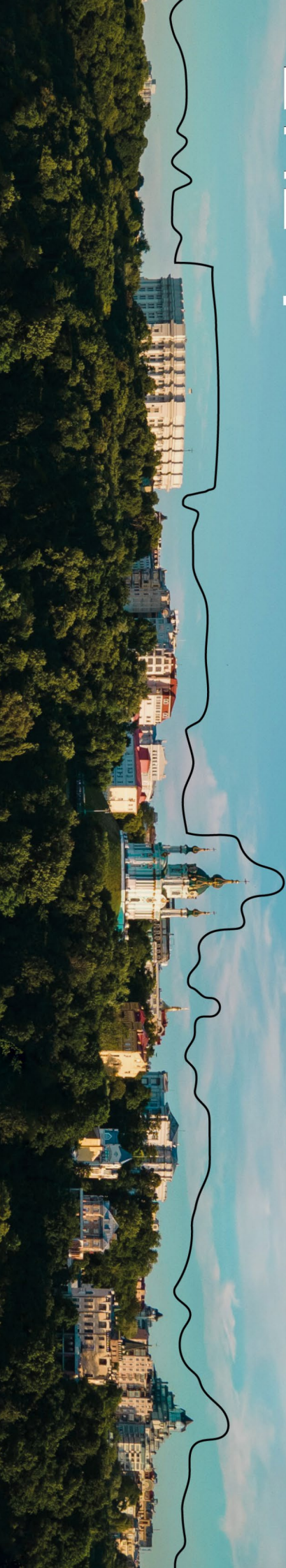


THE AQUA SPACE

water parks • pools • baths • SPA

#6, 1 october 2023

[re  build]



EDITOR'S NOTE

Dear readers, welcome to «The Aqua Space»! This is the third issue in the hellish 585 days of full-scale war, and we can finally say it won't be the last.

For this, we sincerely thank all the defenders of Ukraine. We also extend our congratulations to everyone who contributed to preserving the independence of our country on Defender of Ukraine Day and the Day of the Ukrainian Cossacks. We express our gratitude to all those who protect, save, treat, transport, donate, tell stories, invent, and document. We thank everyone who unites millions of Ukrainian hearts into one, pulsating with life.

Inspired by the breakthroughs and gains on the frontline, we dedicate this issue to recovery. We want to discuss the nation of victors, a place where heroes will be welcomed, a land they will want to return to. We will delve into the concept of rebuilding — with flowers blooming around bullet scars, with warm light powered without generators, and with inventions that have no equals in the world.

So, let's embark on the journey of healing, ladies and gentlemen. To rebuild and construct, to purify and safeguard, to hold accountable those who are typically beyond reproach, and, of course, to love and honor our homeland. We have a unique opportunity because what we create now will shape the future for our descendants. It is our duty not to let them down.

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DONATION

FOR AN UNDERWATER DRONE

MARICHKA

UAH 16 000 000

**FORCE THE OCCUPIER TO LEAVE THE BLACK SEA
FOLLOWING THE RUSSIAN MILITARY SHIP**



UNDERWATER DRONE «MARICHKA»

Ukrainians are not only requesting weapons but are also effectively producing them themselves. Need proof?

Despite hundreds of Russian attacks, military equipment and weapons manufacturers not only continue production but are also scaling it up.

Furthermore, over the past two years, a significant number of enterprises have emerged, producing not only analogues of Western weapons but also entirely unique specimens. In general, according to the analytical platform YouControl, at the beginning of this year, there were 461 enterprises and 35 individual entrepreneurs working in the fields of air and space aircraft production, related equipment, military vehicle manufacturing, and weapons and ammunition production.

As a result, in 2022, the state concern «Ukrainian Defense Industry» increased production volumes by 5-8 times compared to 2021. In August of this year, it climbed from 89th to 65th place in the Defense News ranking of defense companies.

So, Ukraine has numerous indigenous developments that are proving themselves on the battlefield. «Cossack,» «Oplot,» «Novator,» «Bulat,» «Leleka,» «Furia,» «Shark,» «Werba,» «Bogdan,» «Stugna,» «Neptun,» as well as other lesser-known Ukrainian innovations, are daily countering Russian invaders.

Now, let's discuss another Ukrainian innovation, which is just beginning to make its mark on Ukraine's weapon industry – the underwater drone «Marichka.» However, it is interesting not only for its capabilities. One of the founders of the AMMO fund, dedicated to its development, is Istvan Kohan, the director of the company «Water World Window.»



Istvan has dedicated over 20 years of his life to designing and building commercial swimming pools, but what is less known is that he has spent even more years deep-sea diving. There is no doubt that these knowledge and skills played a crucial role in the creation of the drone.



So, who is «Marichka»? We won't uncover all its secrets in advance, but some are already known. According to the developers, their underwater drone boasts a wide range of applications and numerous advantages:

- No crew required, thus no casualties or injuries.
- Stealth – silent and underwater, capable of resisting electronic warfare systems.
- Autonomy – the drone can switch to an energy-efficient standby mode.
- Range – it can cover over 1000 km.
- Versatility – capable of performing combat, cargo, or reconnaissance missions.
- Effectiveness – able to hit boats, ships, underwater bridge piers, and shore fortifications of the invaders.



