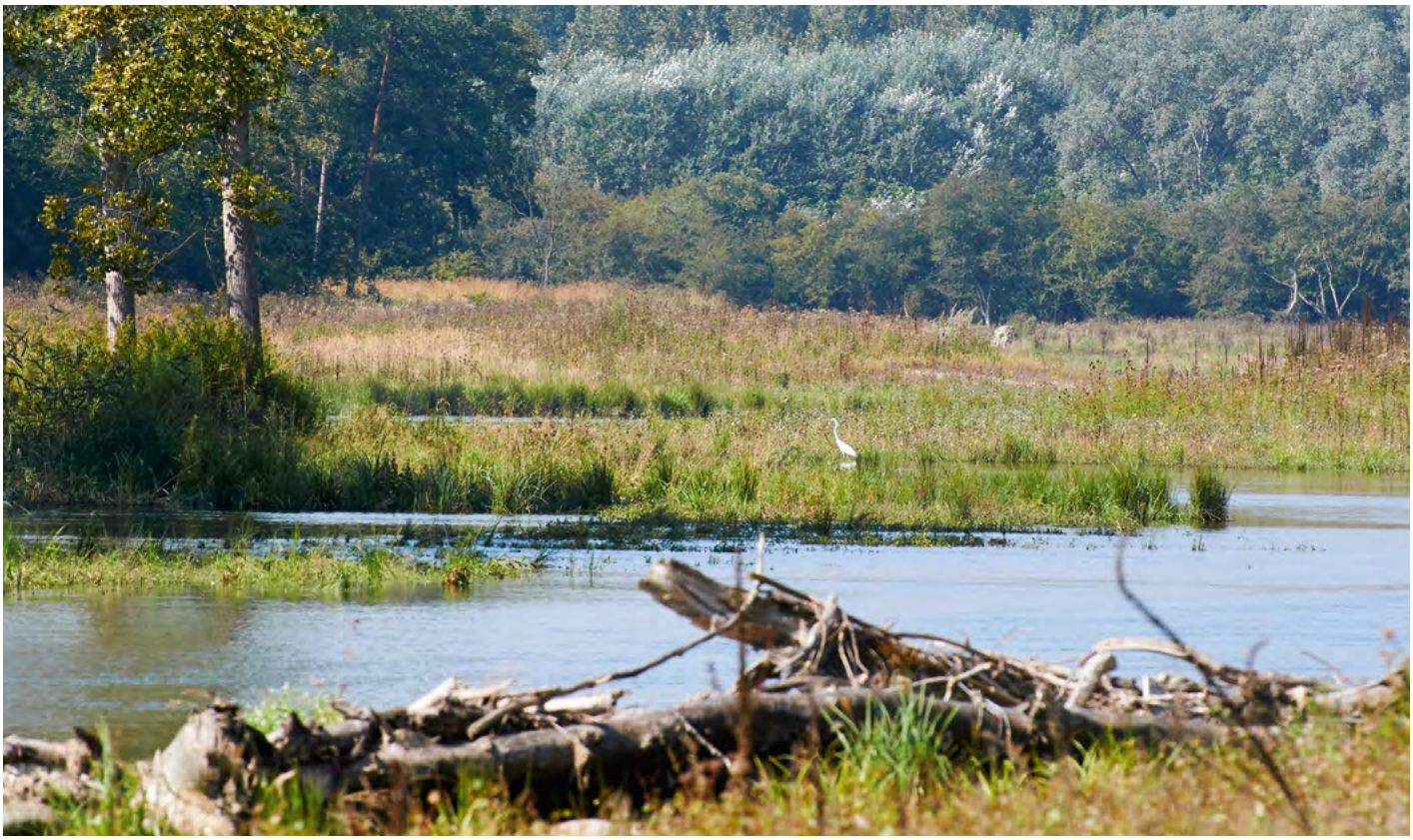
LIFE+ Traisen
New life in the floodplain

life-traisen.at



With the support of the European Union, the Austrian Federal Government and the Province of Lower Austria

Support by



Wild nature: Vegetation reconquered areas along the banks of the Traisen surprisingly quickly.

