



Rewilding without borders

In the Oder Delta, which straddles the German-Polish border, river and riparian restoration efforts are working to revitalise an entire ecosystem.

Towards wilder waters

Artur Furdyna, a hydrobiologist, has spent the last 20 years bringing biodiversity back to the Oder River and its tributaries. He knows better than most how well-functioning waterways are critical to the overall health of the Oder Delta, which may be bisected by the German-Polish border, but is effectively a giant interconnected mosaic of rivers, lakes, wetlands, heathlands, and riparian forests.

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“It’s only when we comprehensively address the restoration of nature, which is what rewilding is about, that we start to see beneficial results at scale,” says Furdyna. “And in the Oder Delta, which is a highly aquatic landscape, one of the most important factors in this restoration is water.

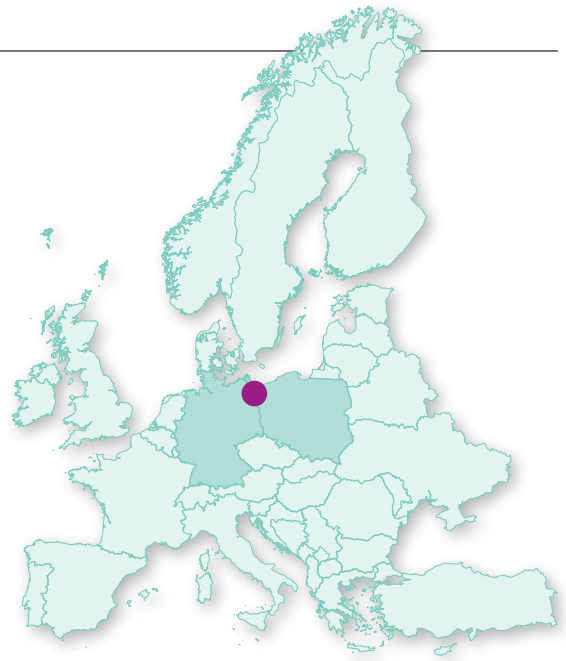
“From a human perspective, the delta has a Polish and German side, but from a natural perspective, it’s one watery ecosystem. Last year, we focused

our efforts on rewilding a tributary of the Oder River in Poland. To bring about meaningful and positive change, we need to work on both sides of the border, which is what the Rewilding Oder Delta team are aiming to do in a coordinated way.”

Revitalising waterscapes

Rivers harbour some of the richest biodiversity on earth and provide an array of benefits to people. Healthy, free-flowing rivers, which are well-connected with surrounding landscapes, offer a wide range of habitats for wildlife species. Such “waterscapes” also help to purify water and reduce the risk of downstream flooding in times of heavy rainfall, and are more resilient to the effects of climate change.

In the Oder Delta rewilding landscape, which comprises the centrally located 70,000-hectare Stettin Lagoon, and 380,000 hectares of surrounding forest and open areas, many streams and rivers are in poor ecological



○ **Countries**

-  Germany
-  Poland

○ **Focal landscape**

Oder Delta

○ **Size of landscape**

468,582 ha

○ **Work started in**

2015

○ **Larger landscape**

A network of rivers, forests, wetlands, and the Baltic Coast on the border between Germany and Poland.

○ **Main habitats**

Baltic coast with wetlands, tidal zones, reed marshes, sand dunes, alluvial and coastal forests, peat systems, and wet grasslands.

○ **Focal species**

White-tailed eagle, European bison, beaver, elk, wolf, Atlantic sturgeon, and grey seal.

○ **Team Leaders**

Ulrich Stöcker (Germany)
Peter Torkler (Poland)



▲ Artur Furdyna.

In collaboration with local partners – and complementing other rewilding efforts around forest restoration and wildlife comeback across the landscape – the Oder Delta rewilding team are working to restore a number of local waterways through a range of measures. These include rewetting wetlands near rivers to increase water storage, planting riparian trees to provide shade and lower water temperatures, removing barriers to increase habitat connectivity, and supporting riverine species by restoring spawning grounds, which typically involves adding stone and gravel in locations where it should occur naturally. With the Stettin Lagoon acting like a kidney, making the rivers of the delta healthier will help the functioning of the lagoon become healthier too.

The power of prisms

In the autumn of 2023, the rewilding team carried out restoration work on a small stretch of the 126-kilometre-long Ina River, which flows

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condition. Riverbeds have been artificially straightened, deepened, and embanked in many places, the free flow of water has been restricted by barriers such as dams and weirs, and the areas surrounding rivers drained and reclaimed for human activity, such as agriculture and forestry. Channelising rivers increases the speed of water flow, increases erosion, reduces the amount of sediment in the water, and reduces the diversity of riverbed habitats, which are essential for species such as fish and aquatic invertebrates.