One significant advantage of underwater drones is their inherent stealth. Unlike surface models, they are difficult for enemies to detect. This allows them to conduct reconnaissance, infiltrate coastal zones, bays, and other restricted water areas. Underwater drones are ideal for searching and detecting underwater submarines, as well as identifying and neutralizing underwater mines and torpedoes. Additionally, they can remain undetected underwater, even in heavy storms when surface drones may be rendered unusable.

Incidentally, the drone owes its name to the song by the popular band «Patsyki

z Franeka,» which also participated in fundraising for «Marichka.» According to the project's founders, the first visualizations of the drone fit so well with a well-known song that the name stuck naturally.

The purpose of «Marichka» is to inflict maximum damage to Russia's Black Sea fleet and, ultimately, to expel the occupier from the Black Sea waters. «We are confident that after the first attack by Marichka, the invader's fleet will leave the Black and Azov Seas and head to the Caspian,» claim the project's authors.

A team of Ukrainian scientists, inventors, and military experts is diligently working on the drone, with development being financed through their own funds and donations. We urge you to support the developers to ensure that «Marichka» sings the final song for the occupiers this year.

SUPPORT



FUND AMMO UKRAINE



PAYPAL

Reconstruction of a pool for soldiers in the Clinical Hospital 'Psychiatry'

In our previous issue, we discussed the «Psychiatry» Clinical Hospital, where we appealed to benefactors to support the hospital's efforts in rehabilitating Ukrainian defenders.

Just as a reminder, this hospital admits servicemen who have suffered from mine-explosive injuries and post-traumatic stress disorders (PTSD).

Under the care of dedicated psychiatrists, these individuals work to overcome anxiety and depression, manage intrusive thoughts, and deal with nightmares related to their combat experiences. They undergo a process of adaptation to return to a normal life.

Alongside medical treatment, a comprehensive rehabilitation program, encompassing both psychological and physical aspects, is implemented with patients. Active engagement in activities helps alleviate anxiety and tension, releasing various hormones, including endorphins responsible for feelings of happiness.

Swimming has proven to be an effective method for addressing PTSD symptoms. In late February, a sergeant from the Armed Forces of Ukraine reached out to the editors of «The Aqua Space,» seeking assistance

in restoring the hospital's pool, which had been in use for over 30 years.

We promptly contacted volunteers to assess the extent of the work required. Unfortunately, years of inactivity had left the concrete structure, lining, pipes, equipment, ventilation, and ancillary areas in a state of disrepair. Consequently, their restoration demanded significant effort and financial resources.

The team at «Water WorldWindow,» a leading company in the Ukrainian public swimming pool market, took on this project. They possess extensive experience with complex endeavors and have responded to military requests in the past. Thus, in April, the process of dismantling the pool's lining commenced, and by July, the final pieces of equipment were installed in the engineering block.

We'd like to extend our gratitude to the Italian company «Litokol Plus» LLC, under the leadership of CEO Maccio Maurizio. They generously provided high-quality materials such as cement plaster, waterproofing, glue, epoxy grout, sealants, and others, with a total value of UAH 400,000. **Your thoughtful contribution is highly appreciated.**



The pool is now fully operational and awaits the completion of indoor renovations. We invite you to take a look at this interim progress.



MUNICIPAL POOLS

What is it and where to look for them?

Summer has passed, which means it's time to draw conclusions and prepare for the next season. We've discussed various commercial swimming pools extensively, but now, we're focusing on the topic of municipal open-air swimming pools in Ukrainian cities, using Kyiv as an example.

Firstly, why is this topic relevant? While the past summer could be considered mild, August brought temperatures soaring to +35°C, which persisted for nearly a month. During such weather, people naturally seek to spend time near the water—sunbathing, swimming, and cooling off. Ukrainians are fortunate as our country boasts an abundance of natural reservoirs, and from childhood, we cherish memories of family picnics and outings in these beautiful settings.

However, it's crucial to recognize that times have changed, and our water bodies have suffered due to various human-made factors, including the impact of war. Currently, swimming in rivers and lakes carries certain risks, such as polluted water, mined shores and shallow areas, remnants of

sunken debris and ammunition. Additionally, not all beaches have officially opened for the season, which means the presence of lifeguards may not be guaranteed.

Regarding Kyiv, data from the «Kyiv City Center for Disease Control and Prevention of the Ministry of Health of Ukraine» indicates that at the beginning of the summer of 2023, only six beaches in Kyiv were deemed safe for swimming: «Dytyachiy,» «Peredmzystna Slobidka,» «Venetsia,» «Veselka,» «Chortoriy,» and Lake «Troyeshchyna.»

However, by August 2023, these beaches were also marked as unsafe for swimming based on sanitary-microbiological and sanitary-chemical assessments.

Given the potential risks associated with swimming in open water, there is an alternative—open-air pools. But do they truly exist?

