



5th stakeholder forum for the project
„Preparation of documentation for river training works on the
critical sectors of the Danube River in Serbia“

Morphological processes and river training works in view of ecosystem functions and reference conditions

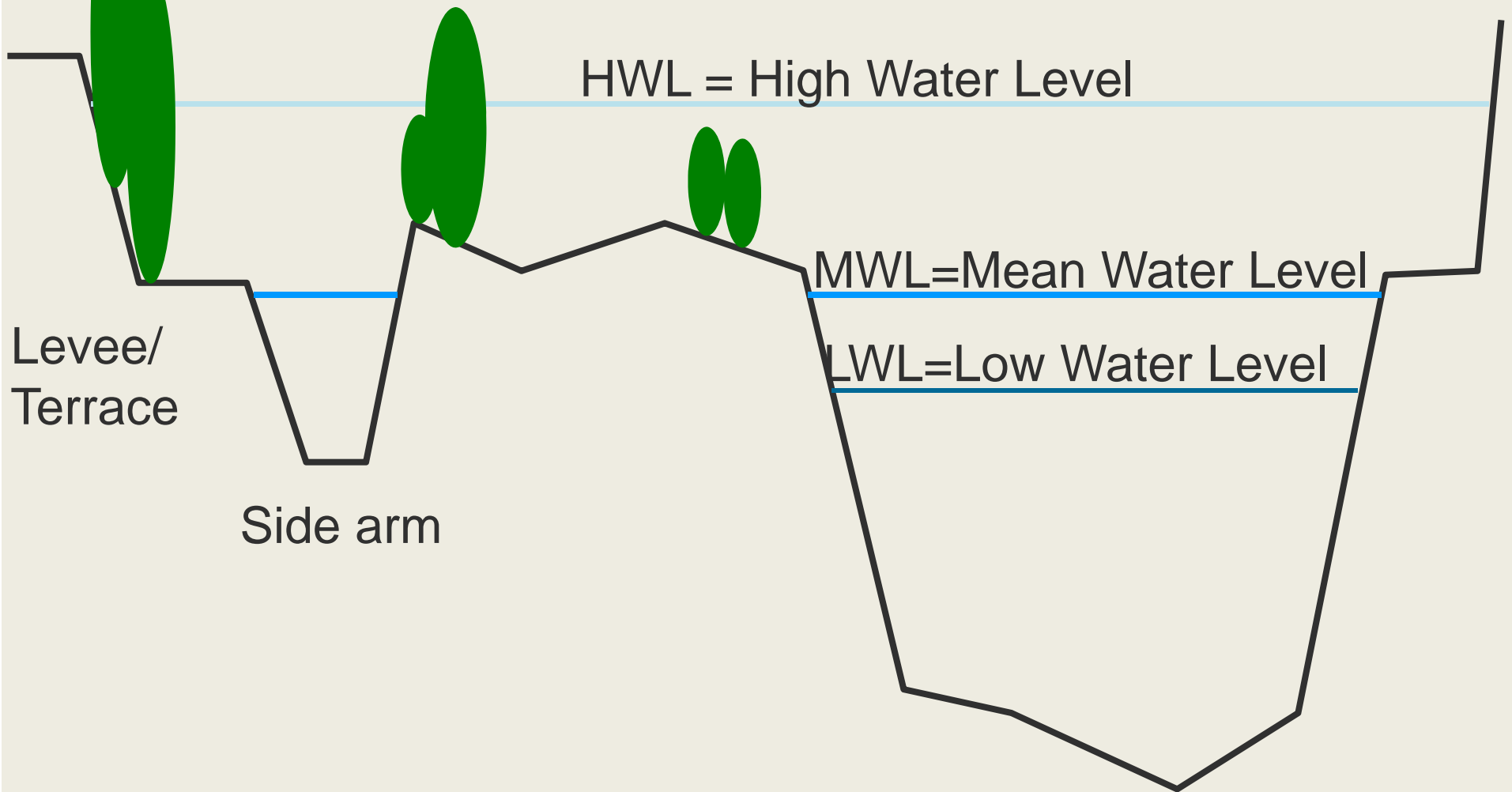
Georg Rast, WWF Germany



Structural interventions - aspects from environmental point of view

