



CAJIN STAN / ALAMY STOCK PHOTO

# Resilient rewilding

Despite the ongoing impact of the Russian invasion, rewilding in the Danube Delta continues to have a positive impact on terrestrial and freshwater ecosystems – a testament to the resilience of nature and local rewilding teams.

## Overcoming adversity

Nature has long been a silent casualty of war. From pollution and habitat destruction to the collapse of entire management systems, the environmental impact of armed conflict can be devastating, wide-reaching, and hugely difficult to reverse.

In Ukraine, where fierce fighting has now raged for over a year following the Russian invasion in February 2022, the full environmental impact of war remains unclear. Yet with one-third of the country's protected areas and sites – including two biosphere reserves – currently located in zones of active hostility, occupation, and humanitarian crisis, it's clear that Ukrainian nature is suffering on a daily basis.

While Rewilding Europe's cross-border Danube Delta rewilding landscape, which is located partly in southwest Ukraine, is situated well away from the main areas of fighting, the ongoing conflict has thrown up a whole range of logistical, human resource and access issues. With the support of a 2.1 million euro grant – awarded to Rewilding

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Europe by the UK-based Endangered Landscapes Programme at the end of 2018 – the Rewilding Ukraine team and partners are working determinedly to overcome these as they continue efforts to recover 40,000 hectares of wetland and steppe. In 2022, the main focus was on the restoration of key natural processes, such as flooding and natural grazing.

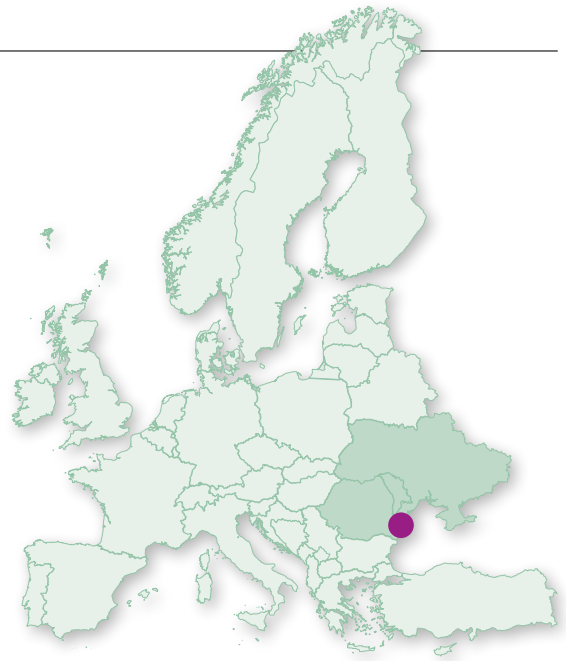
“Following the war, half the Rewilding Ukraine team relocated overseas, while much of the outer Ukrainian Danube Delta, where we have released animals, is currently off limits,” explains Oleg Dyakov, a rewilding officer attached to the Rewilding Ukraine team. “In spite of this, we concentrated our efforts on the things we and our partners could do.”

## A choked ecosystem

The 600,000-hectare Danube Delta is a complex, ever-shifting mosaic of channels, islands, forest, marshes and reedbeds that collectively represent Europe's greatest natural wetland. Yet large-scale



**DANUBE  
DELTA**  
UKRAINE  
ROMANIA  
MOLDOVA



hydro-engineering work carried out in the twentieth century – which primarily involved the creation of an extensive network of canals and dykes – has had a hugely negative impact, altering natural water flow and sedimentation patterns, and diminishing the ability of the delta to recycle nutrients. Polders and many fish farms have failed, leaving behind altered landscapes that are desperate for restoration and rewilding. Water bodies have stagnated, fish diversity and stocks have plummeted (according to some estimates by over 60%), and populations of other wildlife have declined, adversely affecting many local economies.

Ongoing work carried out by the Rewilding Ukraine team is now breathing new life into the delta’s former polders, lakes and communities by restoring connectivity and water flow. In 2022, such efforts focused on Ermakiv Island (where 300 metres of dyke were removed), on the area around Lake Katlabuh, and also on Lake Kartal. On Ermakiv, where the Rewilding Ukraine team have reintroduced water buffalo, Konik horses, red deer and fallow deer in recent years, this is already enhancing biodiversity and will further boost the island’s tourism appeal when the war is over.