Kyiv boasts around a dozen such pools, all located within recreation complexes or beach clubs. It's worth noting that only a few of them feature large pool areas. In most cases, the pool size comfortably accommodates up to

ten people, which is significantly fewer than the number of visitors these places attract, even on weekdays.

Overcrowding has become a major issue, especially considering that Kyiv's population exceeds three million people, and a dozen or so city swimming pools during a hot summer are insufficient. Personally, we attempted to visit «Pier 39» at VDNG on a weekend but were unsuccessful due to the complex's overcrowded conditions—even as early as 10 in the morning!

The cost of such a vacation is another concern. On weekdays, the entrance fee to the pool area plus sunbed rental (sometimes included) starts at 400 hryvnias (\$10.5) per day, while on weekends, it begins at 600 hryvnias (\$15.5) and higher.

Even with discounts for children under 7, this poses a financial burden for families with average budgets. As such, this vacation is only feasible for those with a high income.

How is this issue addressed in other countries?

Most cities with well-developed infrastructure have municipal

swimming pools under their purview. These pools operate using city budgets and may charge a symbolic entrance fee to cover maintenance costs. While such pools may not offer luxurious surroundings, restaurants, or waiter service, they fulfill the essential function of providing safe and affordable water recreation for diverse segments of the population.

To put it in perspective, consider the United States, where there are a staggering 10.4 million private swimming pools and an additional 300,000 public swimming pools—a total of 10.7 million swimming pools, equating to one for every 31 people! The cost of visiting municipal swimming pools in the U.S. ranges from \$3 to \$6, making them accessible to virtually anyone.

Municipal swimming pools, as part of the local infrastructure, serve several

vital social functions:

- **Sports and Physical Health:** Municipal swimming pools promote sports and physical activity, contributing to a healthier lifestyle, stronger muscles, and improved physical fitness.

- **Youth Development:** They offer a valuable opportunity for young people to engage in meaningful and healthy activities, fostering coordination, improved health, and self-discipline.

- **Swimming Education:** Municipal pools can organize swimming lessons for both children and adults, teaching crucial water safety skills to prevent accidents.

- **Social Integration:** These pools serve as places where people from different social backgrounds can interact and build social cohesion.

- **Family Recreation:** They provide enjoyable and relaxing experiences for families, often featuring additional attractions

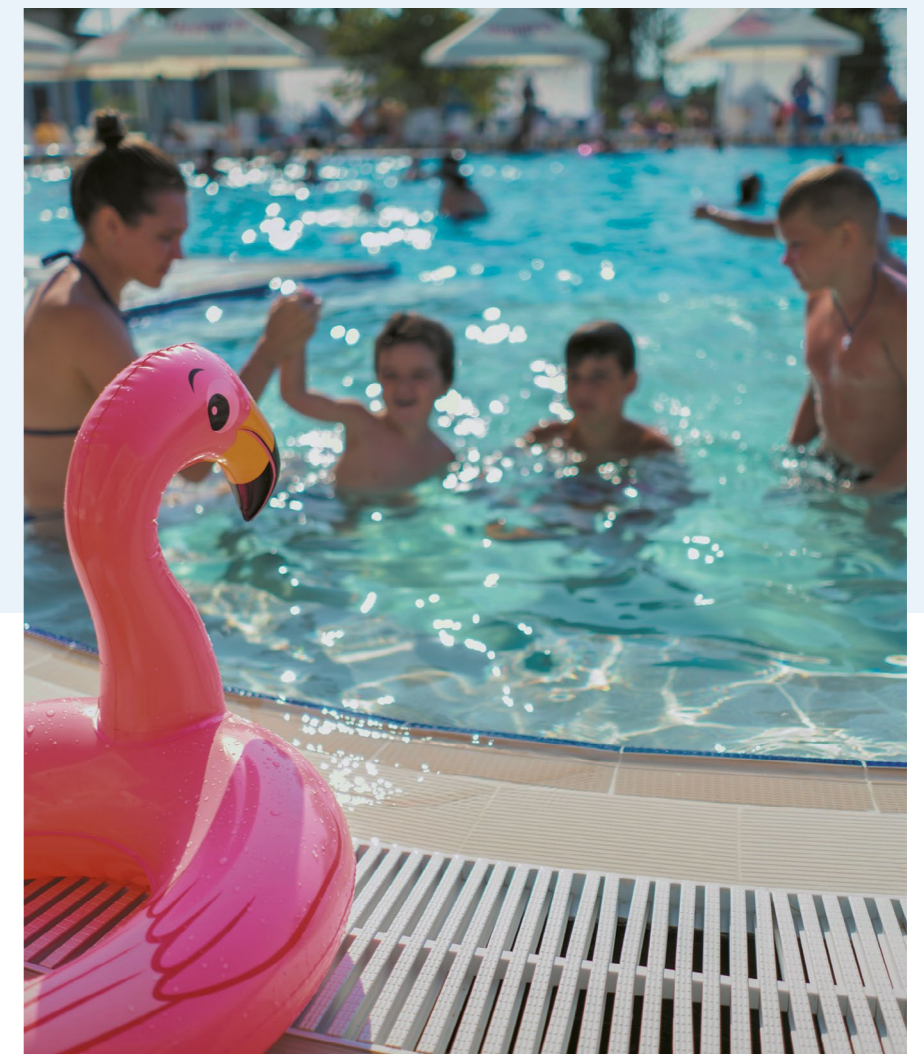
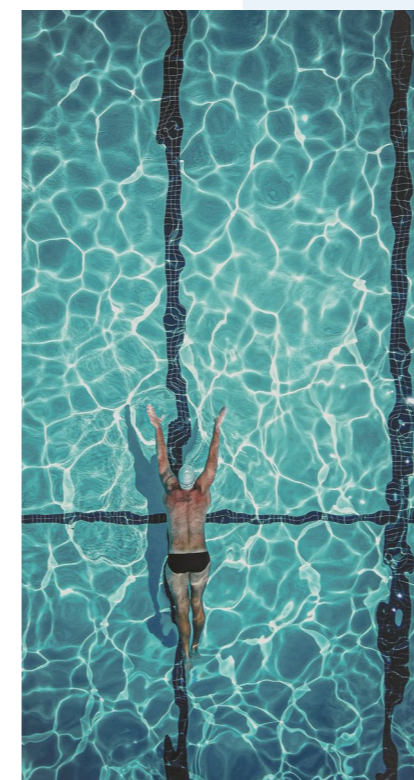
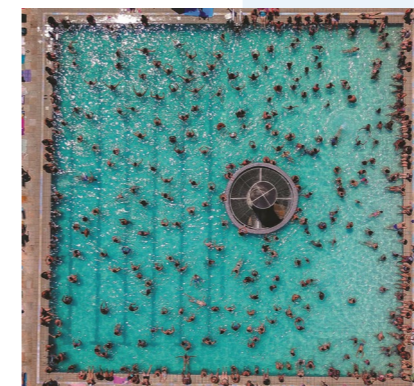
like slides and water games.

