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SESSION 02 COST-EFFECTIVE SOLUTIONS FOR RIVER MANAGEMENT

# REHABILITATION OF THE LOWER SALZACH – CONCEPT AND FIRST EXPERIENCES

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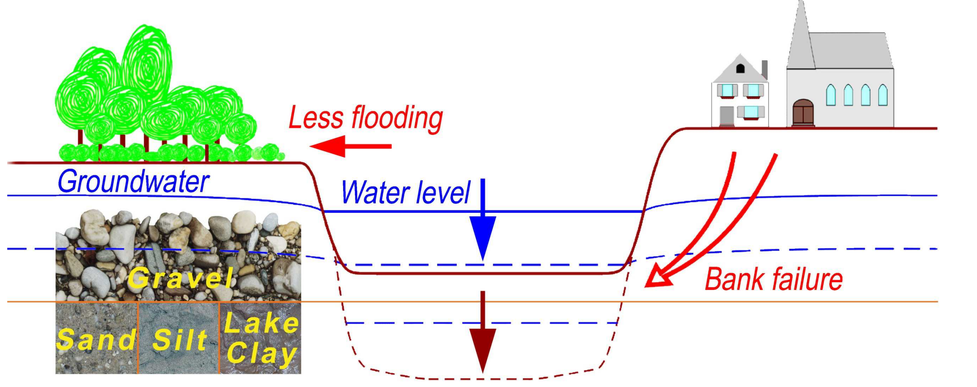
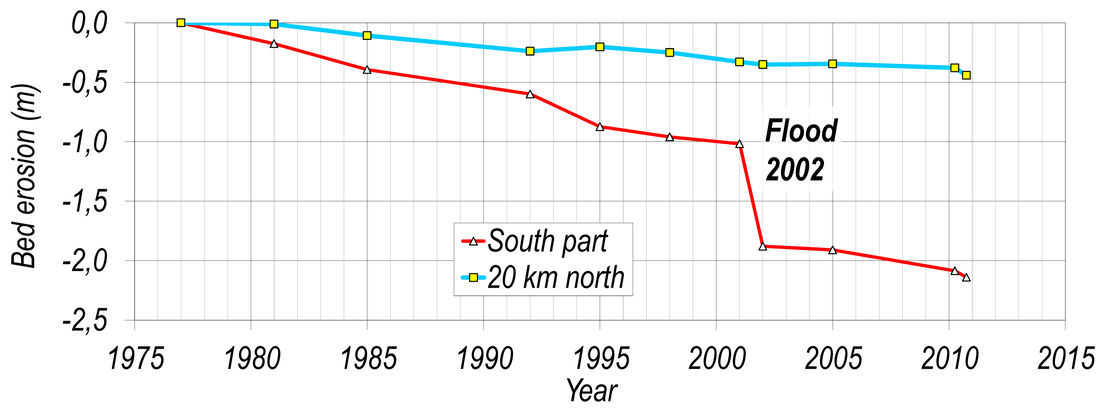
## Our problem:

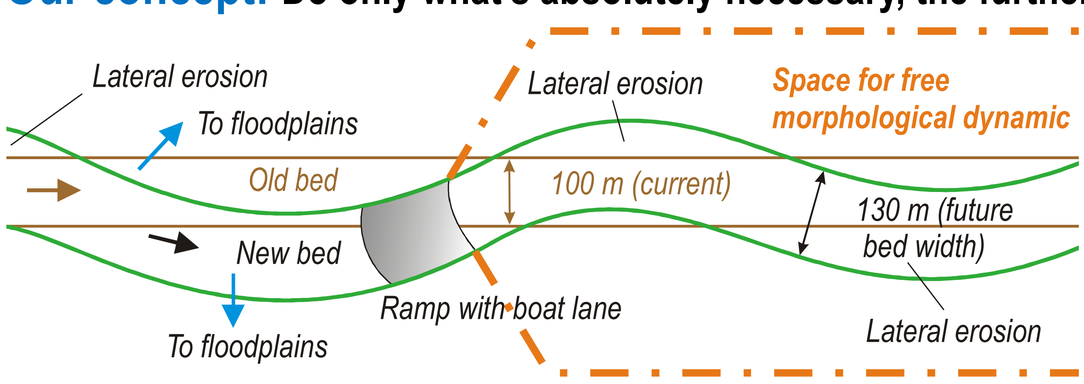

- Large bed erosion
- Ecological deficit (terrestrial and aquatic)
- Settlement areas at risk
- Bridges at risk