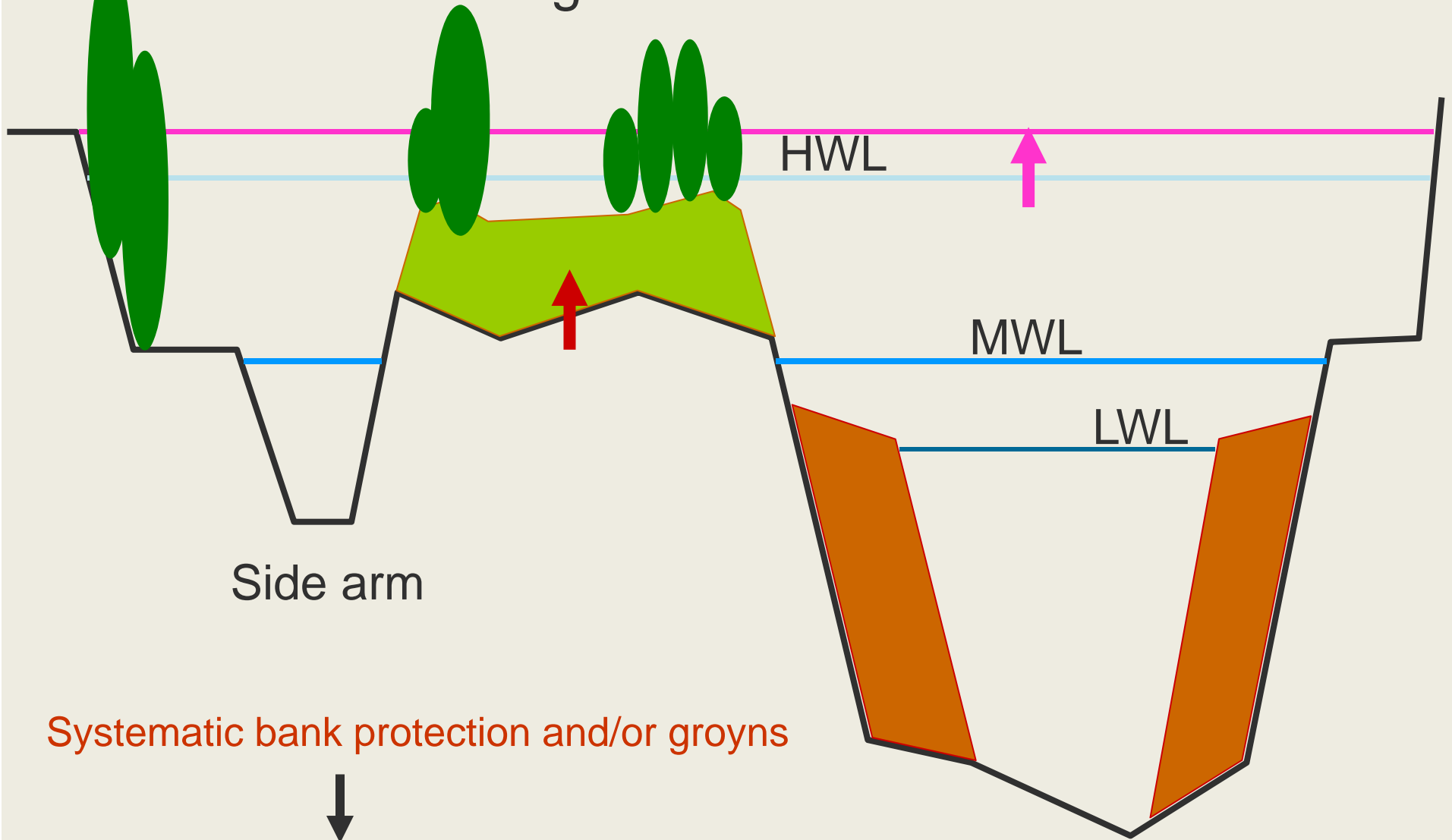
- Joint Statement objectives for environment include also opportunities for environmental improvements
 - Limit river bed incision
 - Sustain riverbed dynamics/habitats
 - Rehabilitate floodplain dynamics
- Include effects from interventions in the past (are there on-going changes?)
- Orientation on reference conditions (what can we learn from historical maps?)

