Institute for Hydraulic Engineering and Hydrometry

Federal Agency for Water Management

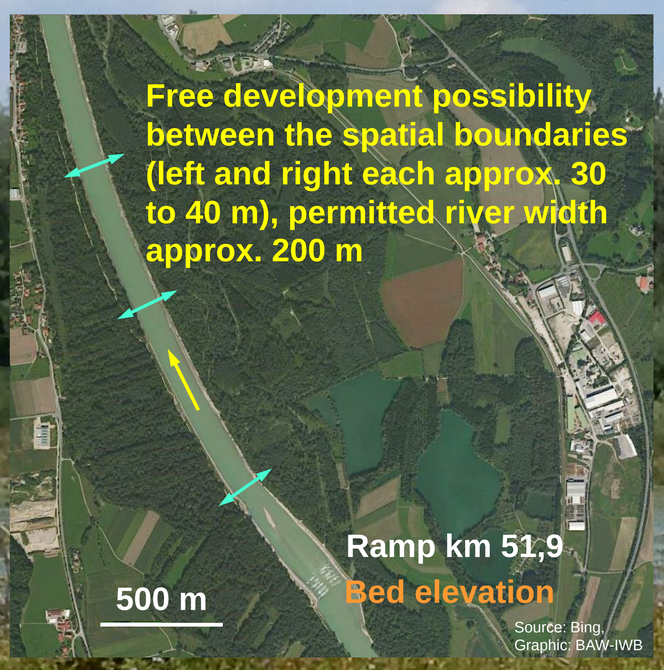
First planned self-dynamic river widening in Austria
Prognosis and Reality

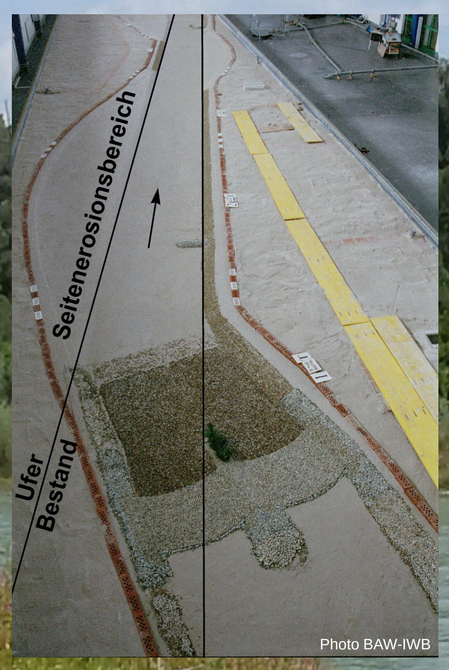
Initial situation:

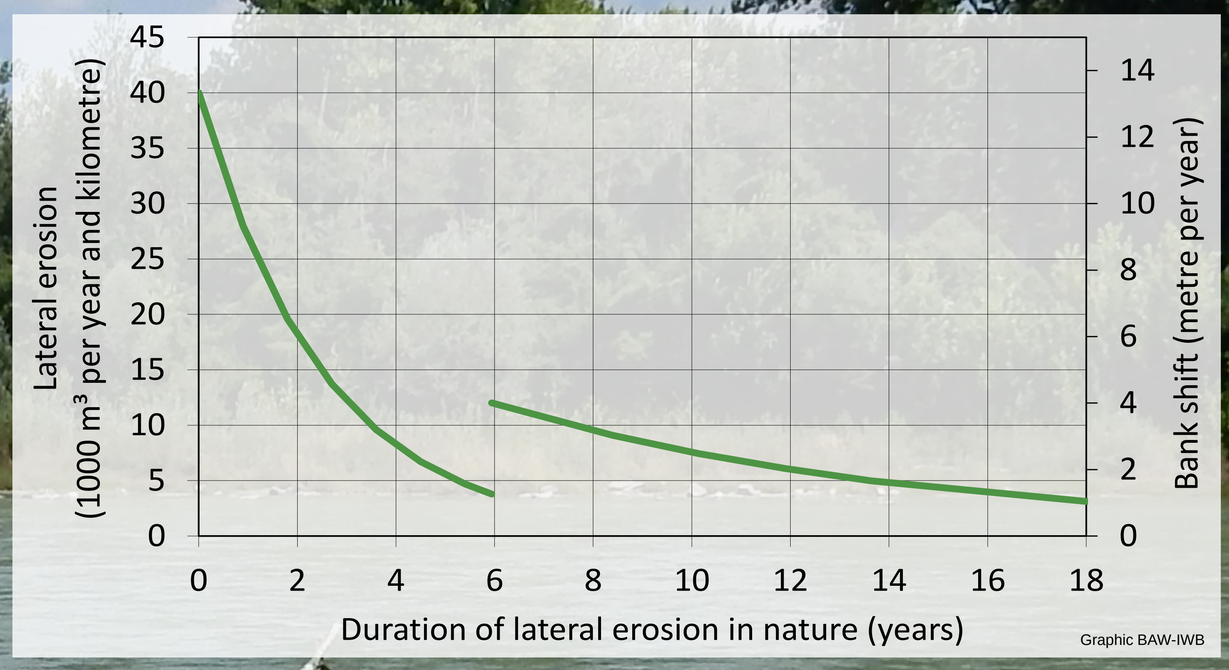
- For the Salzach at the border to Germany, we developed a concept for riverbed stabilisation.
- Downstream of a ramp to raise the riverbed, widening is required to compensate for the temporary bedload deficit caused by the ramp and to stabilise the bed in the long term.
- The widening is to be carried out with low use of machinery, self-dynamically by the power of the river.