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Rewilding efforts were carried out along four kilometres of the Ina River in 2023.



- ◀ River restoration on the Ina River.
- ▼ Soil sampling with Dr. Sebastian Lorenz, head of the Physical Geography Laboratory at the University of Greifswald.
- ▼ A white-tailed eagle.

Riparian restoration

In late October, the Oder Delta rewilding team followed up on their riverbed restoration efforts by planting around 100 willow saplings along the Ina. This was carried out in collaboration with several Polish NGOs, as well as volunteers from a nearby town and village.

Riverside trees provide numerous benefits. They can help the self-cleaning process of a catchment area by capturing nutrient run-off. They also create niches for mosses and aquatic lichens, and habitat for birds and insects, which helps to enhance biodiversity. Tree roots stabilise riverbanks and reduce erosion. And the partial shading of rivers by trees, when combined with the addition of gravel and stone piles, also helps to stabilise the temperature of the water, which can benefit a wide range of wildlife species, particularly fish. In river valleys such as that of the Ina, trees also act as a natural flood barrier.

The tree planting day was a great way for members of the local community to come together, socialise, and learn about rewilding.

“It’s great to see the number of volunteers and activists grow with each rewilding activity,” says Magdalena Urlich, a tourism and entrepreneurship specialist who organised the event on behalf of Rewilding Oder Delta. “Being out in the field working on practical restoration really helps us to build engagement and reconnect people of all backgrounds with nature.”

Scaling up

The Ina River and its surroundings provide an important habitat for a wide range of animals, from Atlantic salmon and Eurasian beavers to common cranes and white-tailed eagles. However, climate change has led to increasingly intense periods of drought, which have had a damaging impact on



into the Oder River and has a roughly 2000 square-kilometre catchment area. Together with local partners, and with the use of an excavator, the team oversaw the construction of raised stone and gravel features (called “prisms”) on the riverbed at three sites, near the Polish village of Strumiany. Laid down in a natural way, these prisms – and the sequences of rapids and pools they create – are extremely important for the natural functioning of rivers.

“Historic human intervention means the condition of the Ina today is closer to a canal than to a natural waterway,” explains Artur Furdyna. “Rewilding using large machines in a riverbed may be visually shocking, but the man-made changes to the river are so significant that manual restoration is no longer feasible.

“As a rewilding measure, the addition of stone and gravel helps to diversify and naturalise water flow, thereby improving the living conditions for aquatic animals and plants. It also helps to stabilise water levels. This, in turn, benefits people by enhancing water retention, increasing the availability of clean water and reducing the risk of floods and droughts, boosting the filtration of agricultural chemicals, and mitigating climate change through enhanced carbon storage.”

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volunteers helped to clean the banks of the Ina River in Goleniów.

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FLORIAN MOLLERS

- ▲ Rewetting peatlands in the Oder Delta supports nature recovery and boosts carbon capture and storage.
- ▶ A giant poplar tree felled by a beaver at a dam on the River Randow.
- ▶▶ Fungi in the Oder Delta.



FLORIAN MOLLERS



NEIL ALDRIDGE

both the landscape and its wildlife. This has been exacerbated by agricultural drainage systems, which rapidly funnel water into the river from surrounding fields, and the loss of meadows and wetlands, which also help to keep water in the landscape for longer.

In February 2024, the necessity of carrying out further rewilding efforts along the Ina was clearly shown when a period of heavy rain resulted in a rapid surge of water along the river. Because of its channelisation, most of the water quickly passed downstream. But on the stretch that had been rewilded, water flow velocity was lower, the water level remained higher for longer, and surrounding floodplains became inundated.

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 “This kind of flooding, where the river is well-connected to its floodplains, is a natural process that helps to revitalise the landscape.”

to revitalise the landscape,” says Artur Furdyna. “On the downstream sections of rivers which have not been channelised, and which naturally meander through a flatter landscape, it should take many hours for flood water to rise and fall. But widespread intervention

has made the Ina a so-called ‘flashy’ river, draining the catchment of water far too quickly after periods of rainfall.”

The rewilding team plan to continue rewilding efforts along the Ina and other rivers on the Polish side of the delta in 2024. They also want to develop a monitoring programme, which would assess the beneficial impact of their work.

“This would prove that our actions make sense and help to scale up rewilding measures across the region,” says Artur Furdyna. “Eventually we would like to see similar restoration carried out as part of regular maintenance work along multiple rivers and their surroundings in the Oder Delta. Carried out on such a cross-border scale, this would really amplify the benefits for people and nature.”