



**Mixed Environment Transport External Expert Team (METEET)
Training on Integrated Planning of Inland Waterways Transport Projects**

Budapest, November 12, 2019

**Involvement of Public &
Transparency of the Planning Process in
IWWs Infrastructure Project in Serbia**

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This project has received funding from the European Union's CEF under the Grant Agreement No. MOVE/B4/SUB/2015-426/CEF/PSA/SI2.719921



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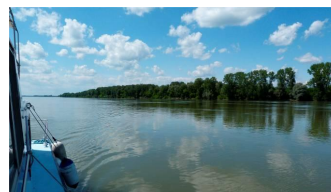
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Basic project data

- EU funding programme: IPA 2010
- EU funding rate: 100%
- Value: EUR 1.85 Mill
- Timeframe: 2011-2013
- Beneficiaries:
 - Ministry of Infrastructure and Energy
 - Directorate for Inland Waterways
- Goal: Improvement of navigation safety
- Measure: removal of navigation bottlenecks



Towards a Smoother Inland Navigation



Preparation of Necessary Documentation
for River Training Works on Selected Locations
along the Danube River
(IPA 2010)

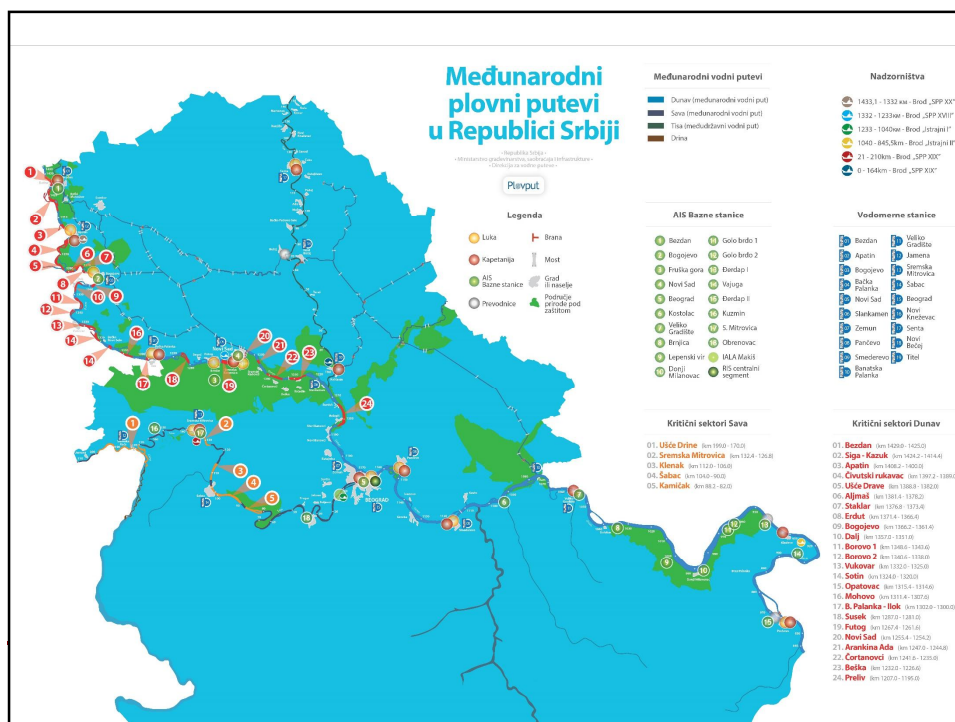


Plovput



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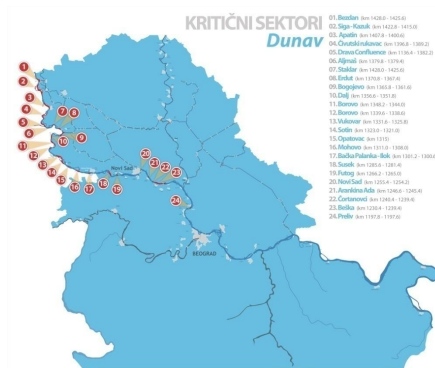
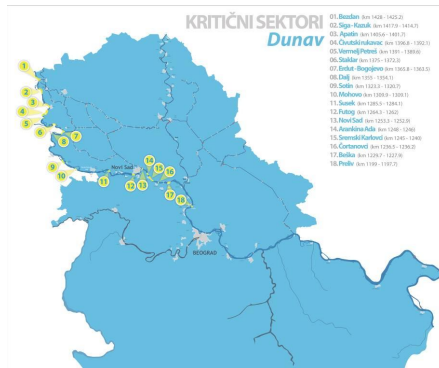
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Critical sectors

