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FAIRway Danube II

Connecting Europe Days, Andreas Bäck, viadonau, Brussels on 3 April 2024

Development steps of waterway management in Austria

2012



Testing of granulometric river bed improvement with coarse gravel



Optimization of groynes – new location, new shapes, lowering



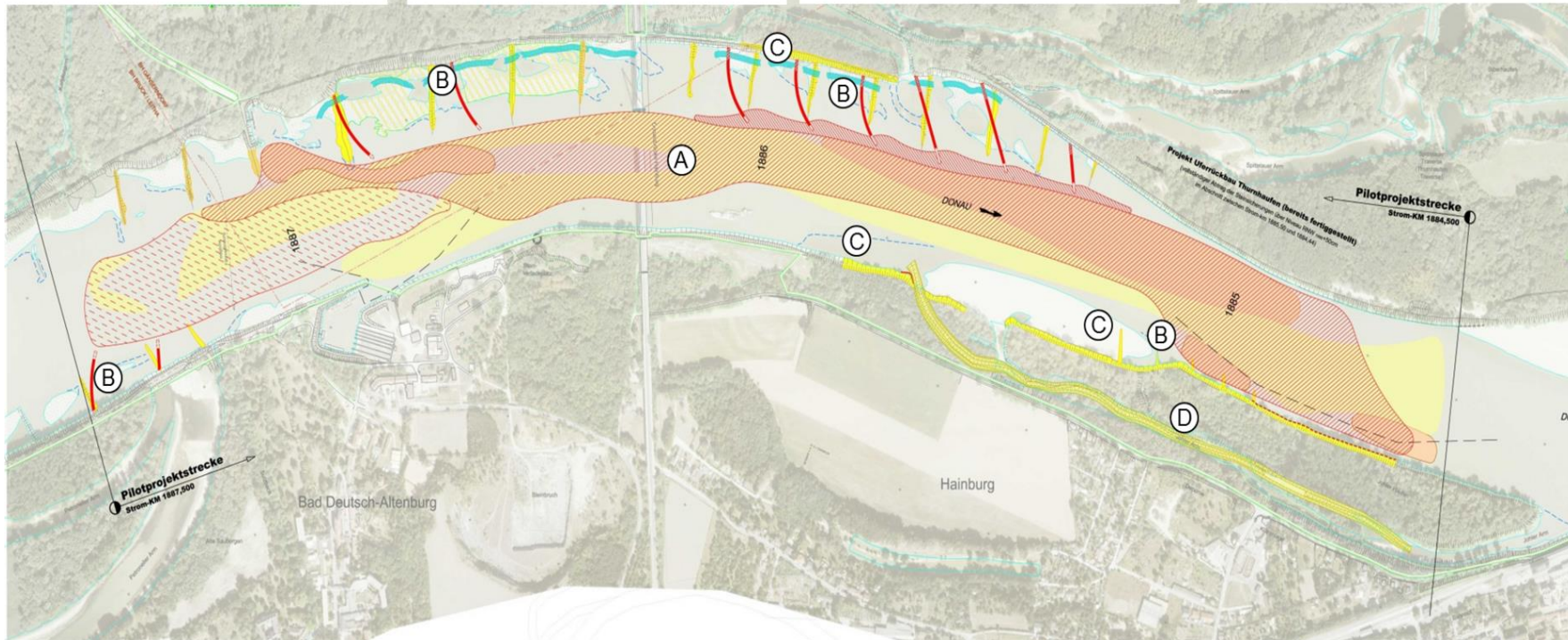
River bank restoration – removal of stone armour along the river bank



Reconnection of the Johler side arm with long-term sustainable through flow



TEN-T
funded Pilot
project east
of Vienna
(02/2012 -
07/2014)