- **Support for Sports Teams:** Municipal pools can serve as training grounds for swimming and other water sports teams, encouraging sports development in the community.

- **Inclusivity:** Pools can be adapted for classes and rehabilitation for individuals with disabilities, providing them with exercise opportunities and enjoyment of swimming.

While we recognize that the proliferation of municipal swimming pools in Ukraine is a long-term process, exacerbated by the impact of war, we encourage citizens to raise awareness about the need for accessible water recreation in cities.

These cultural, sports, and social spaces are far more than just summer entertainment—they serve as essential resources for the well-being of our communities.



Rikka Khust Thermal Resort

The largest pool in Transcarpathia

A year ago, we wrote about the «Rikka Khust» complex as one of the first to continue functioning after the start of a full-scale war: to volunteer, build and protect. Today, we are delighted to reconnect with them and witness the remarkable progress made by the complex's team.

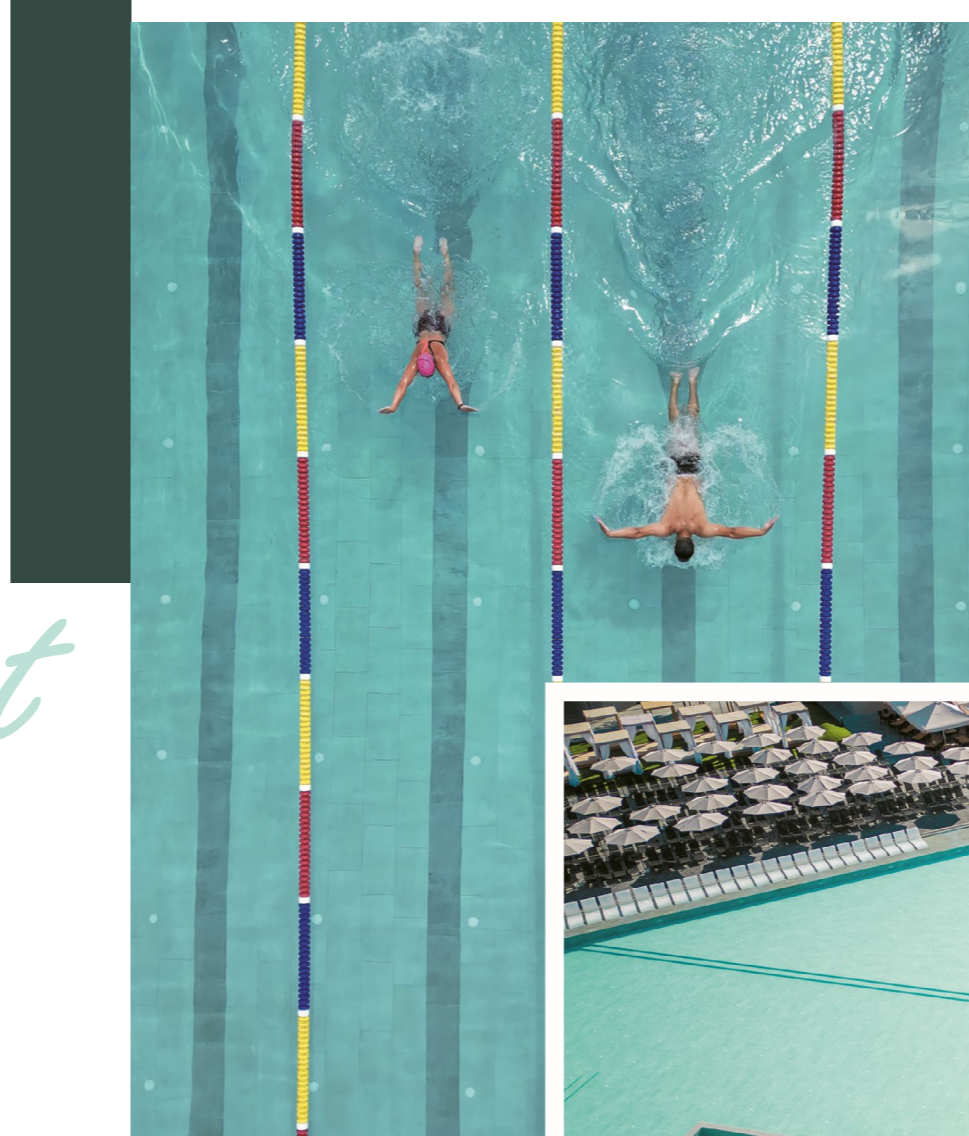
Today, the Rikka Khust Thermal Resort stands as a cherished destination for recreation and sports, catering to both locals and visitors to Transcarpathia.