Master Plan (2006)
18 critical sectors
40 km total length

IPA 2010 project (2011)
24 critical sectors
70 km total length

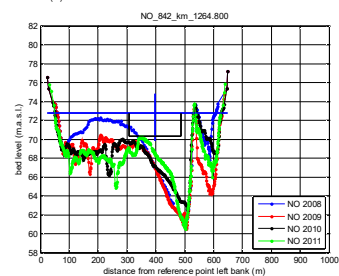
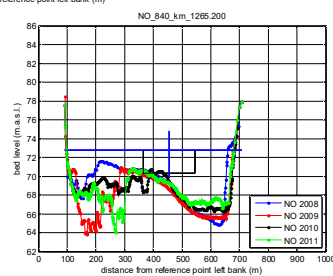
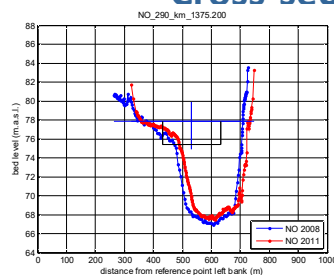
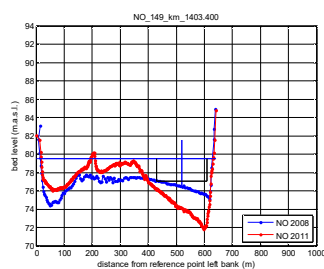


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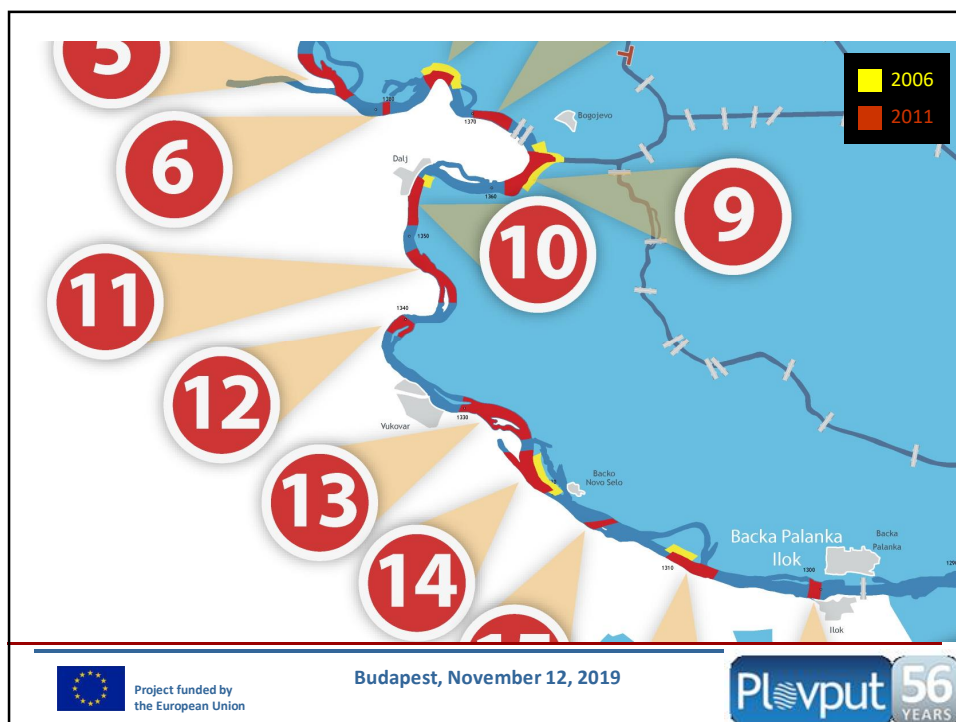
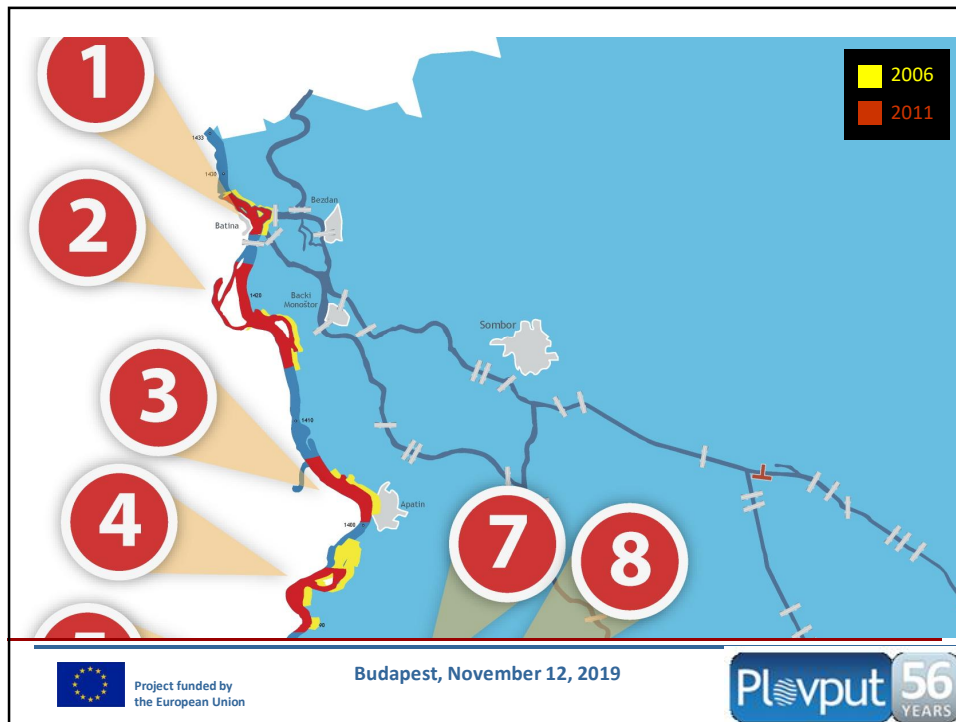
Cross-section analysis