2014

Development steps of waterway management in Austria

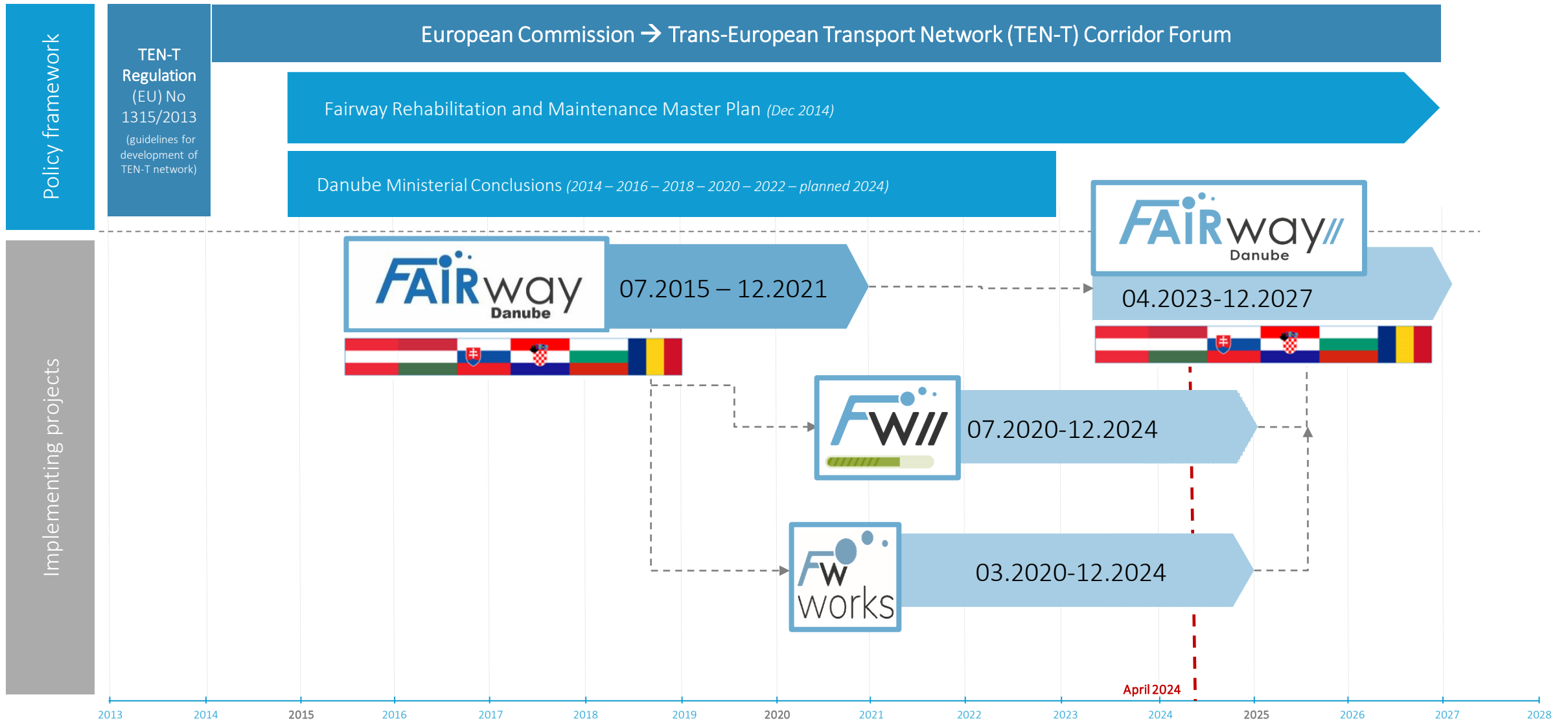
As of
2015

Catalogue of measures east of Vienna (=result of integrative planning)