This summer, they proudly unveiled a new addition—a luxurious multi-level mineral pool spanning an impressive 1,320 square meters. This pool stands as the pride of the complex and is the largest outdoor pool in Transcarpathia.

The pool boasts a well-appointed bar area and is filled with mineral water drawn from the resort's own well, sourced from a depth of 340 meters. However, its true centerpiece is a dedicated sports area featuring four 25-meter professional swimming lanes.

It's worth noting that just five years ago, this same spot was covered in bushes, housing an old, abandoned swimming pool that had fallen into disrepair after years of neglect. A few years ago, Andrii Shtefutsa, a renowned English photographer of Ukrainian origin, captured the site in its derelict state.

There's a certain symbolism in the fact that a new and modern pool now stands where the old and dilapidated one once was. This place is poised to nurture new generations of athletes and bring joy to children. Transcarpathian swimmers are already making the most of this pool for their regular lessons and to enhance their professional skills. On the next page is a photo of how it looks today.



In addition to providing relaxation and tranquil leisure, the pool area offers various services:

- Individual swimming lessons for adults and children: Professional coaches help enhance swimming skills or teach them from scratch.
- Group swimming lessons for children: Children can learn to swim in an enjoyable and effective manner alongside friends, guided by experienced instructors.
- Baby swimming: The youngest children can have their first delightful water experiences in a secure environment, closely supervised by a coach.
- Swimming for children with special needs (hydro-rehabilitation): A certified trainer provides hydro-rehabilitation services that support the development and relaxation of children with various nervous system conditions.
- Aqua aerobics: Adults have the opportunity to add some movement to their lives under the guidance of professional instructors.



*Additional benefits of visiting
Rikka Khust Thermal Resort*

- Children's pool, sauna, salt room, thermal baths, summer water park, massage and cosmetic procedures, pump station with therapeutic mineral water, restaurant, children's room, and other areas dedicated to unparalleled relaxation.
- Safe water without the strong smell of chlorine, thanks to the Injecta automatic dosing station and regular water testing by specialists.
- Always warm and comfortable water for swimming, courtesy of the Behncke low-temperature heat exchanger.
- Contributions to a noble cause, as the complex is consistently involved in charity work. For instance, on their two-year anniversary, they donated UAH 200,000 to the «AMMO UKRAINE» charity fund, which raises funds for the development of the Ukrainian underwater drone «Marichka,» as featured on page 4 of our magazine.

We cordially invite you to Rikka Khust, where water brings people together, offering relaxation, learning opportunities, and the chance to maintain your health and vitality. Their new pool is your ticket to an active and healthy life!



A TREND THAT
IS GAINING
POPULARITY
WORLDWIDE

Rainwater pools

In recent years, there has been a growing focus on environmentally responsible solutions aimed at preserving natural resources and reducing the negative impact on the environment. One vivid example is the utilization of reclaimed rainwater in swimming pools. This concept combines benefits for human health with a positive contribution to the preservation of water resources and natural ecosystems.

Rainwater is a source of life and a crucial resource for sustaining our environment. Using this natural resource to fill pools offers numerous advantages. Harvested rainwater can be collected and stored for various purposes, including filling not only private swimming pools but also sports complexes and health centers.

The use of rainwater in swimming pools offers direct benefits for the health and well-being of users:

- **Environmentally clean water:** Reclaimed rainwater is naturally softer and cleaner than its counterparts from tap water systems. Consequently, there is potential to reduce the use of chemicals for pool water treatment. This, in turn, has a positive impact on the skin and respiratory health of swimmers.
- **Reduced risk of allergies and irritations:** By decreasing the use of chemical reagents in pool water treatment, rainwater can lower the risk of allergic reactions and skin irritations.
- **Ecological approach:** Utilizing reclaimed rainwater in pools aligns with an ecological approach to environmental protection, contributing to water resource conservation and reduced emissions into the atmosphere.