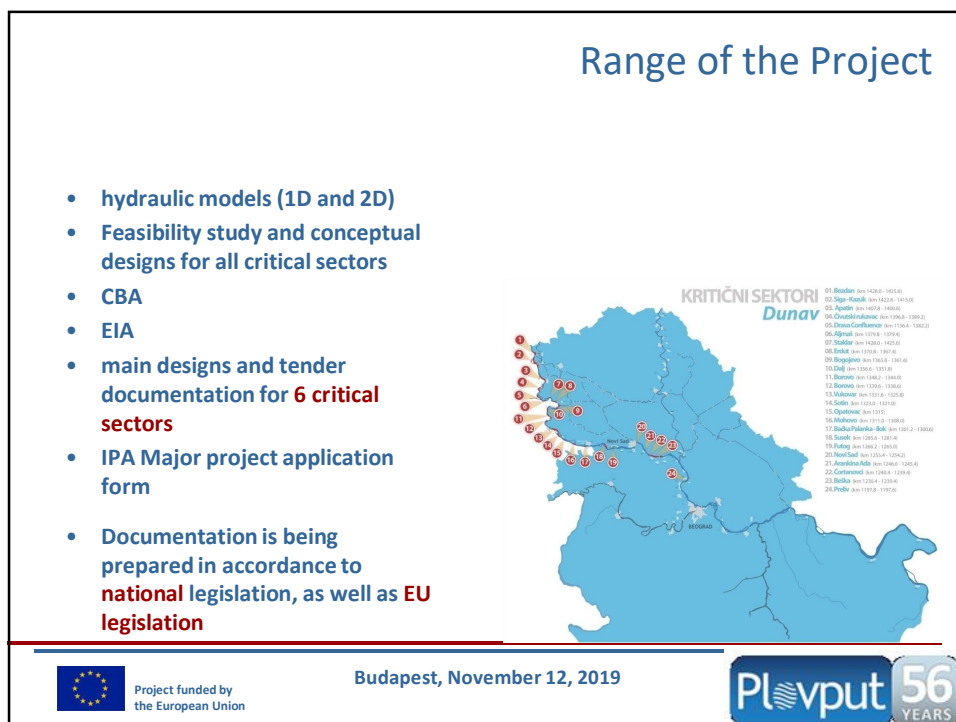


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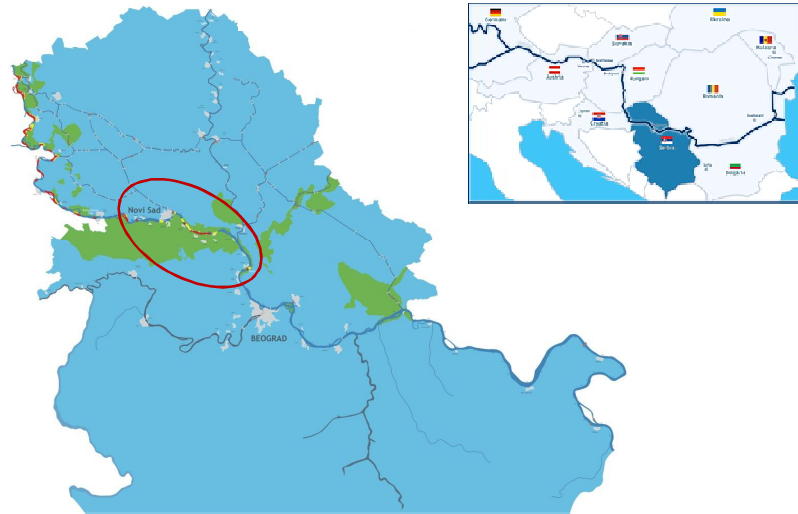
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Project area



