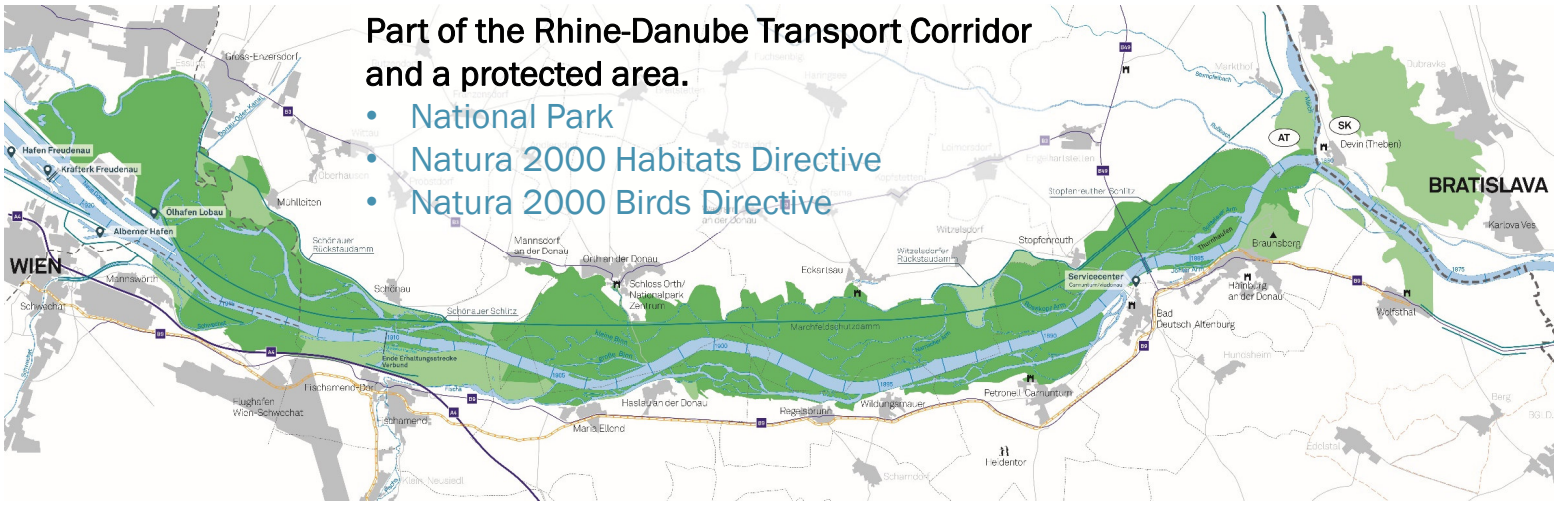
Integrated River Engineering Project
Catalogue of Measures for the Danube East of Vienna

Workshop EU environmental legislation requirements & inland waterway navigation projects
WebEx, 16 March 2021

Danube East of Vienna



Part of the Rhine-Danube Transport Corridor and a protected area.

- National Park
- Natura 2000 Habitats Directive
- Natura 2000 Birds Directive

- Approx. 48 km long: river-km 1,921.0 Freudenau Power plant to river-km 1,872,7 Austrian-Slowak border
- Height difference: approx. 18 m (40 cm/km)
- Fluctuations in water levels: up to 7 m

RNQ	discharge: 980 m³/s	Ø flow velocity 1,6 m/s (5,8 km/h)
MQ	discharge: 1930 m³/s	Ø flow velocity 2,0 m/s (7,2 km/h)
HSQ	discharge: 5130 m³/s	Ø flow velocity 2,5 m/s (9,0 km/h)

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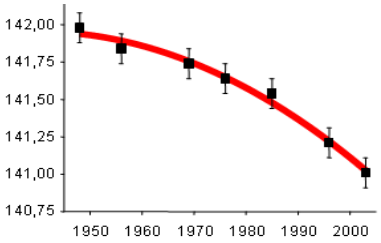
Danube East of Vienna – 3 major challenges

