

### Timetable and Objectives

The construction of the pilot sites started in autumn 2016 and will be finished in early 2017. The evaluation of the measures continues until 2019. The main aims of the projects are:

- Efficient rehabilitation and elevation of dams
- Ecological improvement of the river banks
- No impact on existing flood plain forests
- Simplification of approval processes

Supporters

Transfer of results to other European rivers

Bavarian State Ministry of the Environment and Consumer Protection | Bavarian Ministry of Economic Affairs and Media, Energy and Technology |

Bavarian State Office of the Environment (LFU) | Governement of Swabia | Districts of Günzburg and Neu-Ulm | Water Management Office Donau-

wörth | Swabian Fischeries Counseling | Bavarian

Association for Energy and Water Management |

Arbeitsgemeinschaft Alpine Hydropower



The Project is funded under the Life+ programme, a EU funding programme for projects concerning nature and environmental protection. At the moment, it is

the only Life+ project in Bavaria and one of five in Germany. Project Partners are the Obere Donau Kraftwerke AG (ODK), the University of Innsbruck and VGB PowerTech e.V. Furthermore, the Floodplain Institute (Aueninstitut) Neuburg and the TU Munich are involved.

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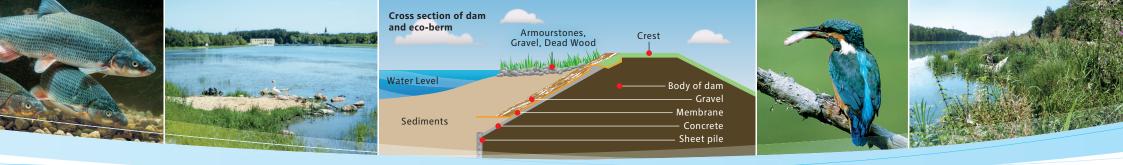






Bayerische Elektrizitätswerke

## Life+ Projekt INADAR Eco-Berms along the river Danube



#### The INADAR-Project: Combining Flood Protection and Ecology

Oberelchingen

HPP Oberelchingen

The main objective of the EU project INADAR (Innovative Approach for Dam Restoration) is the implementation of eco-berms. Eco-berms allow for a rehabilitation of existing dams and the improvement of flood protection. At the same time, habitat for flora and fauna is created. The project includes the construction of two pilot sites with a length of 500 meters each at the power stations Oberelchingen und Offingen along river Danube. In addition, the existing test site at Günzburg power station will be adapted.

#### Main Principles of the Eco-Berme

The standard construction method for the elevation of a dam causes further land requirements on the downstream face of the dam. Eco-berms allow for an elevation using the water (upstream) side of the dam, where a membrane and a layer of gravel are put in place. The ecological benefit: precious habitat for flora and fauna can be created by using dead wood and other structural elements along the banks.

#### Advantages

- Flood plain forests and agricultural land downstream are not affected
- Extensive ecological improvement of the banks

# Test sites show impressive results

The principle of eco-berms has been tested successfully. Results of the test sites in Leipheim, Günzburg and Offingen showed the establishment of natural and rich habitat for animals, e.g. dragonfly, ring snake, great crested grebe and kingfisher. Furthermore, a variety of juvenile fish was spotted.



Test site after completion (left) and after one year (right)