River training measures and effects



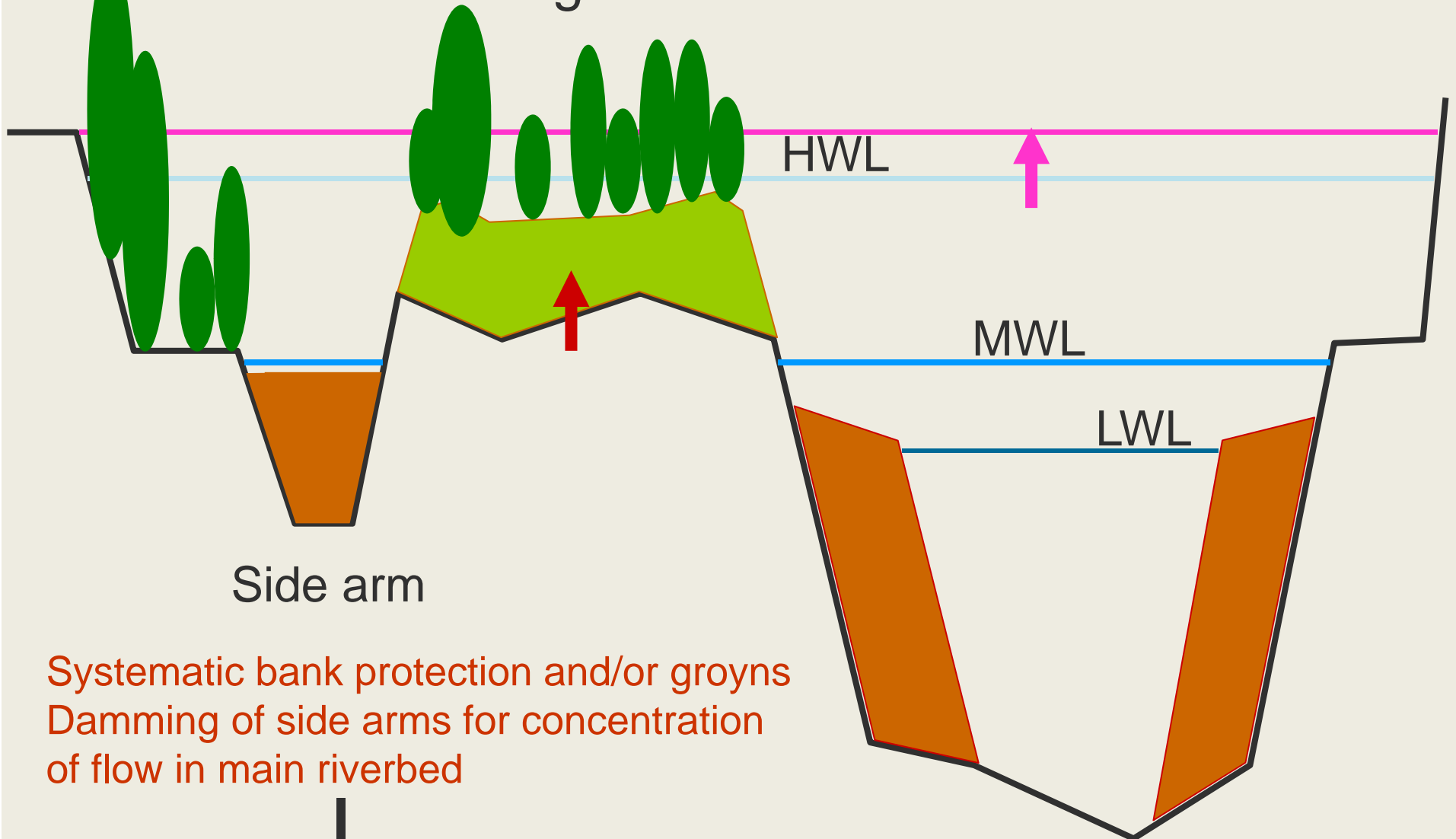
Basic conditions before intervention in riverbed structures

