LIFE Stadt-Wald-Bäche

Stadt Augsburg

A project that fosters future-oriented, ecological action for the conservation of species and habitats in and along the creeks of the Augsburg city forest

The project area: a Natura 2000 reserve

The Augsburg city forest, stretching from the city center along the Lech river to Königsbrunn on a surface of around 2250 hectares, is an area particularly worthy of conservation. It hosts numerous rare species and habitats protected Europe-wide. As part of the "Lechauen between Königsbrunn and Augsburg" fauna-flora-habitat area, it belongs to the Natura 2000 network of protected areas.

The project area is characterized by diverse forests, heathlands on gravel banks and small creeks in which either spring water or Lech river water flows. Combined with spring areas and smaller bodies of water, an impressive mosaic of different habitats with spectacularly high biodiversity came to life.

Natura 2000

Natura 2000 designates an EU-wide network of protected areas for threatened species and natural habitat types of community interest. This network consists of protected areas in accordance with the EU Directives on the Conservation of Wild Birds and on the Conservation of Natural Habitats and of Wild Fauna and Flora (FFHD).

In Bavaria, the European natural heritage is thus conserved and promoted in 745 Natura 2000 areas on 11% of the Free State's surface. One of these hotspots is the Augsburg city forest with its creeks, gray alder forests and Lech heathlands. Combined with the Höhgraben and the Lechbrennen, 16% of the surface of Augsburg are covered by Natura 2000 areas.

The project in figures

Project period:
October 2019 – January 2027

Project area

- Fauna-flora-habitat area "Lechauen between Königsbrunn and Augsburg"
- Part of the Natura 2000 European network of protected areas
- One of Bavaria's oldest and most species-rich nature reserves
- Drinking water protection area for the supply of more than 350000 people
- Size: approx. 2250 hectares

Project execution
Forestry Department of the City of Augsburg

Bayerisches Staatsministerium für Umwelt und Verbraucherschutz

Bayerischer Naturschutzfonds
Stiftung des Öffentlichen Rechts

supported by:
Landschaftspflegeverband Stadt Augsburg
Untere Naturschutzbehörde Augsburg
Regierung von Schwaben
Wasserwirtschaftsamt Donauwörth
Amt für Ernährung, Landwirtschaft und Forsten Augsburg
Tiefbauamt Augsburg
Fischereifachberatung Schwaben
Stadtwerke Augsburg
Naturschutzbeirat Augsburg
Uniper Kraftwerke
Fischereiverband Schwaben
BUND Naturschutz in Bayern
Landesbund für Vogelschutz

LIFE

Created in 1992, the LIFE program subsidized by the European Union (L' Instrument Financier pour l'Environnement) promotes environmental measures. Its mission is to contribute to the "protection of habitats and species". The program focuses on facilitating the implementation of the EU Directives on the Conservation of Wild Birds and on the Conservation of Natural Habitats and of Wild Fauna and Flora (FFHD), as well as on supporting the development of the Natura 2000 European network of protected areas. The guiding principle is to drive the implementation and further development of the EU environmental policy, thus contributing to achieving the EU Green Deal.

More than 25 LIFE Natura projects have been carried out in Natura 2000 areas in Bavaria so far, benefiting considerably from European subsidies for nature conservation and environmental protection.

Why the creeks in our city forest need support

The water and floodplain habitats in the project area were heavily affected by hydro-engineering interventions during the 20th century. The consequences are:

- significant structural deficits and heavily restricted ecological continuity in the city forest creeks
- missing natural water dynamics
- risk of extinction of various animal and plant species worthy of protection
- decreasing number of certain habitat types (e.g. alluvial forests or bodies of water with floating water vegetation)

The LIFE Stadt-Wald-Bäche project implements various measures to eliminate these deficits and foster species and habitats worthy of protection.

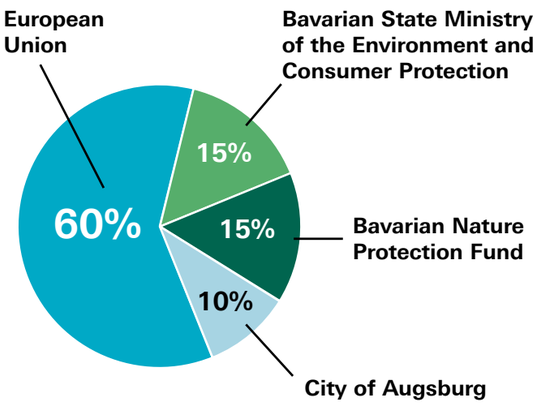
LIFE: ecological enhancement and species protection

The LIFE Stadt-Wald-Bäche project focuses on the 70 km long water network, as well as on alluvial forest and spring areas. The project aims to enhance and extend these habitats for numerous animals and plants worthy of protection, as well as to specifically promote certain species.