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Strategic and Legal Framework

Strategic framework:

- Master plan for IWW transport in Serbia(2006)
- Serbian transport development strategy for the period 2008-2015 (2007)
- General transport master plan (2009)
- Spatial plan of the corridor VII (drafted)
- EU strategy for the Danube region (2010)

Inland navigation:

- DC Recommendations
- AGN (UNECE)
- SRB-CRO bilateral agreement on inland navigation and fairway maintenance (2009)
- Law on navigation and ports on inland waterways (2010)
- Bylaws

Water management:

- Law on waters
- Relevant bylaws
- WFD (EU)
- Danube River Basin management plan (ICPDR)

Protection of cultural monuments

- Law on cultural heritage
- Bylaws

Environment:

- ESPOO convention
- Law on nature protection
- Law on environment protection
- Law on EIA
- Law on SEA
- Regulation on ecological network
- Specific spatial plans
- Relevant bylaws

Law on construction and spatial planning



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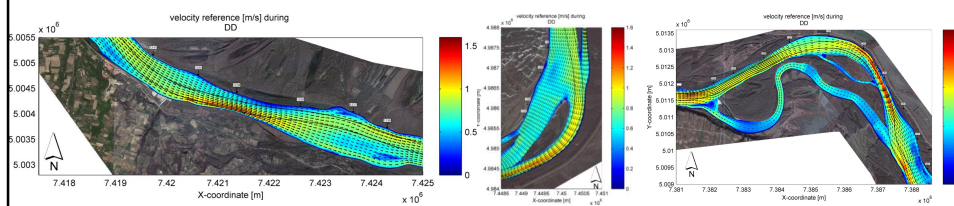
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Basic Orientation

Ensuring **minimal width and depth** of the fairway during the low water periods, while **respecting environmental requirements**

- Preserving **connectivity** conditions
- Preferring **detached structures**
- Ensuring **mitigation measures**
- Preserving **sediment equilibrium**

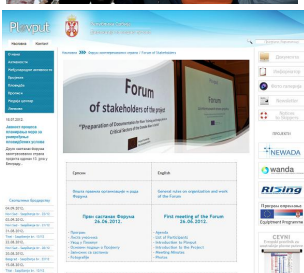


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Dissemination



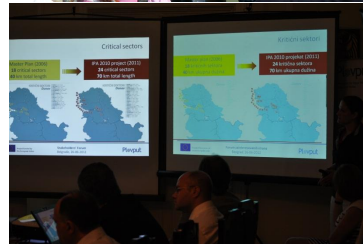
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Stakeholders' Forum

- **Interdisciplinary** approach
 - inland waterway transport
 - hydrotechnics
 - industry
 - nature and environment protection
 - archaeology
- Kick-off: **26th of June 2012**
- Ensuring **transparency**
- Using **multi-criteria analysis**
- **Methodology** of the work ensuring **comparability of options**



Building trust



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Forum members



Asking each others



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Stakeholder's Forum - Basic principles of work

- Membership is **voluntary**
- Membership is **free of charge**
- Recommendations of the Forum have **advisory** character
- **Mutual respect** and acknowledgment of standpoints of others



Acknowledging each others



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Basic principles of the work

- All documents are in both **Serbian and English**
- Work of the Forum is **public** and **transparent**
- **Observers** are welcomed



Respecting each others



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Results

- **General rules** on organization and work of the Forum
- **Annex I** to the General rules – list of members and deputy members
- Active participation of observers
- **Methodology** of the work ensuring **comparability of options** and **choosing the best**

Learning from each others



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Results

- Results of **evaluation** of the work of the Forum
- **6 critical sectors** presented and discussed
- Detailed discussion and fruitful inputs

Common understanding



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Results

- Identification and **common agreement on the preferred options** for further modeling for 6 critical sectors on Serbian stretch of the Danube
- **2.500 hits** on Plovput web site – section Forum
- All documents available in **Serbian and English**
- Short **movie** about the Forum