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Deployment strategy



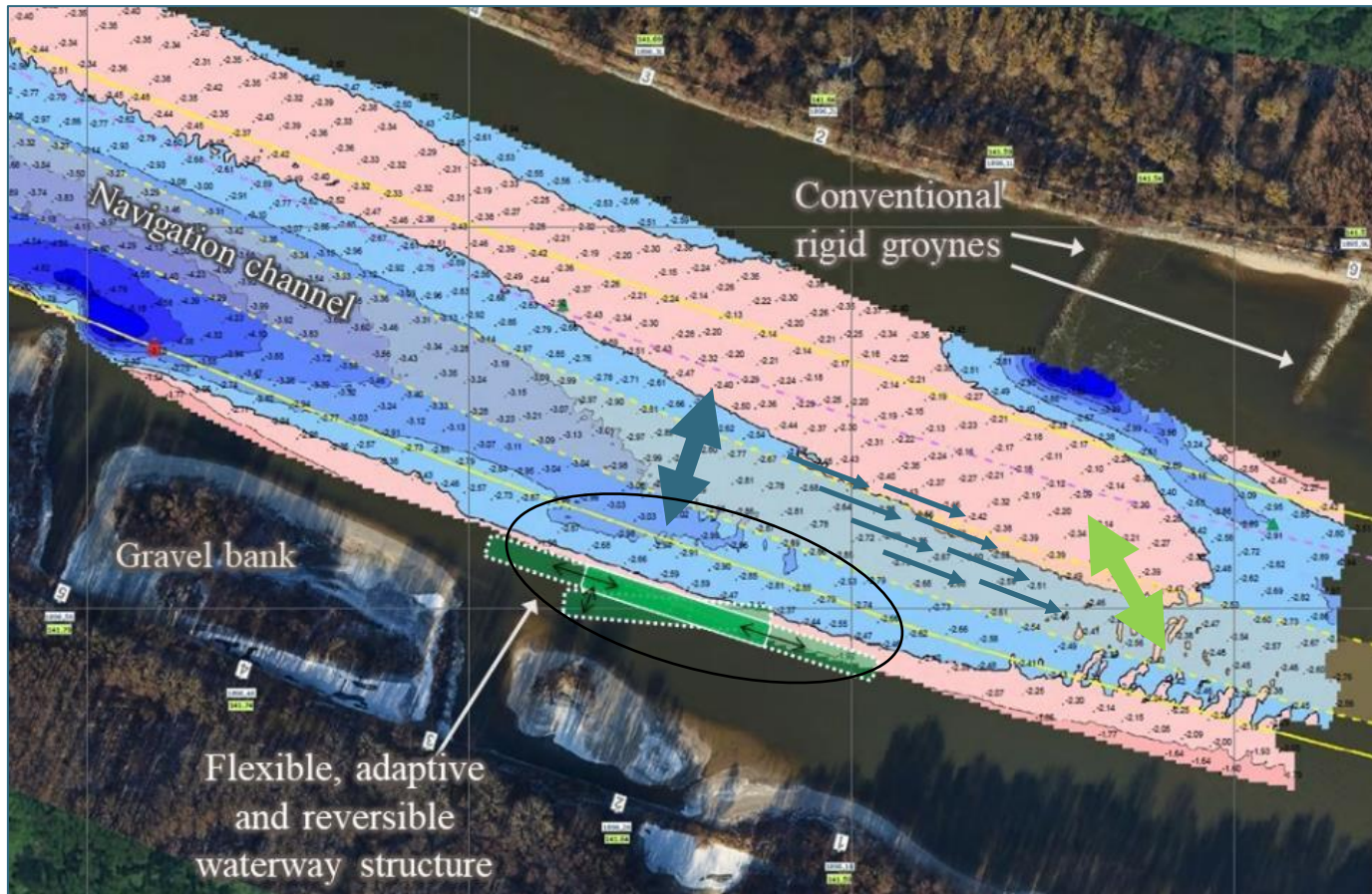
Innovative approaches in waterway management



temporary and flexible
infrastructure elements

Temporary infrastructure elements for extreme low water periods
similar to mobile flood protection dams (complementing the fixed dams)

Pilot for flexible low water regulation – first proof of concept



Pilot project:

Loaded barges strategically positioned next to shallow sections as a temporary and mobile training wall

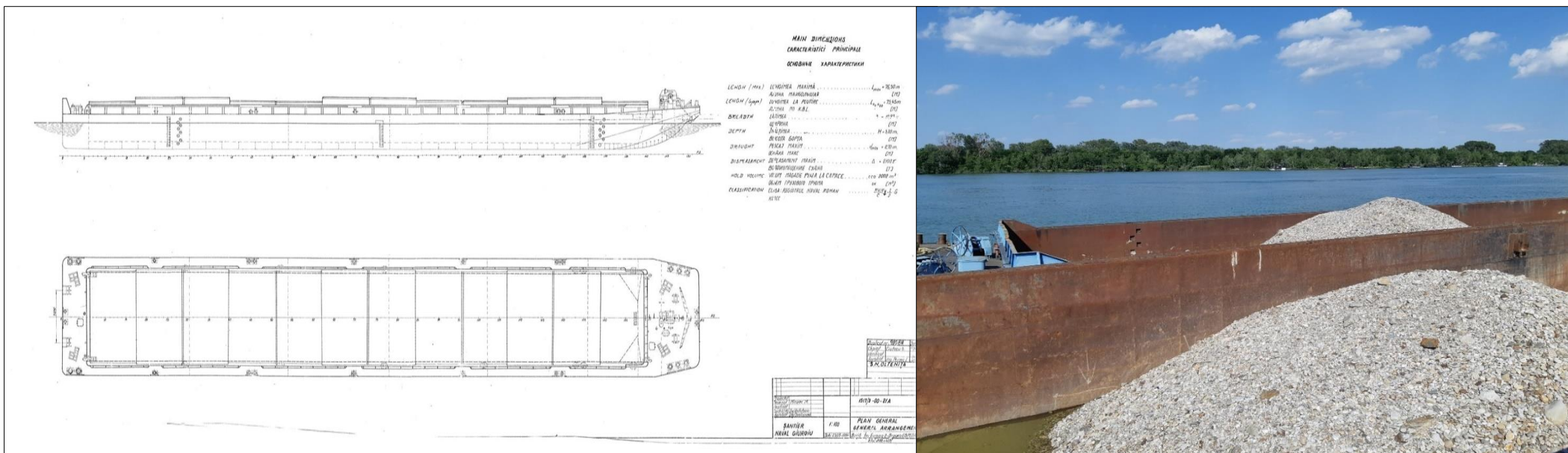
Effects: narrowed cross-section increases flow velocity and bottom shear stress