Incorporating reclaimed rainwater into pools also benefits the environment by reducing the consumption of fresh water, thereby conserving natural resources and maintaining ecological balance in the region.

Here are some steps to implement this approach:

Rainwater Harvesting: Begin by installing a rainwater harvesting system, which can involve drains and pipes directing water from roofs or other surfaces to a dedicated collector.

Filtration and Purification: Rainwater must undergo purification and filtration before entering the pool to remove impurities and particles.

Storage: Purified rainwater should be stored in specialized containers or tanks, ensuring a readily available water source for the pool.

Water Treatment: Additional treatment may be necessary to maintain pool water quality, including chemical treatment to ensure water safety for users.

Connection to the Pool: Connect the rainwater system to the pool filling system, possibly through a special pump or an automatic water level control system.

Monitoring and Maintenance: Regularly monitor the quality of the water entering the pool and maintain the collection and treatment system to prevent potential issues.

Before implementing a rainwater collection system for your pool, it is advisable to consult with specialists in water supply and ecology. They can offer guidance on selecting optimal solutions and ensure the correct installation and maintenance of the system.

Utilizing reclaimed rainwater in swimming pools represents a step into the future, where people can enjoy sports and recreational activities while simultaneously caring for their health and the environment.

This innovative approach underscores the importance of a balance between resource consumption and conservation, contributing to the creation of a more sustainable future for society as a whole.

WHO KILLS BLUE LAKE ?

During the war, Ukraine has to fight not only with an external enemy, but also with an internal one, which creates serious environmental problems. One of them unfolds right outside Kyiv. This is a large-scale construction waste dump of «Recultivatsia» LLC, which destroys the natural beauty of the region and the unique Blue Lake.



The modern world has a greater responsibility for nature conservation and environmental sustainability than ever before. We face threats of environmental pollution, destruction of ecosystems, and the loss of natural reserves. Unfortunately, Ukraine is not an exception, and in this article, we will discuss the threat to one of its natural attractions—the unique Blue Lake in the Kyiv region.

This lake originated in Soviet times as a result of a quarry failure during clay mining. According to locals, the water rushed in so rapidly that the excavator that fell into the spring remains at the lake's bottom.

Nevertheless, this is one of the deepest lakes in the Kyiv region, and its water is so clean that, according to test results, it is nearly comparable to drinking water.

It serves as a recreational area, drawing many Kyiv residents who seek respite on hot days.

However, local residents have been sounding the alarm for several years because the Blue Lake constantly faces the threat of destruction. Just a hundred meters from the shore lies a construction waste landfill that expands onto new hectares of land each year. In response to this issue, local activists initiated a petition before the war:

«Since 2005, the Gorenka landfill has been generating substantial profits for LLC 'Recultivation,' local authorities, and overseeing organizations that condone this criminal activity. Conversely, local residents are grappling with catastrophic pollution of the area, the air, and the water, causing irreparable damage to both people's health and the environment,» the petition's preamble states.

The authors of the petition have documented a list of contractual and legal violations by «Recultivation» LLC, including the landfill's occupation of nearly 30 hectares instead of the planned 5.6 hectares, unregulated accumulation of hazardous waste, and the unchecked import of hazardous substances. Poisonous leachate freely flows into the rivers and lakes of the Irpin region.

«Two quarries, originally intended for solid waste disposal resulting from clay extraction by a brick factory, were to be filled. Instead, we now have a colossal mound looming over the lake,

polluting the Irpin river, which is part of the Smaragd group,» the appeal emphasizes.

The petition's initiators demand the following actions:

- Immediate closure of the landfill for waste disposal.
- A sanitary and ecological examination of the landfill area by independent experts to assess its condition, determine the scope and plan of reclamation work.
- Mandatory enforcement of full reclamation of the landfill by «Recultivatsia» LLC, under community supervision, to fulfill its obligations.
- Legal action against those responsible for these crimes and harm to public health.
- Inclusion in the village of Gorenka's master plan (currently under development) the creation of a landscape park on the site of the reclaimed landfill.

The petition garnered the required number of votes and was submitted for processing to the Gostomel settlement council. This issue was last addressed in November 2021 during the 17th session of the VIII convocation, where public representatives and environmental experts presented laboratory research findings. After discussions, the deputies gave «Recultivatsia» LLC six months to fully close and prepare the landfill for reclamation.

Additionally, the State Environmental Inspection of Ukraine calculated losses of UAH 364.8 million due to the landfill's encroachment and UAH 31.9 million due to pollution.

