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LIFE-Nature project
The Danube-Ybbs Confluence
2004 - 2009

Fishway
at the Melk power plant
on the Danube
www.life-donau-ybbs.at



In brief

LIFE is the European Union's funding instrument for environmental projects. The construction of a fishway at the Melk power plant on the Danube is a measure belonging to the "Danube-Ybbs Confluence" LIFE-Nature project.

As a partner in the project, VERBUND Austrian Hydro Power AG constructed the fishway.

The Lower Austrian Federal Hydro-Engineering Department, the project organiser, constructed the new mouth of the Ybbs.

Besides the EU, the project organisers and the partner, the Lower Austrian Landscape Fund (NÖ Landschaftsfonds), the Ministry of Life and the Lower Austrian State Fisheries Association (NÖ Landesfischereiverband) helped finance the project.



The Danube power plant

No fishway was erected when the power plant went into operation in 1982. Such facilities were included in construction work only in the case of the Freudenau power plant.

The Melk power plant is thus the first power plant on the Danube in Austria to have been retrofitted with a fishway. There is a difference of 12 metres between the water surface level upstream and downstream from the power plant. The second free-flowing course of the Danube in Austria, the Wachau region, is located downstream from the power plant.



Obstructions interrupting the flow of the rivers are partly responsible for the decline in previously abundant fish stocks. Such obstructions include dams built as part of power plants.

Fishway?

Fishways are designed to provide fish with a means of circumventing obstacles in the river. Various types exist, ranging from a technical fish pass to a nature-like bypass channel.

Fish migrate along a river, for instance in order to travel from their summer habitat to their wintering grounds. "Spawning migration" is the term used to refer to groups of fish travelling to their spawning grounds.

Today we know that every domestic fish species travels from one habitat to another over a greater or lesser distance. This is necessary for survival.

Objective

The purpose of the measure was to create for fish in the Danube a link between the Wachau section and the upper end or head of the reservoir. This is also where the Ybbs flows into the Danube. Like other Danube tributaries, the Ybbs is a destination for migrating fish, for instance during spawning. The fishway results in improved conditions for many fish species living in the Danube and the rivers belong to the Natura 2000 "Lower Austrian Alpine Foothills Rivers" region.

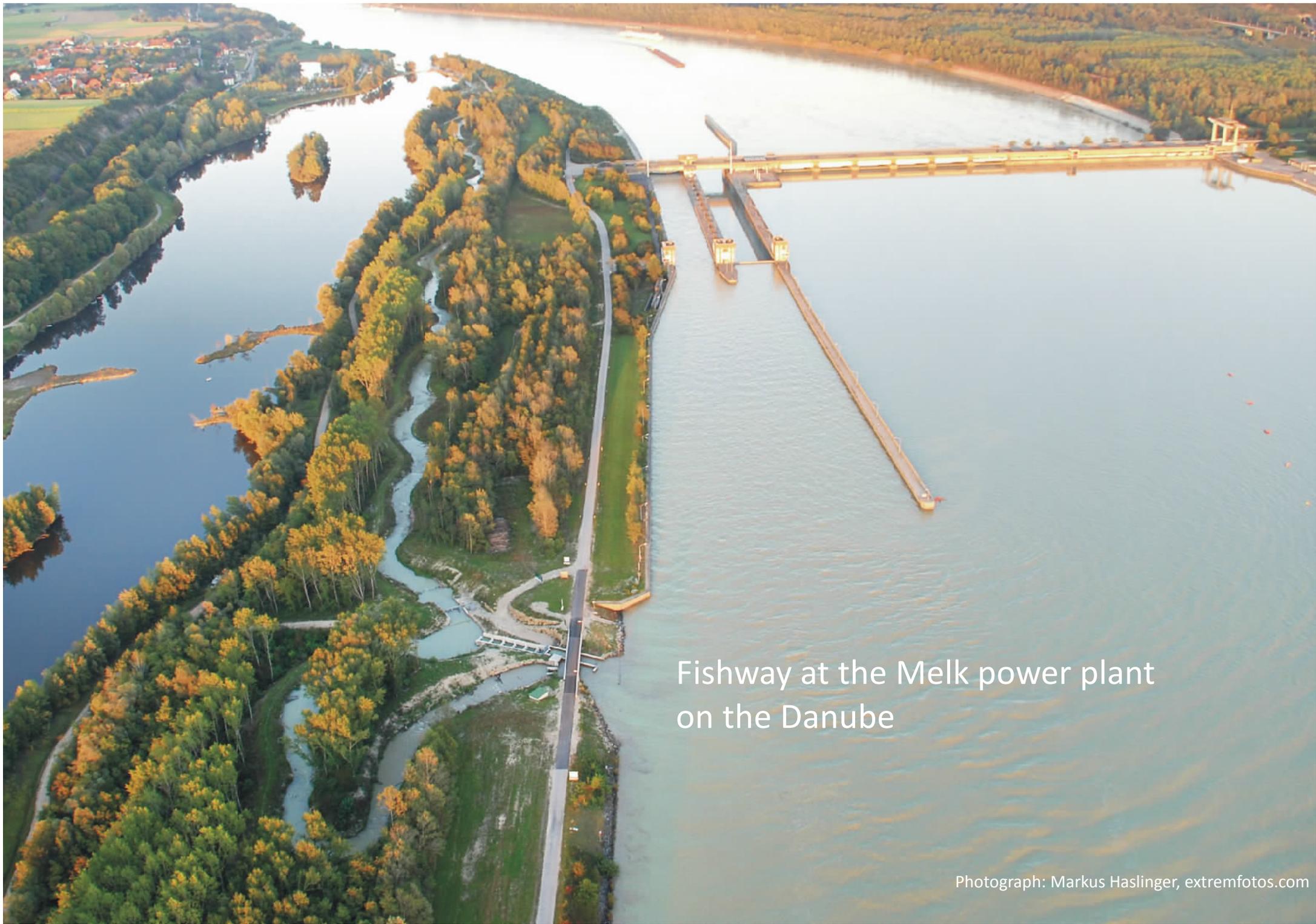
Rare and endangered species are also benefiting from it.