River training measures and effects



Continuous aggradation of floodplain, more dense vegetation in floodplain, on banks and on islands
elevation of flood water levels

River training measures and effects

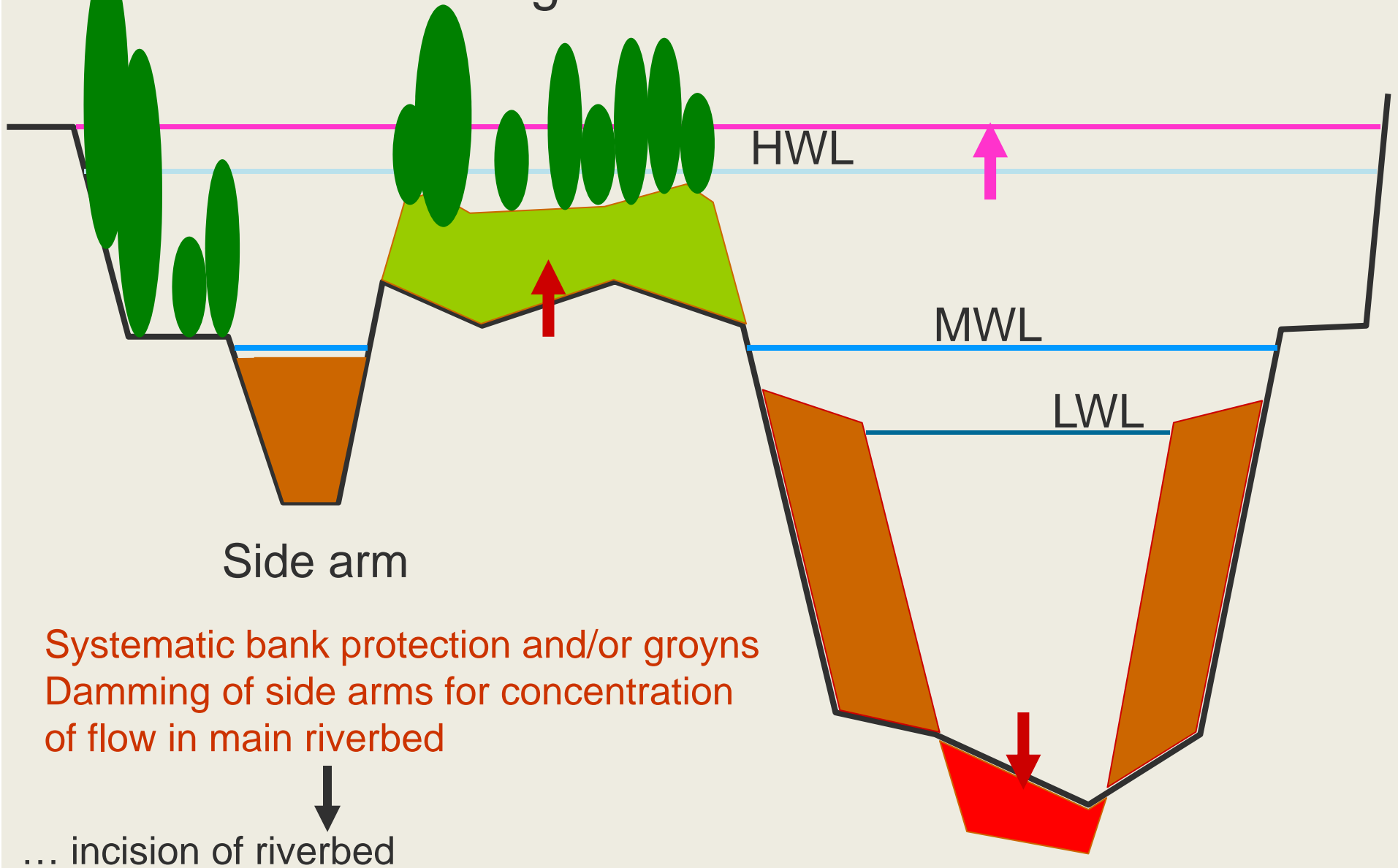


Systematic bank protection and/or groynes
Damming of side arms for concentration
of flow in main riverbed