Planning together



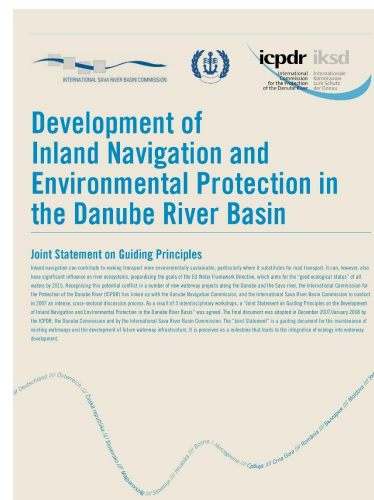
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Joint Statement on Guiding Principles

- Adopted by ICPDR and Danube Commission in December 2007
- Annual follow-up meetings (Zagreb - September 2017, Vienna - September 2018, Budapest – September 2019, next Zagreb – fall 2020)



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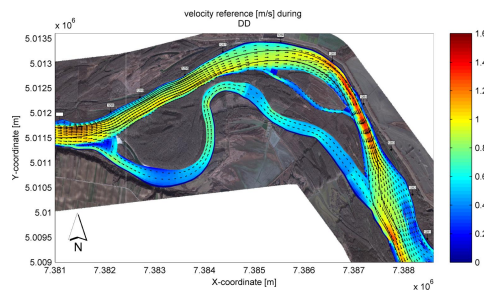
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01. Application of JS

JS: ...supporting a dynamic equilibrium and adequate connectivity conditions...

- Adopted design approach:
 - Preserving connectivity conditions



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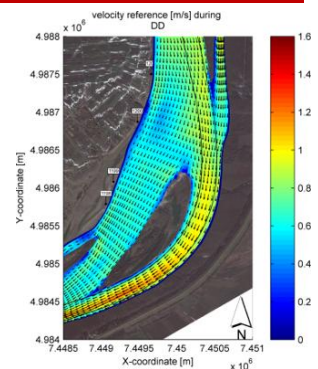
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02. Application of JS

JS: ...undisturbed longitudinal and lateral migration of all fish species and other water-related species to ensure their natural and self-sustaining development...

- Adopted design approach:
 - Preferring detached structures



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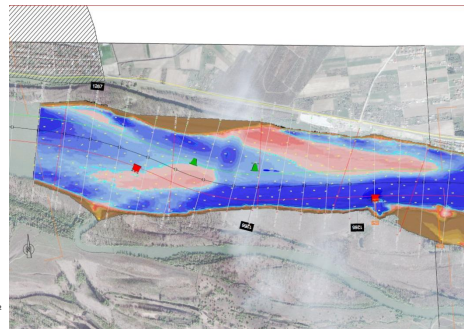
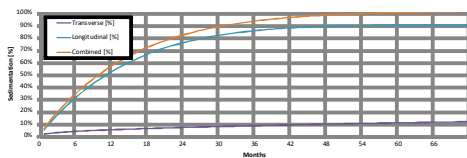
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03. Application of JS

JS: ...a balanced sediment budget...

- Adopted design approach:
 - Preserving sediment equilibrium



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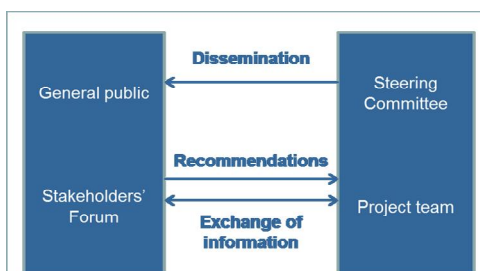
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04. Application of JS

JS: ...Establish interdisciplinary planning teams involving key stakeholders...

- Stakeholders' Forum established



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05. Application of JS

JS: ...Set-up a transparent planning process (information/ participation)...

- Stakeholders' Forum established
- Web site, no restrictions (2.000 hits monthly)
- Serbian and English language
- 9 Forum meetings
- 2 site visits
- 26 presentations on events
- 24 articles
- 1 movie



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06. Application of JS

JS: ...Ensure the comparability of alternatives...

- Multi-Criteria Analysis
 - Navigation
 - Environment
 - Technical feasibility
 - Costs



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07. Application of JS

JS: ...Inform and consult the international river commissions in the Danube River Basin...

- Stakeholders' Forum



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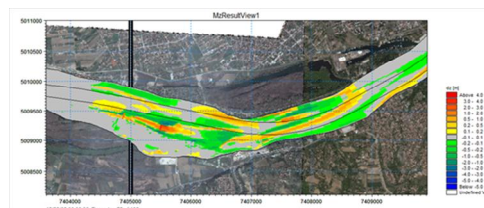
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08. Application of JS

JS: ...Seek to avoid or, if this is not possible, to minimize the impacts of structural/ hydraulic engineering interventions...