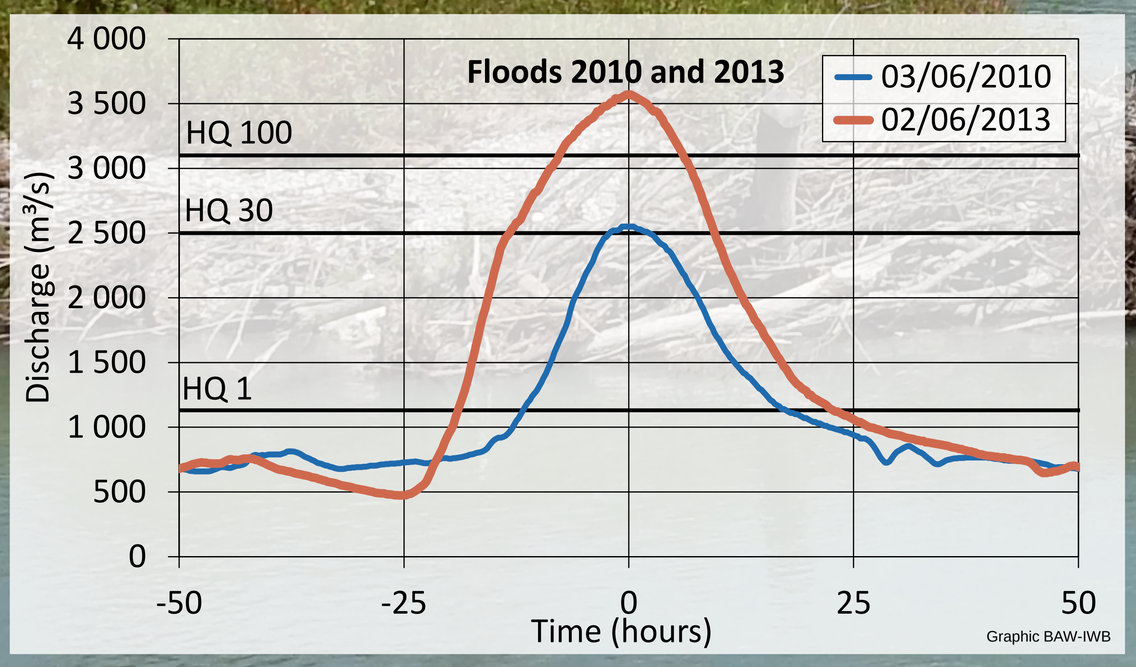
Concept for the stabilisation of the riverbed

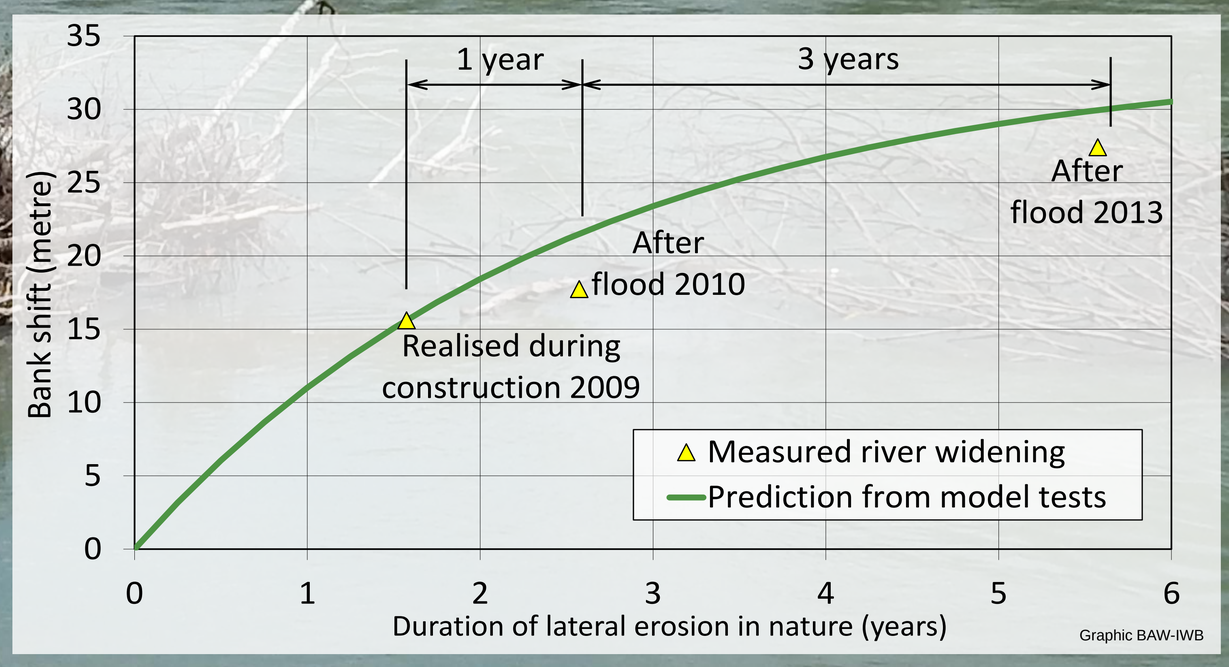
Model test on a scale of 1:50 on an area of 53 x 10 metres (left image: morphological model test 2001, right image: prediction of morphology)











Results:

- Self-dynamic widening can be predicted. However, the effort is high.
- The quality of the forecast depends on the available data.
- Self-dynamic developments need time, as they are dependent on runoff regime.
- **Self-dynamics = benefit for hydraulic engineering and ecology**

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