Natura 2000: Protected areas for flora and fauna

Natura 2000 is an ecological network of special protected areas. It ensures the continued existence of endangered types of flora and fauna as well as their habitats. The Natura 2000 network extends from the Atlantic via the Alps to the Black Sea. In Austria alone there are around 240 such protected areas. The legal basis is formed by the European Union's Habitats Directive and the Birds Directive.

LIFE programme: Investing in the future

The LIFE programme is the main financing instrument of the European Union for environmental and nature conservation as well as climate politics. It can be used by both public and private institutions. From 1992 to 2020, more than 5,400 projects across the EU were funded to the tune of around 6.5 billion euros. The LIFE+ programme comprised projects that were submitted and approved between 2007 and 2013. These also include LIFE+ Traisen.

What LIFE+ Traisen has achieved

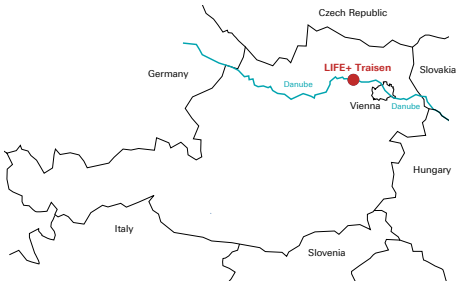
A near-natural river course with dense vegetation: that is what the estuary of the River Traisen in Lower Austria looks like today. This was made possible by the LIFE+ Traisen project – Austria's largest renaturalisation project to date. Many endangered animal and plant species found a new home.

Precious natural treasure. A new riverscape was created on an area of 150 hectares in the mouth section of the Traisen at the Danube power plant near Altenwörth. It is now continuously connected with its floodplain's waterbodies.

More biodiversity. Today, the Traisen area comprises a colourful mix of wet and dry areas. Native species have found their habitat here. Amongst them many endangered fish, birds, insects, amphibians and plant species.

Unrestricted migration for fish. Previously, the river was not continuously passable to fish and other aquatic organisms. Thanks to the renaturation project, they can now migrate unrestricted again between the Traisen, Danube and adjacent bodies of water.

Nature protection in Europe. LIFE+ Traisen is one of the most comprehensive restoration projects in Central Europe. Together, the project partners made an important contribution to the nature conservation objectives of the European Union.



The new Traisen:
A near-natural riverscape extends across the project site today.



A new habitat arises: Project progression

Clean hydropower is Austria's most important source of energy. Since the Second World War hydropower plants and regulations on rivers and their tributaries, such as the Traisen, have been further expanded. Within the LIFE+ Traisen project, a new, near-natural river was developed.

Together for a living floodplain

The Traisen is one of the largest tributaries of the Danube in Lower Austria. In the 1970s the construction of the Danube power plant at Altenwörth – the most powerful run-of-river power plant in Austria was constructed. Within the construction process the river was extended by 7.6 kilometres and the estuary of the Traisen River was relocated. Since then, the river course has run as a straight channel through the Natura 2000 site Tullnerfelder Donau-Auen between Traismauer and Zwentendorf. This straightened section of the Traisen River provided only few habitats for animals and plants and was not connected with the surrounding floodplain water bodies. Fish migration through the area was restricted by ramps and in some areas impossible.

Hence the desire to improve the river and floodplain system arose. Furthermore, new ecological requirements were imposed by the EU Water Framework Directive. Together with other project partners, the electricity company VERBUND defined a clear objective: to establish a natural river with alluvial forest in order to create new habitats for animals and plants and to increase biodiversity. The redesign of the lower course and estuary of the river was seen as an opportunity not only to improve the condition of the Traisen River, but also to have a positive impact on the Danube.

A focus on birds, butterflies and more

Special consideration to ecologically valuable areas and habitats of flora and fauna worthy of protection was taken into account during the planning phase. In the fields of vegetation, fish, dragonflies, amphibians, beetles, butterflies, grasshoppers, bats, and birds, some 225 species of animal and habitat types were recorded in the area at the start of the project. 118 species are recorded in the red lists and a further 24 animal species were expected to exist in the project area.