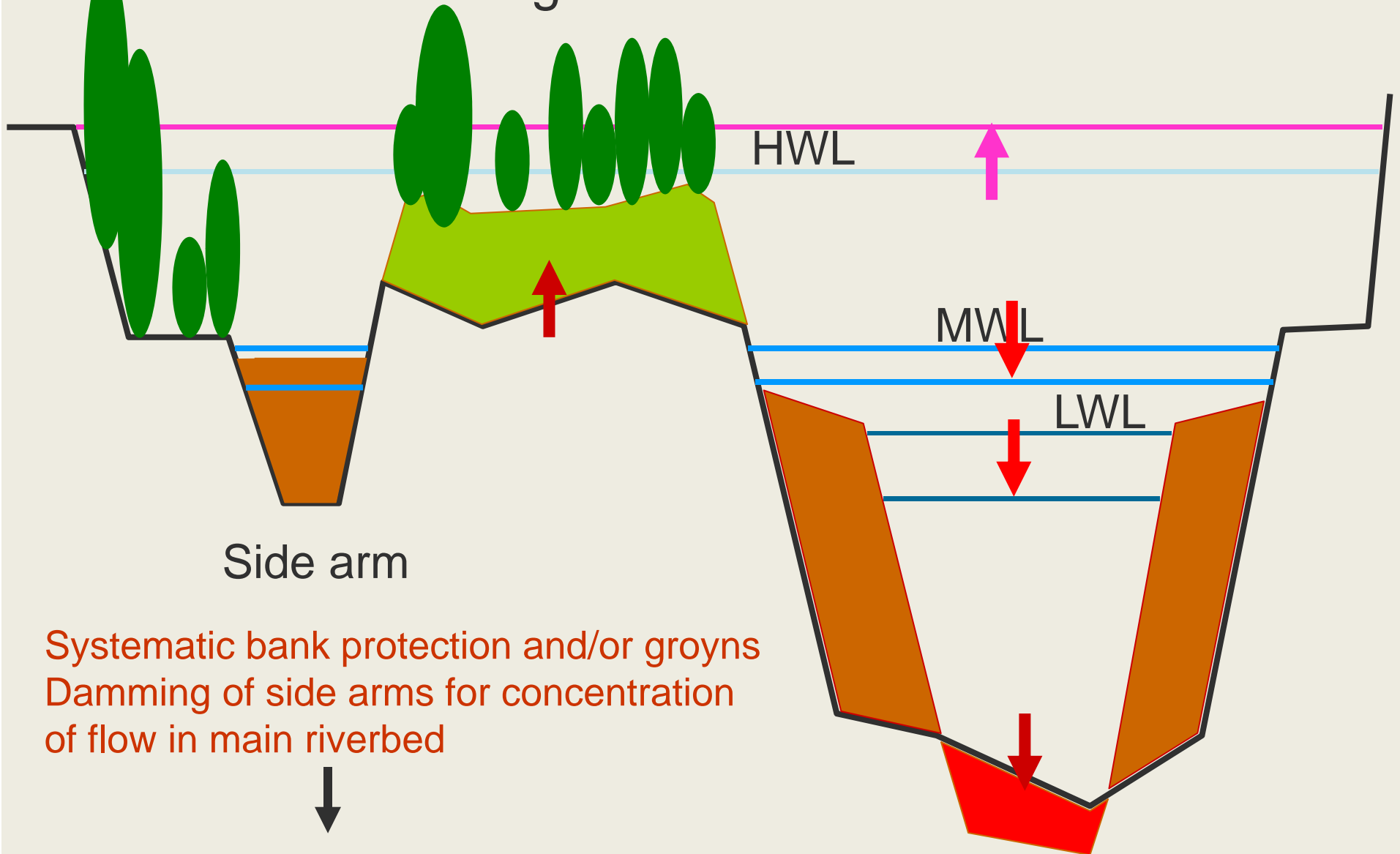


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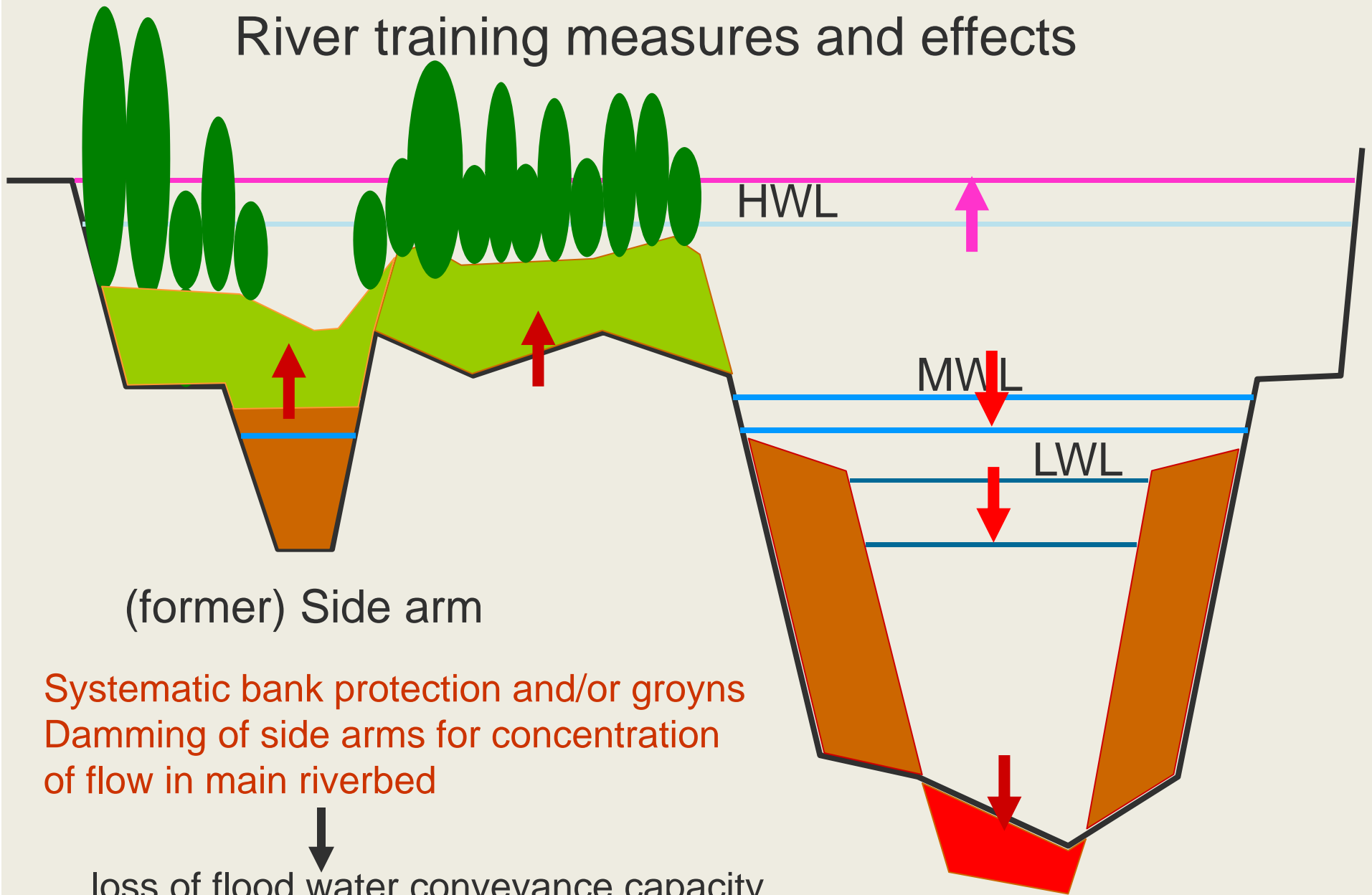


Systematic bank protection and/or groynes
Damming of side arms for concentration
of flow in main riverbed



