



# From theory to practice: Dam removal at Baunach River

## Six kilometres of free-flowing river in Bavaria

### From theory to practice

In May 2021, during the conference “[Dam Removal goes Alps 2021](#)”, we still discussed how to start and push dam removal forward. Four months later, in mid-September, WWF Germany in cooperation with the Kronach Water Management Authority, removed the "Leucherhof" weir on the Baunach. After being inspired by the examples from all over Europe and beyond, we put the theory into practice and pushed dam removal in Bavaria! Thanks to all who contributed: our WWF donors, our conference partners who agreed to use residual funds for the removal, and the committed staff of the Kronach Water Management Authority who dared to break new ground, namely by implementing a complete removal instead of a rough ramp!



Figure 1: Excavator in Baunach River  
(© Bianca Renk, WWA Kronach)

“Dam Removal goes Alps 2021”, May 4 to May 7, 2021: <https://dam-removal-goes-alps.de>



### The Baunach River

The Baunach rises in a low mountain range in northern Bavaria and flows into the Main after 54 kilometres north of Bamberg. In places, it still meanders sweetly between meadows and forests. In sections it is designated as a Natura 2000 site. The river is home to brook mussels (*Unio crassus*) and small fish worthy of protection such as brook loner (*Barbatula barbatula*) and tailors (*Alburnoides bipunctatus*). It is a fish priority water which means that it is crucial for the preservation of the Bavarian fish fauna.

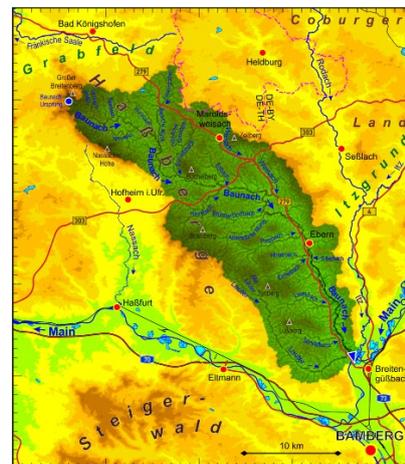


Figure 2: Catchment area of Baunach<sup>1</sup>

<sup>1</sup> Von Periphrastika - Eigenes Werk, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=100202055>

Despite its partly unspoilt course, the Baunach suffers from sediment inputs from the surrounding fields and from dissection by transverse structures. The “Leucherhof” weir was formerly used for the irrigation and drainage of meadows but had long since lost its usefulness. Actual, the original owner of the weir, a cooperative, should have dismantled the weir after it was no longer needed. But the cooperative wasn’t active anymore, it existed only on paper. No one felt responsible to intervene and invest money in order to give back a piece of freedom to nature.



*Figure 3: Meander of the Baunach River  
(© Siegmund Katholing, WWA Kronach)*



*Figure 4: „Leucherhof“ weir, formerly used for the irrigation and drainage of meadows  
(© Raphaela Titus, WWA Kronach).*

## The work of the excavators

Middle of September, an excavator, commissioned by the Water Management Authority and paid by means of WWF Germany, began its work in the river. The weir consisted of a base plate in the water, two bank-side weir cheeks and two pillars in the middle of the river. Stone by stone was removed until the barrier disappeared, and the water was enabled to flow again after almost 150 years. What a feeling of freedom! Freedom for the river ecosystem, which can unfold here again. Freedom for the fish, whose migration has so far ended at the weir. And freedom for the people who may now sit on the shore of the river and observe the natural changes of the freshwater ecosystem and its interaction with the floodplain.