The course of the new Traisen River was designed with computer assistance. The run-off behaviour was analysed with the help of extensive computer simulations. All these efforts resulted in an EU funding under the LIFE+ programme after a stringent selection process involving 270 European environmental projects. After ten





Hydro power, important for the electricity supply: The riverbed of the Traisen was straightened during construction of the Danube power plant at Altenwörth.

Idyllic and near natural: The new Traisen nestles harmoniously into the landscape.





New bicycle bridge: The Danube cycle path was diverted and now crosses the mouth of the new Traisen.

Excavations: In total, 1.5 million cubic metres of gravel were transported away in environmentally friendly fashion by boat.

years of preparation, the ground-breaking took place in 2013.

Pure nature in the new riverbed

The new river and the accompanying littoral zones were constructed in just three years. State-of-the-art GPS technology was used to implement the three phases of construction. The layer of clay and sand on the floodplain was removed, the gravel beneath it excavated. Gravel surplus was transported away mainly by boat along the Danube. Most of it was used as a bedload donation to counteract the deepening of the Danube east of hydro power plant Freudenau. Incidentally, the project area was meticulously cleaned of munition and bombs from the Second World War.

The riverbed was successfully completed in 2016. The Traisen now flows into a newly created, approximately 700 metre-long side arm of the Danube. At low water, this arm acts as an extension of the river. At high water, a large bay area provides a zone of retreat for Danube fish. The littoral zones have very different shapes, as is typical of natural watercourses. They therefore offer diverse habitats for many species of flora and fauna.

THE PROJECT'S MILESTONES

1973–76
The mouth of the Traisen is relocated and the river constructed as a straight channel

1990s
The University of Natural Resources and Life Sciences in Vienna develops initial ideas for ecological improvement.

2003
Landowners, scientists and technicians consider to create a new Traisen River.

2004
A feasibility study for the restoration of the lower reaches and estuary of the Traisen River is developed.

2008
Funding of the restauration project within the scope of the LIFE+ programme is approved by the EU Commission.

2011
Citizen informational events are held in Zwentendorf, Traismauer and Altenwörth.

2012
The environmental impact assessment is completed.

2013
The ground-breaking ceremony for the project is held.

2016
The new Traisen bed is complete.

2019
The LIFE+ project is officially finished.

Notable successes: Animals and plants settle in





Record catch during monitoring: A Danube salmon of 113 centimetres in length.

Danube salmon spawning: The rare fish are amongst the endangered species.

Visitors to the new Traisen notice the bent course of the river and its diverse flow patterns. With its flood zones, shallow and deep areas, as well as gravel banks and deadwood, it offers a wide range of structures. All of this rapidly attracted many fish, birds, insects and amphibians.

Rare species of fish like the Danube salmon are back

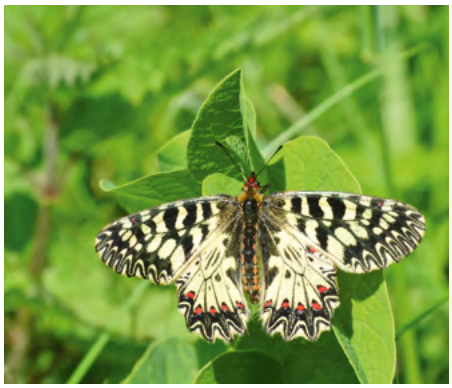
In record time the Traisen River developed suitable habitats for fish. Today, it is fully connected with the Danube and fish stocks have increased. Endangered fish species like the Danube salmon are back. Rare but typical species such as zingel, striped ruffe and streber are also found. The river is a migratory route for Danube fish, which are now able to reach their spawning grounds further upstream. New spawning grounds have also been created – nase, barbel and common carp have already used them.