### Towards a dynamic delta

The 68 square-kilometre Lake Katlabuh, which is located upriver from Ermakiv Island, is one of many “limans” found in the Danube Delta. These lakes and marshes form in river deltas and are typically separated from open or fast-flowing water by barriers or spits of land.

Before the 1960s, when the water regime of Katlabuh was completely natural, the lake was home to a wide range of fish species and thriving populations of birds, including rare species such

#### ○ Countries

-  Ukraine
-  Romania
-  Moldova

#### ○ Focal landscape

Danube Delta

#### ○ Size of landscape

790,000 ha

#### ○ Work started in

2013

#### ○ Larger landscape

Overall Danube Delta system consisting of major river branches in Romania, Ukraine and Moldova.

#### ○ Main habitats

River delta, reed beds, marshes, riverine forests, coastal grasslands, dune systems, coastal lagoons, and dry forest.

#### ○ Focal species

White and Dalmatian pelican, red deer, Tauros, wild horse, beaver, water buffalo, kulan, demoiselle crane.

#### ○ Team leader

Mykhailo Nesterenko

as the pygmy cormorant, glossy ibis, squacco heron and white-tailed eagle. Then a dyke and a series of sluices were constructed, effectively isolating the lake and turning it into a reservoir. Over the years the level of water dropped, the water gradually stagnated, and fish productivity and biodiversity both markedly declined.

In 2022, the Rewilding Ukraine team continued work to reconnect Lake Katlabuh with the Danube River and surrounding area, via the Lake Lung system – a smaller, transit lake and reedbed system that acts as an intermediary between the main lake and the river itself. In addition to enhancing biodiversity, this will benefit local communities in a number of ways.

“Restoring connectivity will guarantee regular water flows in and out of Lake Katlabuh,” explains Rewilding Ukraine Executive Director Mykhailo Nesterenko. “This will make the lake water less salty, which means it can be used for irrigation. It will also diversify and boost fish stocks, which will help local fishermen.”

In 2022 more work was carried out to restore connectivity on Lake Kartal too, which is located farther upstream than Lake Katlabuh. These efforts have already had a noticeably positive impact.

“With the assistance and support of the Reni and Safiany communities,

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**300**

metres of dyke were removed on Ermakiv Island in 2022.

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▲ Educational activities are part of the Pelican Way of LIFE – a school visit in Svishtov, Bulgaria.

▶ The first Festival of the Dalmatian Pelican is held in Persina Nature Park, Bulgaria.

▶▶ Channels are cleaned between the Danube River and Katlabuh Lake, restoring a vital connection between the two water bodies.



rewilding efforts have now seen the most important canals connecting Lake Kartal and surrounding wetlands with the Danube,” says Panas Zhechkov, Director of the Iztmail Department of Water Resources. “This has seen various water bodies refilled with water and improved the health of their ecosystems, as well as providing water resources to the local population.”

“We have already seen fish species migrating into Kartal from the Danube,” adds Mykhailo Nesterenko. “Eventually the dynamics of all of these reconnected lakes should more or less follow the dynamics of the Danube itself. There will be periods of flooding and periods of drought – this is completely natural. A thriving, wilder Danube Delta shaped by natural processes is the ultimate objective.”

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### Pelican progress

Efforts by the Rewilding Ukraine team to restore natural water flow are particularly good news for Dalmatian pelicans. As one of the delta’s most iconic indicator species, these majestic birds require access to still, fish-filled waters undisturbed by human activity, with extensive flooded and shallow water areas.

Coordinated by Rewilding Europe, the Pelican way of LIFE initiative kicked off in late 2019, funded by the European Commission and Arcadia Fund. Its aim is to enhance populations of the Dalmatian pelican in southwest Europe – including in the Danube Delta, one of the strongholds of the species. Over the last few years, as part of the initiative, the Rewilding Ukraine team have constructed a number of artificial nesting platforms in different locations to encourage the birds to breed and support the comeback of these gentle giants. Efforts to restore water flow in many of the water bodies on the Ukrainian side will significantly improve the chances of this happening.