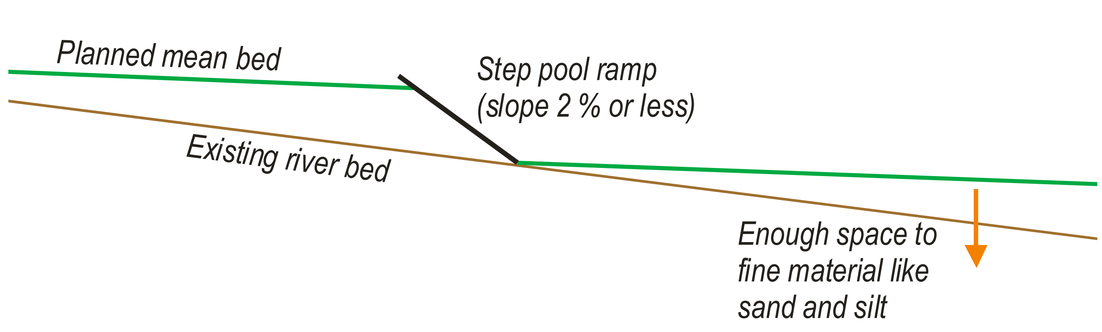
Salzach:
Length ≈ 60 km
$HQ_{100}$ = 3100 m³/s
Flooded area ≈ 45 km²




## Our concept: Do only what's absolutely necessary, the further work let the river do



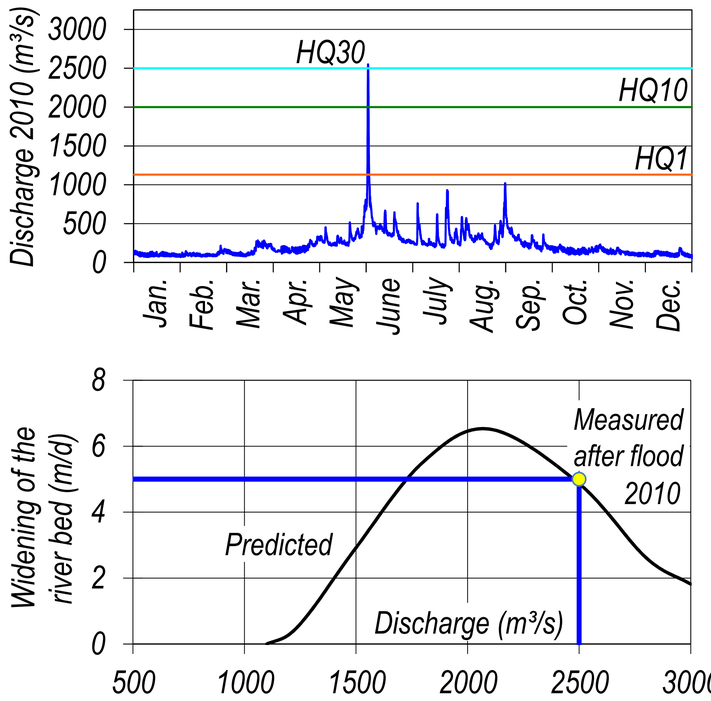




**What we have done:** build a flat ramp, remove bank protection downstream, activate old side arms in the floodplains, give the river space for free dynamics

**What the river does (without additional costs):** widening during floods, rising the bed level with bed load from lateral erosion areas

## First experience: As expected

Large sections without bank protection are leading to a morphological dynamic river bed, an improved connection between aquatic and terrestrial habitats (mild sloped gravel banks, dead wood) and new spawning grounds.



## Conclusions:

Using the force of the river for widening and bed level stabilisation as well as controlled morphological bank dynamics almost without bank protection is a promising way for river rehabilitation, flood protection and recreational use.

Going this way needs an intense planning phase using numerical and physical models at the state of the art. Lot of time is required for discussions with nature conservation (authorities and non governmental organisations as well) and land owners.

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