- For each of 6 sectors, at least 5 conceptual alternatives
- For conceptual alternatives, up to 35 simulations



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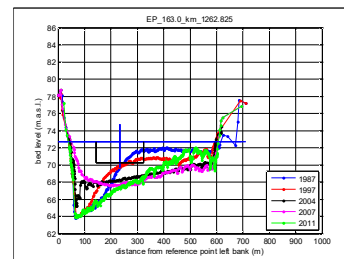
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09. Application of JS

Use of best practice measures to improve navigation...

- Using all available practice, to identify the most suitable solution for each sector, by case-by-case approach



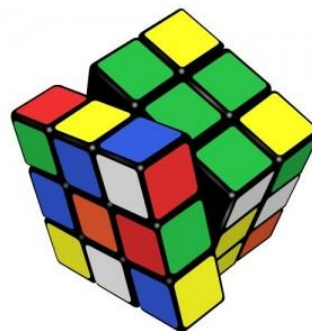
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10. Application of JS

JS: ...Ensure flexible funding ... to enable integrated planning and adaptive implementation & monitoring...



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11. Application of JS

JS: ...Monitor the effects of measures...

- **Environmental monitoring ensured: before, during and after works**
 - Hydro-morphology
 - Water and sediment quality
 - Biology



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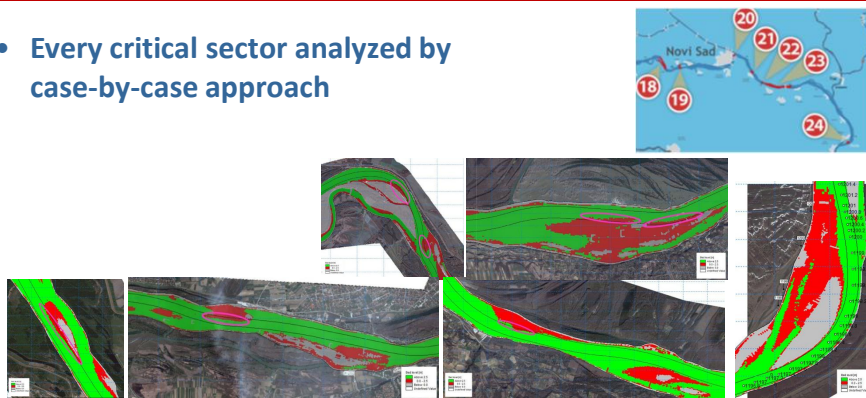
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12. Application of JS

JS: ...Use a case-by-case approach...

- **Every critical sector analyzed by case-by-case approach**



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13. Application of JS

JS: ...“working with nature” ... following the principle of minimum or temporary engineering intervention...

- Mostly applied solution is dredging, with refilling the sediment back into the river
- Minimum structural interventions by application of different pilot solutions
- All structures detached



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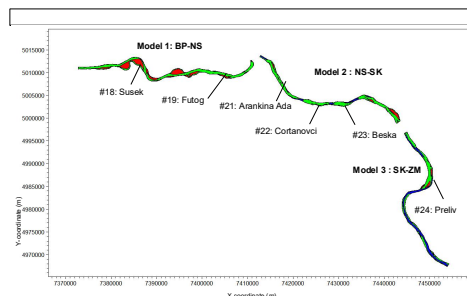
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14. Application of JS

JS: ...Integrated design of regulation structures, equally regarding hydraulic, morphological and ecological criteria...

- Multi-Criteria Analysis
 - Navigation
 - Environment
 - Technical feasibility
 - Costs



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15. Application of JS

JS: ...implementation of measures in an adaptive form (e.g. river bed stabilization by granulometric bed improvement, low water regulation by groynes)...

- All structures design to have impact only during low water periods



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16. Application of JS

JS: ...Optimal use of the potential for river restoration (e.g. river banks restoration) and side channel reconnection...

- Budget for (during monitoring programme) identified additional environmental compensation measures insured



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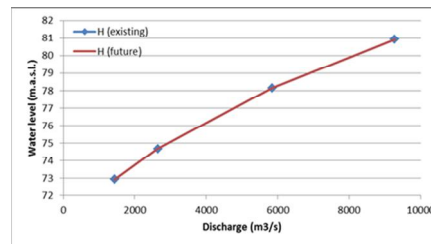
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17. Application of JS

JS: ...Ensuring that flood water levels are not exacerbated and, ideally, are reduced...