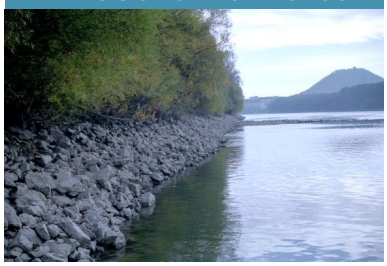
Riverbed degradation



decoupling of river and floodplains, falling groundwater levels

→ **Stabilization of water levels**

Heavily regulated river in National Park area



habitats of typical local flora and fauna are at risk

→ **Improvement of environmental conditions**

Inadequate fairway depths

limited competitiveness of inland waterway transport

→ **Improvement of fairway conditions / opt. waterway infrastructure**

High diversification of objectives
→ interdisciplinary approach, stakeholder participation

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Integrated River Engineering Project - Catalogue of Measures

- today's implementation strategy is based on the experiences of a pilot project phase.
- modified maintenance processes in combination with optimization projects.
- Realization in order by priority.

3 critical success factors:

- result of an integrative planning approach
- accompanied by a stakeholder forum since 2012
- meant to be a learning system (or adaptive system) to improve quality and to cope with uncertainty

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Integrative Planning

How to achieve Good Navigation Status & Good Environmental Status simultaneously in the same place?

- A good start: Involvement of interdisciplinary experts from the beginning (definition of goals)

  Interdisciplinary Steering Group: Experts in river engineering, navigation, ecology, spatial planning and economics, representatives of ministry of transport, national park

  In parallel: **Wider stakeholder involvement** process (moderated) was carried out to reflect interim results

  Variant selection process → Output: planning principals

- **Interdisciplinary planning team** translates the planning principals into concrete measures

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Integrative Planning

Additional information

The integrative planning approach applied east of Vienna is outlined and described as good practice in various publications. For example:

"Joint Statement on Guiding Principles for the Development of Inland Navigation and Environmental Protection in the Danube River Basin" (ICPDR, Danube Commission and Sava Commission, 2007)

"Manual on Good Practices in Sustainable Waterway Planning" (EU PLATINA Project, 2010)

Guidance Document „Inland waterway transport and Natura 2000" (EC, 2012)

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Stakeholder Participation
Motivation

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Interdisciplinary Steering Group, moderation processes, etc. were useful at the beginning but not sufficient to integrate stakeholders and the civil society into the implementation phase.

Objectives viadonau:

- Intensify integration of key stakeholders in the realization phase
- Improve transparency
- Direct communication with key stakeholders (not via media)
  Topics: aims & measures, construction related issues, monitoring results
- Objectification of the discussion with “critical voices”
- Using the chance of demonstration of live realization works instead of plans, computer- and physical models (advantage of a pilot project)