... incision of riverbed, decrease of low and even mean water levels
subsidence of groynes and bank reinforcements, increased maintenance

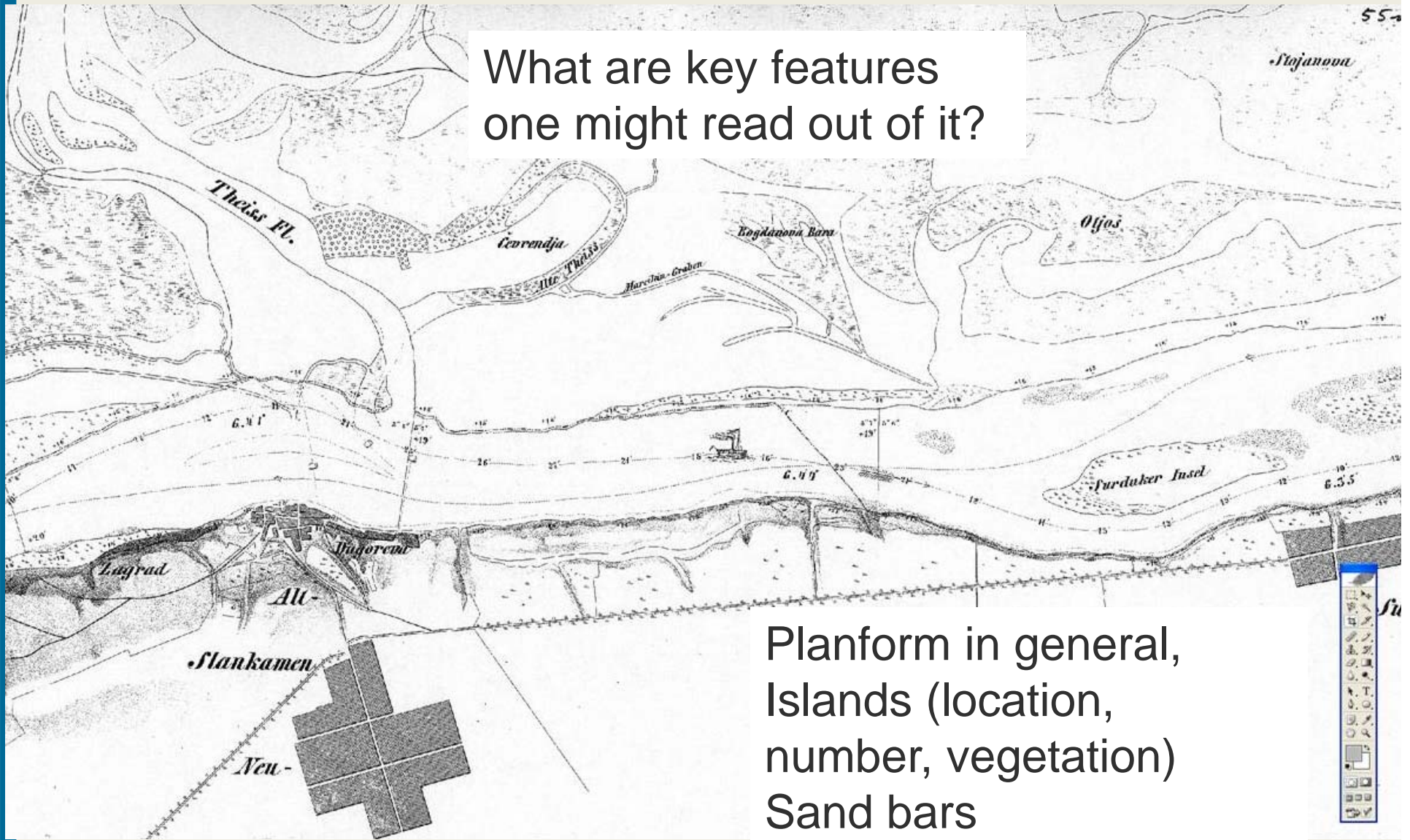
River training measures and effects





Historical maps – reference conditions?

What are key features one might read out of it?



Planform in general,
Islands (location,
number, vegetation)
Sand bars



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