- No long-term impact on water levels



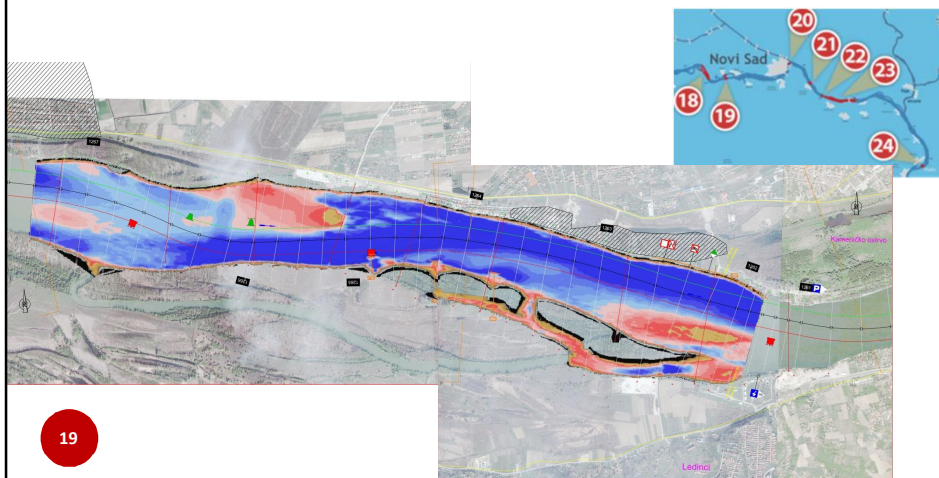
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Current navigation conditions

Critical sector **FUTOG** – available depth, August 2012



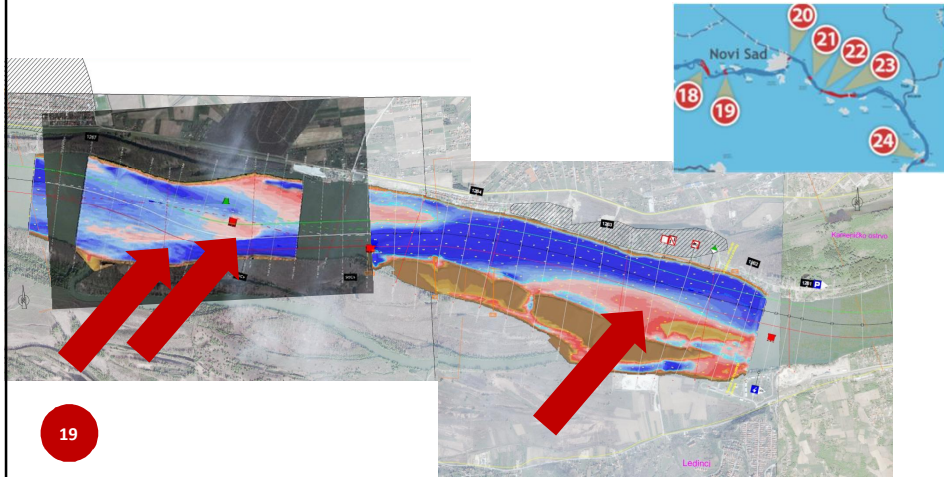
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Current navigation conditions

Critical sector **FUTOG** – available depth, August and December 2013



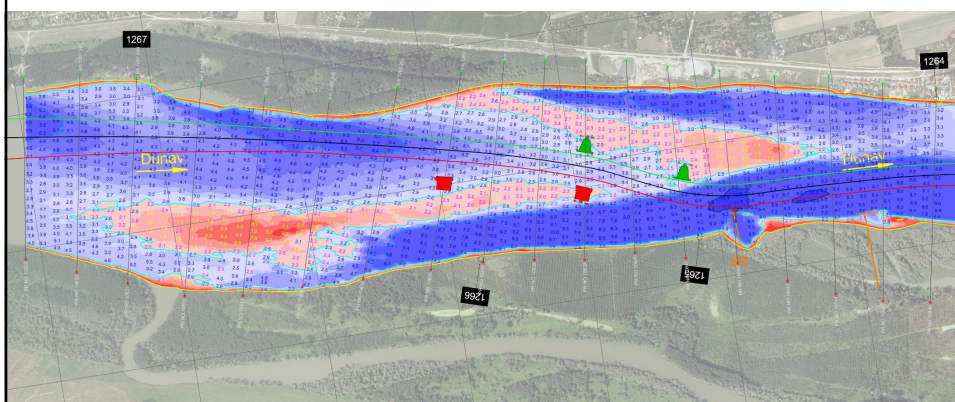
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Current navigation conditions