Results: increased fairway depths for the shipping sector when most needed

On the way to dynamic low water regulation

April 2024

- **Idea developed** in close cooperation with national park administration and shipping sector
- **Exchange and Hearings** with authorities and technical experts
- **Rental of barges** (mobile training walls): Integration in framework tender for dredging (06/2022) as contractual option, loading with gravel from dredging in shallow sections (spring 2024+)
- **Permissions** for implementing the pilot **entered into force** (before 10.11.2023)

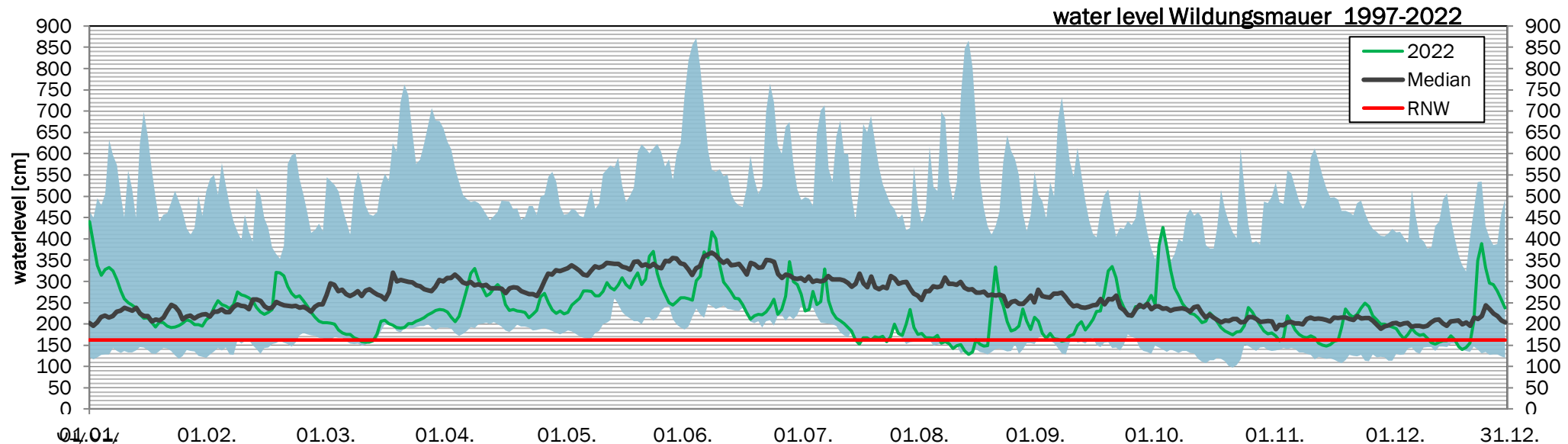


On the way to dynamic low water regulation

2Q2024

12/2027

- **Implementation:**
 - loading barges with gravel, positioning the barges at a critical section next to the fairway as **temporary and mobile training walls**
 - securing the barges with heavy anchors
 - removing the barges at high water levels
- **Monitoring** of the effects on river bed (surveying) and effects on navigation channel
- **Documentation** of results/ findings and **report on lessons learned**
- **Environmental supervision**



Why dynamic river management ?

- Optimal adaptation to water discharge
- Stable fairway parameters for the shipping sector in extreme low water periods
- Riverbed stability without permanent impact on sediment transport and ecosystem of the river



synthesis of waterway management
and environmental functions of rivers

=

dynamic river management



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www.fairwaydanube2.eu

Thank you for your attention!



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