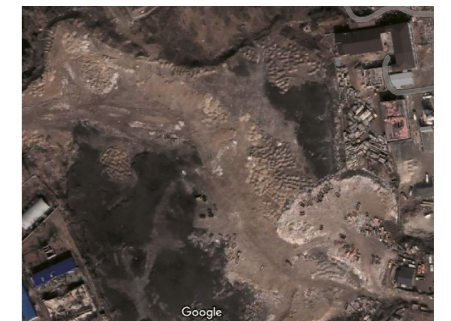
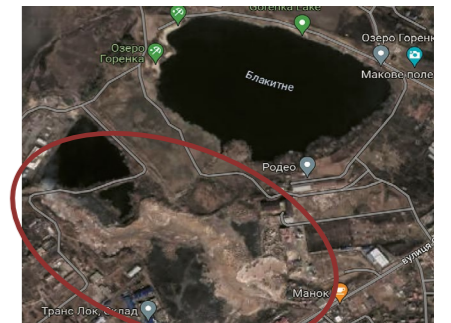
As of today, the disposal of waste at the specified landfill not only continues but also increases. According to service recipients, this location hosts Kyiv's largest construction waste landfill, with another significant one in Borodyanka, necessitating more funds for transportation.

The Gostomel settlement military council has not assisted

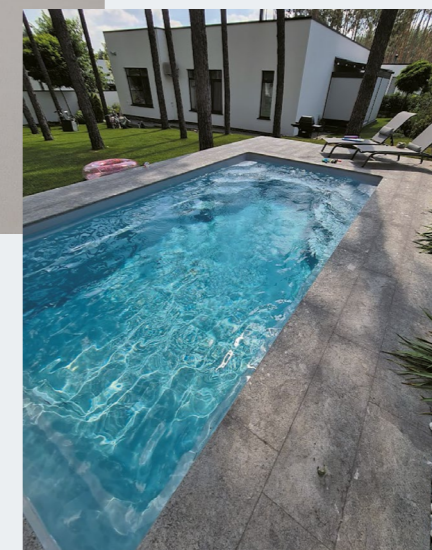
in resolving this problem as it is not the legal successor of the Gostomel settlement council and has not received any session decisions from it.

Preserving our environment necessitates joint efforts and shared responsibility. The landfill near Kyiv, which threatens the Blue Lake and the environment, is an acute issue that cannot be ignored. Local residents and community activists have taken the first step in saving this water body and nature, but this is a challenge that now falls upon all of us collectively.

It is imperative to support their efforts and demand that authorities take decisive measures to halt this ecological disaster. Our natural heritage is a legacy for future generations, and we must do everything within our power to preserve it for them and for ourselves.



FROM POOLS TO SHELTERS



The issue about restoration would be incomplete if we did not interview the current president of the Association of Aquaparks of Ukraine, a pool creator, manufacturer and volunteer — Maksym Babchun. During the war, he not only opened a branch of his production in the west of Ukraine, but also started a completely new project, which has no analogues in the world. If you also wonder how he manages all of this and what motivates him, then this article is for you.

Maksym, in the past, the pool community knew you as a manufacturer of composite pools. Who are you now? A pool creator, a volunteer? Or have modular shelters become your main project?

Today, swimming pools remain my primary focus because I have been working with them since 2006, and since 2016, I have been involved in production myself. It's like a train that was very difficult to set in motion but also difficult to stop due to its very large inertia. Even with a full-scale war, there are sales that keep the company afloat. Of course, we do not have fantastic profits, but with the entire team working together, we can cover rent, salaries, taxes, invest money in development, and refurbish molds. We even plan to start working on a new type of pool this year!

As for the shelters, this is the idea of my comrade Roman, who fought as a volunteer from the first days. He is a combat officer, took part in the Kharkiv operation and in battles near Bakhmut. At some point during his service, he sketched the optimal modular shelter for civilians. He previously worked with fiberglass, so he understood how to make it suitable for

comfortable and safe use.

Tell me a little more. What does it look like?

The capsule is a living module; it is not standalone protection against shells and missiles. This capsule is completely sealed, waterproof, and very warm. Its heating for four people consumes only 1.2 kW of electricity. It is absolutely sterile and modern, resembling the cabin of a yacht inside. All the engineering, air filtration and ventilation systems, heating system, backup air supply system, water supply, and drainage system, as well as the main and backup power supply systems, are completely integrated into its structure. Powered by backup batteries, it can be completely autonomous for two days.

The country has accumulated a great deal of military experience. There are building regulations for civilian shelters: at what depth should they be located, what kind of embankment should they have if they are on the surface, what the walls, ceilings, etc. should be made of. So when we install the capsule, a concrete sarcophagus is built around it according to the norms, ventilation channels are brought out, and utilities are connected. Only after this, the shelter is considered safe.

It's important to note that we don't position

our modules solely as shelters during shelling. For example, no one is shelling America, but it is fashionable there to build bunkers—it's like an underground hideout for adults. We also build it so that it can be used as a living space. The shelter is absolutely adapted for this. The war will end someday, and this facility can be used like any other, perfectly quiet and private room.

What is the profile of your target audience? Who is the main customer? Can we already talk about competition in this market, or are you pioneers?