### A steppe in the right direction

As part of the extended Danube Delta rewilding landscape, the 5200-hectare Tarutino Steppe is one of the very few remaining areas of steppe in Ukraine and Europe. Characterised by its expansive grassy plains, it is home to a wide range of rare flora and fauna. Since 2019, the Rewilding Ukraine team have been working to preserve and enhance the steppe, as they realise a vision of a wilder landscape governed more by natural processes, such as natural grazing.

Despite their many operational difficulties, the Rewilding Ukraine team were greatly cheered by a number of exciting new arrivals on the Tarutino Steppe in 2022. Herds of fallow deer and kulan (the wild Eurasian donkey) were released during the year, while a foal was born in the early spring to a herd of kulan that were released into the wild in 2021 – almost certainly the first free-roaming kulan born in Ukraine in over 200 years.

Oblivious to events taking place elsewhere in the country, a group of steppe marmots released by the Rewilding Ukraine team in 2021 also found the Tarutino Steppe to their liking, with

at least six pups born in 2022. And in December, a family of three European hamsters were released onto the steppe – both these and the marmots are an ecologically important part of local food chains, and further releases are planned.

Last but not least, a collaboration between Rewilding Ukraine and a team of scientists saw a study on the carbon uptake and storage potential of dry grassland ecosystems kick off in September, with a focus on Tarutino and the Askania Nova Biosphere Reserve. Although further work and analysis will be conducted to complete the study in 2023, samples have now been taken at multiple points across the steppe.

“It’s already safe to say that the sampling points with lowest carbon storage and storage potential were located in areas of the steppe that suffer from overgrazing and regular burning, which is actually prohibited but still carried out close to local settlements,” says Oleg Dyakov.

When completed, the study should provide a scientific basis for the inclusion of steppe ecosystems in the system of carbon credits, which will improve opportunities to attract financing for the restoration of steppe landscapes.

### Looking to the future

There is still no sign of the brutal and unjustified Russian invasion of Ukraine coming to an end. Yet despite the challenges arising from the conflict, the rewilding agenda in the Danube Delta is moving forwards, to the huge credit of the Rewilding Ukraine team and partners. In 2022, the Danube Delta rewilding landscape was recognised by the United Nations as a European nature restoration showcase – a fine testament to the team’s efforts.

And nature is finding a way to survive and thrive too. The Konik horses released in the outer part of the



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Ukrainian Danube Delta are doing well, for example.

“The whole of the Danube Biosphere Reserve remains inaccessible to us and I have only been able to visit it once since the war began,” says Oleksandr Voloshkevich, director of the reserve, which encompasses much of the delta on the Ukrainian side. “There are traces of fires, shell craters and burnt out houses everywhere. But it was very touching to see herds of wild horses with recently born foals, which have survived and show that life continues.”

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offspring of various species were born in the Danube Delta rewilding landscape in 2022.

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Fallow deer released by the Rewilding Ukraine team on Ermakiv Island are also doing well. A number of individuals have been observed on the Romanian side of the delta, recolonising territory as they acclimatise to their new home.

With regard to the Romanian side, steps were taken in 2022 to identify and reach out to agricultural and fishing concession holders, with the aim of scaling up rewilding work. The hope is that a herd of nearly 40 water buffalo can be brought to one of these concessions in 2023 to boost natural grazing.

While there are concerns about how Ukraine will rebuild itself after the war is over, and whether environmental regulations will be respected, Mykhailo Nesterenko remains positive about the recovery of Ukrainian nature, both in the delta and beyond.

“Ukraine is dealing with a very difficult humanitarian situation right now, but nature is fundamental to people: you cannot separate us from nature. It directly affects us when water is polluted, or when villages are flooded because of destroyed dykes.

“As our own rewilding efforts in the delta have shown, Ukrainian nature is as resilient as the people of Ukraine, and they both depend on each other. Once the war is over, I am confident they will both recover.”