However, not only animals and plants shall feel comfortable in the city forest; visitors shall find space to take a break, enjoy the diversity of species and thus benefit from the ecological enhancement initiated by LIFE Stadt-Wald-Bäche.

To achieve these goals, the project is accompanied and supported technically by numerous public authorities as well as local and supra-regional players in the fields of nature conservation and environmental protection.

Financing of LIFE Stadt-Wald-Bäche



Budget
6,6 Mio. Euro

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Photos: Forestry Department of the City of Augsburg; Green gomphid, habitat types: E. Pfeuffer; Bullhead fish ("miller's thumb"): Andreas Hartl; Beaver: iStock, Andyworks; Illustrations of the map and the Narrow-mouthed whorl snail: Ines Flögel

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1. In many places: enhancement of the structural diversity of creek courses
2. Reconnection of the city forest creeks to the Lech river via the Gießer Überlauf
3. In many places: measures to restore ecological continuity
4. In many places: forest restructuring to create new alluvial forest areas
5. In many places: clearance measures along spring creeks
6. Additional water routed from the Lech river into the city forest creeks via the Lochbach

The city forest – a mosaic of different species and habitats

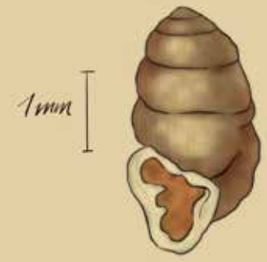
The inhabitants

The **bullhead** is a small fish living deep down; also referred to as „miller's thumb", it requires a varied water bottom consisting of stones, gravel and sand. This species benefits from enhanced structural diversity and renaturation to enable fish migration.

The **green gomphid** is a species of dragonfly that can be found in creeks and rivers and stands out due to its vivid apple green appearance. It lives mainly in small creeks boasting high structural diversity, a sand and gravel bed, as well as high but not too dense bank vegetation and excellent water quality. On the banks, the males use sunlit stems, branches or stones as viewpoints – also referred to as raised hides. The clearances and structural measures planned will provide new habitats for this protected species.

Narrow-mouthed whorl snail
Vertigo angustior

Bullhead
Cottus gobio



Beaver
Castor fiber

Green gomphid
Ophiogomphus cecilia

The **narrow-mouthed whorl snail** is one of the smallest native snail species; it can be distinguished by its spindle-shaped, yellowish to reddish shell which is about 2 mm long and 1 mm wide. This rare species lives in calcareous fens and standing water bodies. The renaturation of spring gullies overgrown with bushes creates new habitats for the snail.

The **beaver** is Germany's largest rodent. Like no other animal, it shapes the landscape to suit its needs – by felling trees, building lodges and building dams in creeks. This is how the beaver creates a habitat for both itself and numerous plants and other animals. Given the fact that the city forest is meant to fulfill various functions (drinking water protection, recreational purposes, etc.), conflicts of interest with human needs and desires may arise. To prevent this, a harmonized concept for handling the activities of beavers is required.

The habitats

The **alluvial forest** mainly consists of a strip of forest stretching along the creeks. Gray alders, as well as ash, willow, poplar, fluttering elm, hornbeam and birch trees, are typical tree species here.

Certain spring creek sections in the city forest represent the habitat type of **running waters with flooding vegetation**. A sufficient amount of sunlight hitting the cold clear water is a major factor for water plants being able to grow – such as alpine pondweed, river water-crowfoot and watercress.

Measures focusing on (re)connection anddiversity

- Reconnection of the city forest creeks to the Lech river
  → The goal is to increase the amount of water routed from the Lech into the city forest creeks in order to restore an uninterrupted ecological connection to the Lech via the Gießer Überlauf. These measures are carried out in cooperation with the Licca liber project for the renaturation of the Lech river.
- Restoring uninterrupted ecological continuity within the city forest area
  → Obstacles preventing fish migration, such as artificial cascades (e.g. ground ramps) or pipework are being converted so that fish will be able to migrate through the creeks again without obstacles
- Structural enrichment of the approximately 70 km long city forest creek system
  → Structural elements such as deadwood and stones redirecting the flow of water are integrated into the creeks in order to enable a huge diversity of partial habitats even in creek sections that used to be quite monotonous
- Restoring the alluvial forest habitats
  → Clearance of spruce and pine areas while at the same time facilitating the growth of, and actively planting, tree species typical of the habitat, such as alder, elm, oak, poplar and willow

Numerous animal and plant species benefit greatly from these improved habitat conditions. Biotope areas are optimized in the long term and sustainably improved.

In terms of both flora and fauna, **calcareous fens** are of supra-regional significance for nature. However, this precious type of habitat was heavily affected by hydro-engineering interventions into the course of the Lech river. Today, approximately 1 hectare is still left in the project area.

Calcareous standing water bodies with stoneworts are a particularly rare variant of nutrient-poor, clear bodies of water. Populations of Rough stoneworts at the bottom of water bodies are characteristic of this rare type of habitat which today can only be found in four small, artificially created zones within the project area.