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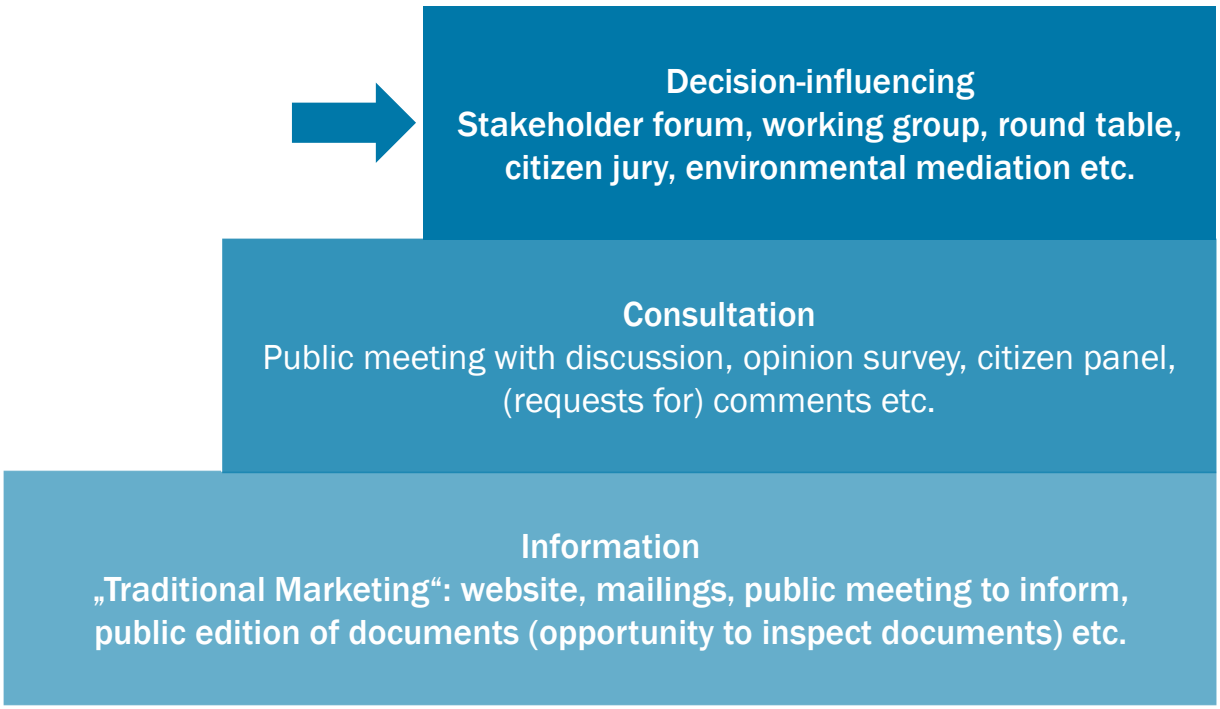
Stakeholder Participation
Different Steps of Participation

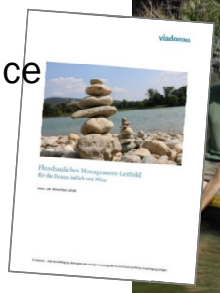


Based on „Die Zukunft gemeinsam gestalten“, ÖGUT/BMLFUW 2005

Stakeholder Forum – Catalogue of Measures

The Stakeholder Forum allows the structured integration of stakeholders.

- Todays forum is based on the experiences of the first forum 2012-2015
- Possibility to accompany and influence the implementation of measures.
- Agreement on **common vision** for future management of the stretch.




on site visits


information days for wider public

Advisory board / Stakeholders

- 4 from economy / navigation sector*
- 6 from environmental NGOs*
- 1 representative of National Park
- 1 representative of ICPDR
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*) selection by the stakeholder group itself

Information and discussion services for observers

A whole catalogue of measures

The result of integrative planning was a combination of maintenance processes and optimization projects ...