barbel

The LIFE-Nature project has brought about significant improvements for the Danube. As such it has made a contribution to the implementation of the EU Water Framework Directive and the EU Fauna, Flora and Habitat Directive, as well as the directive on the conservation of wild birds. LIFE funding has been used for the conservation and development of habitats worthy of protection and for increasing the diversity of species within them.





Fishway at the Melk power plant
on the Danube

Construction

Following extensive planning and issuing of approval by authorities, construction began on 8 August 2006. The facility went into operation on 5 March 2007 following a record construction period of only 7 months. Construction work began with rough excavation of the new channel, then bridges were erected as well as the flow-control structure. The river bed has been sealed with clay and lined with a layer of gravel. Rocks and branches provide improvements to the habitat. Construction work was completed by planting selected combinations of plants and about 5000 willow withes along the shore.



The fishway now makes the impression of already having been part of the landscape for a long time.

Facts & Information

The fishway is a newly created nature-like channel.

It is 2 kilometres long and an average of 12 metres wide.

It is the second fishway built at a power plant on the Danube in Austria.

60000 cubic metres of excavation material was moved during construction and the bed has been sealed with clay. The river bed has been enhanced using pebbles, rocks and wood.

Construction was completed in only 7 months, and the facility went into operation on 5 March 2007.

For more information:

- visit the project website - www.life-donau-ybbs.at
- see the DVD (short films about the LIFE project are available on DVD)
DVD available from: VERBUND Austrian Hydro Power AG,
Am Hof 6a, 1010 Vienna

Monitoring

Fish ecologists at the University of Natural Resources and Applied Life Sciences have been carrying out scientific research, or "monitoring". Already in the first year following completion, varieties of fish, from the burbot to the sander, used the bypass river. In the meantime 40 species have been identified, among them 35 domestic ones.

Their research has shown that even rare and endangered species are using the fishway.



These have unusual names such as zingel, streber and schraetzer.



zingel



streber



schraetzer

Individuals of all sizes and at all stages of development belonging to the most important species to the Danube, the nase and barbel, have swum through the fishway.

Reshaping the mouth of the Ybbs



The Lower Austrian Federal Hydro-Engineering Department constructed the new mouth of the Ybbs. This phase was also part of the Danube-Ybbs Confluence LIFE project. A brochure describing the project is available from the Hydro-Engineering Department of the Lower Austrian State Government.

The new mouth of the Ybbs river offers many varieties of plants and animals a suitable habitat.

It enriches the Danube and Ybbs river landscapes.

In the meantime it has become a habitat for many varieties of fish, including rare and endangered species such as zingel, streber and schraetzer.



See brochure entitled "Reshaping the mouth of the Ybbs":
Lower Austria State Government Office, Hydro-Engineering Department
Landhausplatz 1, 3109 St. Pölten