Valuable habitat for amphibians and insects

Grasslands with birthwort – a plant necessary for the survival of the Southern Festoon – are now protected. They are also home to European mantis and countless kinds of grasshoppers and butterflies. Ponds and various still waters nestle in the littoral zones. Endangered amphibians feel comfortable here. They include, for example, the garlic toad, the fire-bellied toad, and the green toad.



The garlic toad can be found in ponds along the banks of the Traisen River.



A colourful floodplain resident: The Southern Festoon from the family of the swallowtail butterfly.

White-tailed eagles and sand martins feel good

Breeding birds have chosen the new flat water zones near the banks as their home. Migrating waterfowl use them to search for food. Soon after completion, little ringed plovers and common sandpipers were breeding on the gravel banks. The number of kingfishers has increased – the birds feed on small fish and benefit from the presence of juvenile fish. Sand martins utilise the steep banks for breeding colonies. The appearance of the white-tailed eagle marks the pinnacle of the project so far. For the first time in decades, it is sighted regularly along the Traisen River.

Flourishing floodplain forest and meadows

The white willow and black poplar are the main woody plants in the littoral and floodplain zones. From the very first vegetation period, they established themself on over half of the newly created areas along the Traisen River. They will develop into a loose-knit floodplain forest. Meadows also play an important role as habitat for flora and fauna. They have developed well on an area of around 30 hectares. Today, orchids such as the Military orchid and the Burnt-tip orchid bloom here.

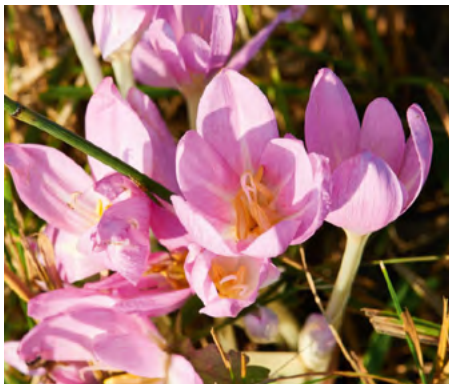
Outlook: Next steps

The LIFE+ Traisen project resulted in a unique riverscape with a mosaic of existing and new habitats. Many animal and plant species have already settled in – including numerous endangered species. The riverscape will develop naturally and undisturbed. Nature itself can allow new habitats to develop and existing ones to change. The positive ecological effects of the new Traisen River extend far beyond the project limits and their impact will be sustainable.



Sighted regularly again on the Traisen for the first time in decades: The white-tailed eagle.





Colourful flower show: Autumn crocus and military orchid show off their splendour.

LIFE+ Traisen at a glance

Project area: Traisen/Lower Austria, European Natura 2000 Tullnerfelder Donau-Auen
Project duration: 2009 to 2019
Measures: Creation of an approx. 10 kilometre-long new river;
ecological improvement and creation of new habitats within the floodplain
Costs: 30 million euros
Financing:
VERBUND (15 million euros) and other financing partners:
Office of the Lower Austrian Provincial Government
Federal Ministry of Agriculture, Regions and Tourism
EU-LIFE+ Nature and Biodiversity Fund
Lower Austria Landscape Fund
Lower Austrian Provincial Fishing Association
viadonau
Benefactors: Augustiner-Chorherrenstift Herzogenburg, Forstverwaltung Grafenegg

Contact and other information
life-traisen.at

VERBUND Hydro Power GmbH
Europaplatz 2
1150 Vienna
+43 (0) 50313-0



Project partners at the ground-breaking in 2013: Karl Heinz Gruber and Michael Amerer (members of the executive board of VERBUND Hydro Power AG), Mayor Anton Kührteiber, Provincial Councillor Stephan Pernkopf, plant group manager Heinz Allmer (VERBUND), Provincial Fisheries Minister Toni Öckher and project leader Helmut Wimmer (VERBUND).

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Media owner and publisher: VERBUND AG, Am Hof 6a, 1010 Vienna, Austria. Concept and text: Schreibagentur. Graphic design: Kathi Reidelshöfer. Photos: VERBUND, Kaufmann, Pock. Image editing: Siegfried Füreder. Status: November 2020.