Bedload management


Sidearm reconnection


Riverbank restoration


Low-water regulation


Stabilisation critical scours


Small-scale Measures

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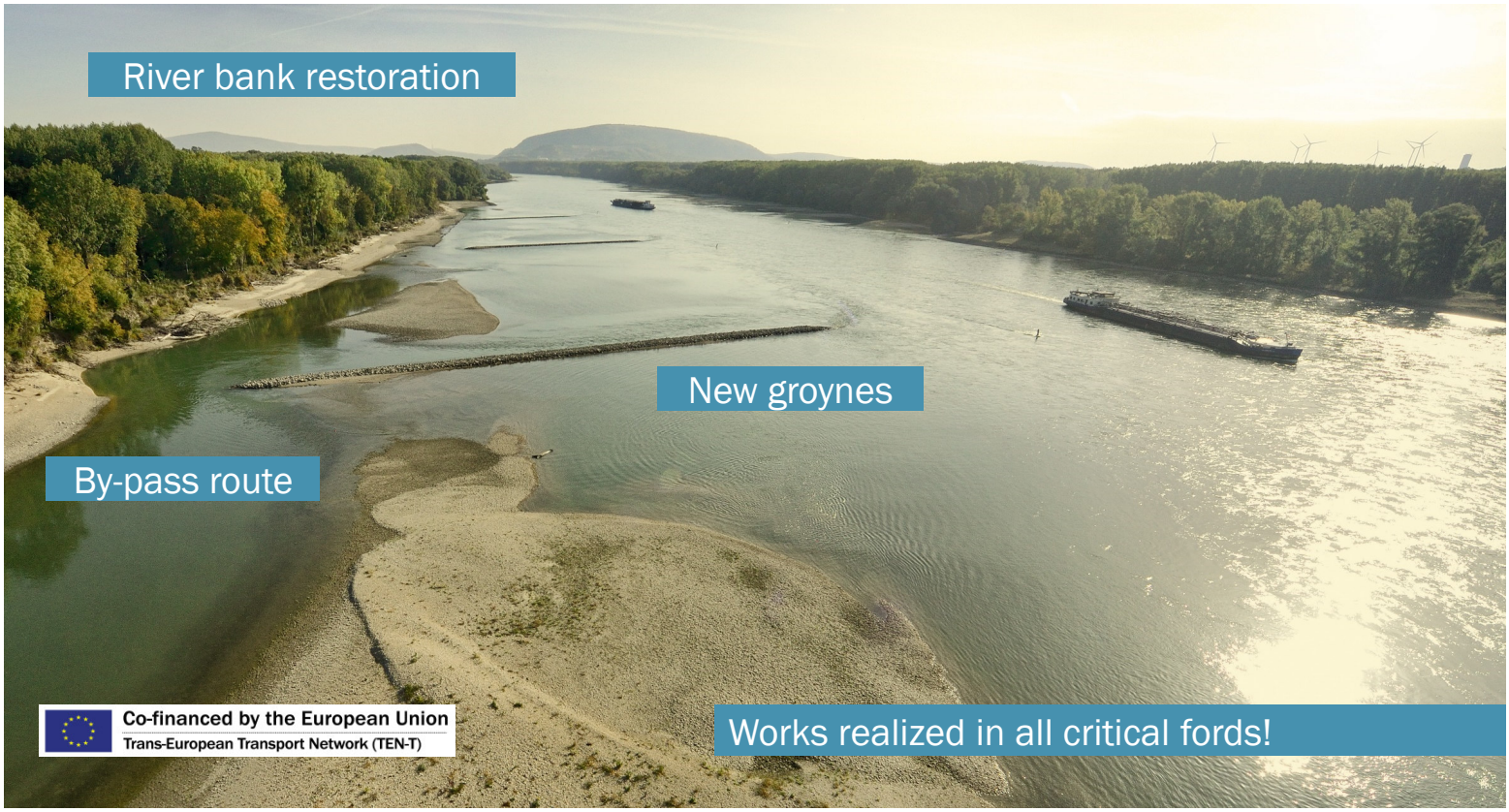
Critical ford Petronell-Witzelsdorf
Groyne optimization & riverbank restoration



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Side arm reconnection & river bank restoration

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Setting up a 'learning system'

Learning from the river. The Catalogue of Measures is meant to be a learning system (or adaptive system).

- to cope with **uncertainty** (technical risks) and the dynamics of the river / floodplain system (no possibility / no need to know everything in advance)
- Flexibility to **react on the effects** of the work of previous years, on discharge, etc.
- Optimization Projects: Learning from project to project (realization according to priority for each type of measure)
- Maintenance Processes: Learning from period to period

Preconditions:

- Scientific support / Monitoring (no learning without observations)
- Flexibility to adopt to findings / experiences (budget, legal, timeframe)

Some lessons learned …

- Integrative planning is a prerequisite for successful planning and implementation activities along the multidimensional system Danube.
- There is no "too-early" for integrative planning and stakeholder involvement (but a "too-late").
- Stakeholder participation models are useful tools during development and implementation.
- Adaptive approaches are beneficial, especially when measures are to be implemented in protected areas (National Park!).
- Integrative planning & adaptive approaches need sufficient political and financial support.

Contact

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