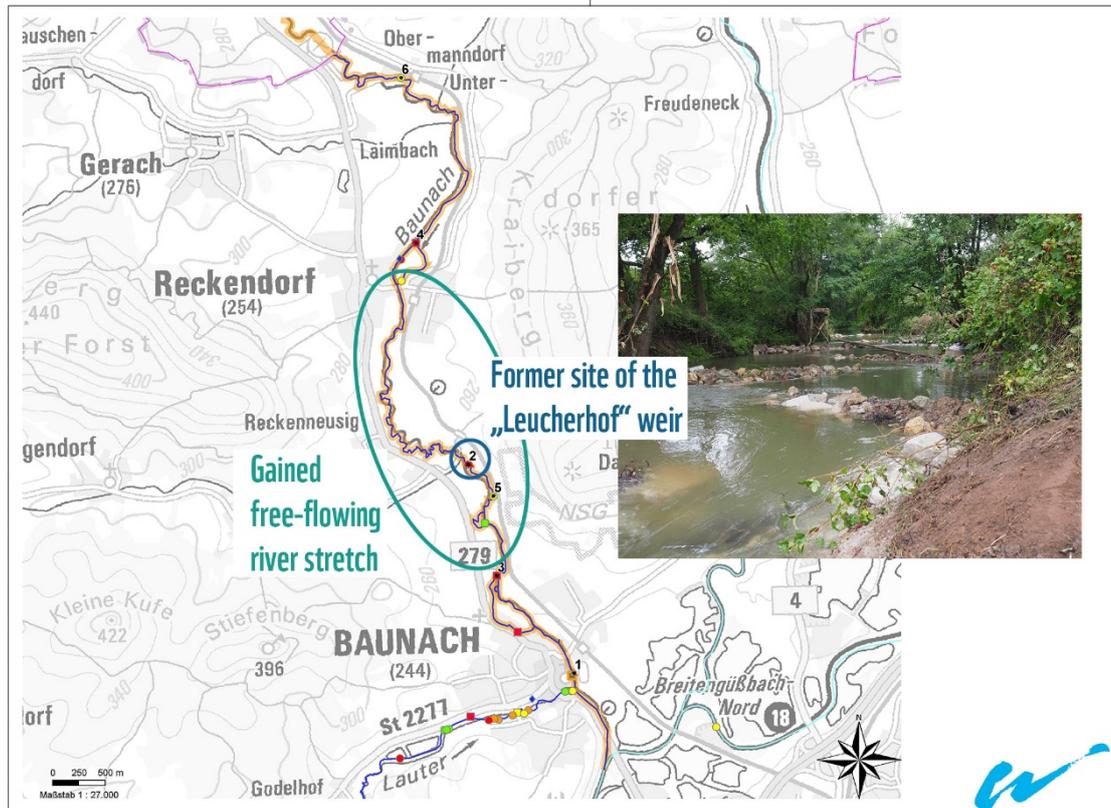
In order to raise the water level and create further structures in the river, the rock of the demolished structure was crushed and piled up into spurs below the former weir site. It will be exciting to see how the route develops in the future: Which fish species benefit? Which dragonflies set in? Will the kingfisher soon create its breeding burrows on the steep shore?



*Figure 5: The „Leucherhof“ weir before and after the removal in September 2021  
(left: © Raphaela Titus, WWA Kronach, right: © Sigrun Lange, WWF Germany).*

## What we gained and what remains to be done

After the dismantling middle of September, a flow route of more than six kilometres has been created – to the next weir, which still blocks the way of the fish into the Main. With the dismantling of the "Leucherhof" weir only the beginning has been made, more removals are to follow – in Bavaria and elsewhere.



There are almost 6600 weirs on the Bavarian rivers, over 900 of which are dilapidated. Presumably, many of these barriers with poor conservation status are out of use. They could be the first ones to be removed. A state dismantling fund would be urgently needed in order to be able to remove barriers of third parties for which no one can be prosecuted or whose dismantling would demonstrably represent too high a burden for the owners. We hope that the Baunach project will be a starting signal for dismantling measures throughout Bavaria and all over Germany. For free-flowing rivers, a benefit for nature and people!

## Literature and links

Information on dam removal activities of WWF Germany:  
<https://www.wwf.de/fluesse-befreien> (in German language)

Background paper von barriers in Bavaria:  
 „Lasst den Flüssen ihren Lauf“ (August 2020, in German language)

Request of nature conservation organisations for living rivers in Bavaria:  
[Demands on politicians](#) (November 2020, in German language)

The removal in Baunach River was part of an international concerted action to finance removal actions throughout Europe: [LET'S UNLOCK RIVERS TOGETHER! \(wnf.nl\)](https://www.wwf.nl)