Our target audience is the private sector. For example, now there are many modular houses, houses made of SIP panels. The big problem with these houses during the war is that there is no place to take shelter. There is no shelter based on the «two walls» principle because all the walls are wooden. It's virtually impossible to implement shelter differently in such houses. Therefore, our audience is property owners for whom it is impossible to implement shelter in another, more classical way. We offer them comfort and safety.

As for competition, there is some, but it mainly comes in the form of concrete or metal capsules. In terms of composite shelters, we are 100% pioneers. This is our patented technology, and as far as we know, no one

Maksym Babchun tells about the development of business during the war

else in Ukraine is doing this. Possibly not even worldwide.

Let's return to the pools. What types of orders are prevalent now?

Since the beginning of the war, we have lost about 70% of our turnover, mainly in large and expensive pools. In the past year, smaller pools of 6-8 meters with rather modest configurations have become popular. Most of our customers are people who have dreamed for a long time and have finally decided to realize their dream, but on a smaller scale than they could afford before the war.

Why did you decide to relocate your production?

It so happened that my first production site was very close to the runway of one of Ukraine's airports. When the airports began to be shelled in February, we mentally said goodbye to it. Fortunately, the company and, most importantly, our molds survived. But for safety reasons, we decided to duplicate production in western Ukraine. Moreover, there are many internally displaced persons (IDPs) there, and many houses are being built, more than in other regions. So there is a market, and we want to supply our products to this market as quickly as possible.

After the war started, you became actively involved in volunteering. Did this affect your relationships with colleagues in the industry?

My circle of communication with swimming pool manufacturers has significantly narrowed. It is challenging to maintain relationships with those who left immediately when the war started and only returned when things got easier and better. I collaborate with reliable people who can keep their word and are focused on victory.

How do you envision the future after Ukraine's victory?

After victory, I want to continue working in this direction, develop new types of pools, completely update the product range, and enter the European market. I love my job. I enjoy coming to a site with bare ground and, after some time, seeing children swimming and laughing there. It's fulfilling. I see the fruits of my work, and for me, as a man, that's very important.

POOL NEWS

The last year and a half have been challenging for everyone. While our thoughts and focus remain on Ukraine due to the crucial news from the front, it's essential for us as professionals to stay updated on the latest developments in the global pool industry. Therefore, we've prepared a digest of news that you might have missed.

- In Europe, a new environmental standard, **NF EN 17645**, for private swimming pools has come into effect. Its primary purpose is to establish a comprehensive environmental classification for private pools using icons. These icons will enable users to identify the environmental performance of pool equipment and products, assigning ratings from A to F and providing an overall score for each pool. The standard will be gradually introduced on a voluntary basis, with the ultimate goal of enhancing the production of equipment for private swimming pools.

- **The world of swimming is becoming increasingly digital.** A few years ago, we highlighted one of the most significant trends in the water park industry: the fusion of traditional entertainment with augmented and virtual reality. This year, «pool-on» technology was showcased at exhibitions, turning visits to public swimming pools into underwater cinemas. The concept operates on a subscription model, where you purchase an underwater projector and subscribe to download videos for underwater viewing. These videos encompass various categories such as motivational, sports, educational, relaxation, rehabilitation, and more. Importantly, the projector can broadcast video to the entire pool or individual lanes.

- In Finland, **the construction of the world's largest cruise liner, the Icon of the Seas, has been completed.** With a displacement of 250,800 tons and a length of 365 meters, the Icon of the Seas boasts 2,805 cabins accommodating a total of 5,610 passengers and a crew of 2,350. The liner features 20 decks, 40 restaurants, 7 pools (including a surfing pool), 6 water slides, and impressive records such as the highest

waterfall, tallest water slide, largest water park, and the first suspended infinity pool on a sea vessel.

- In recent years, **private swimming pools with seawater have gained popularity.** Although their initial equipment costs more, they are more cost-effective in terms of maintenance. The water in these pools is skin, hair, and environmentally friendly, providing the sensation of swimming in the sea or ocean.

- While **pools with artificial waves for surfing** were once a novelty, they are now vying for the title of the «largest and longest.» Abu Dhabi has announced the construction of the world's largest wave pool, covering an area of 51 million square meters. The grand opening is scheduled for late 2023, promising an unprecedented surfing experience. You can already spot the project on Google Maps.

- **Alternative water leisure complexes are also gaining popularity.** Leading the way are open-air children's water centers, featuring a variety of slides, fountains, and obstacle courses within a relatively small area. The advantages include lower capital investment compared to full-fledged pools or water parks, high profitability during the season, and, with the right location, minimal need for additional advertising. Downsides include seasonality, stringent safety requirements, and installation specifics.

Additionally, it's worth noting that this market is virtually untapped in Ukraine, offering an opportunity not only for seasonal entertainment but also for a unique experience appealing to both children and adults.

- Every year, the number of people choosing to invest their love and care into pets instead of having children continues to rise. Consequently, the market for pet products and services is constantly expanding. Aquatic professionals have recognized this trend, **leading to the emergence of pet-friendly pools and water parks worldwide.** This represents a free and accessible market that is expected to grow in popularity, especially in larger cities, in the coming years.



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