Critical sector **FUTOG** – available depth, May 2017



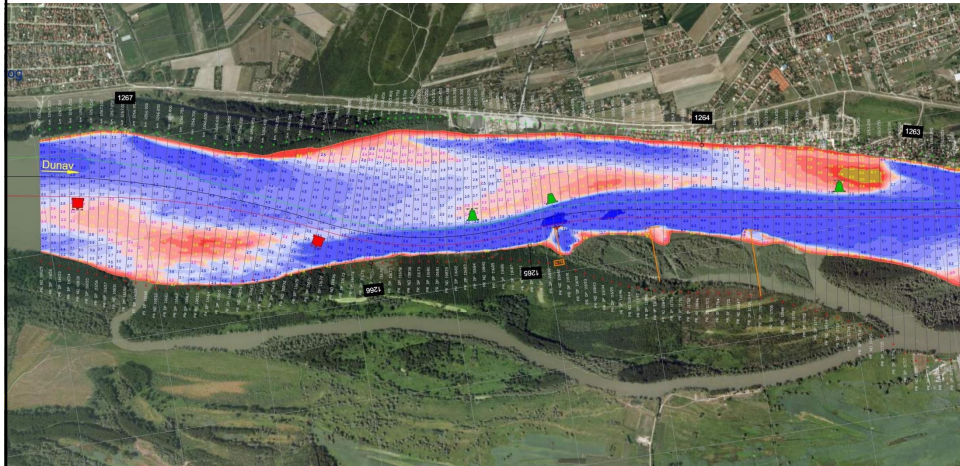
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Current navigation conditions

Critical sector **FUTOG** – available depth, May 2018



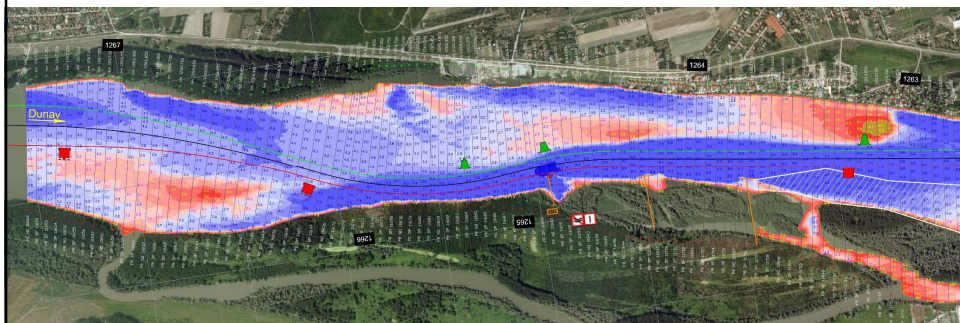
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Current navigation conditions

Critical sector **FUTOG** – available depth, July 2018



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Stakeholders' Forum during Works

Форум заинтересованих страна
у оквиру пројекта „Надзор и еколошки
мониторинг над хидротехничким и
багерским радовима на критичним
секторима на реци Дунав“



Stakeholders' Forum within the project
„Supervision and Environmental
Monitoring of River Training and
Dredging Works on Critical Sectors
on the Danube River“



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Stakeholders' Forum during Works

- Forum Members
- Observers



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Stakeholders' Forum during Works



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Stakeholders' Forum during Works



2019



Stakeholders' Forum during Works



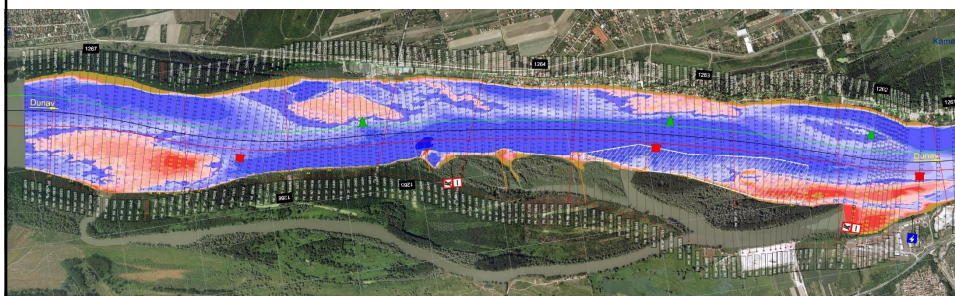
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Current navigation conditions

Critical sector **FUTOG** – available depth, October 2019

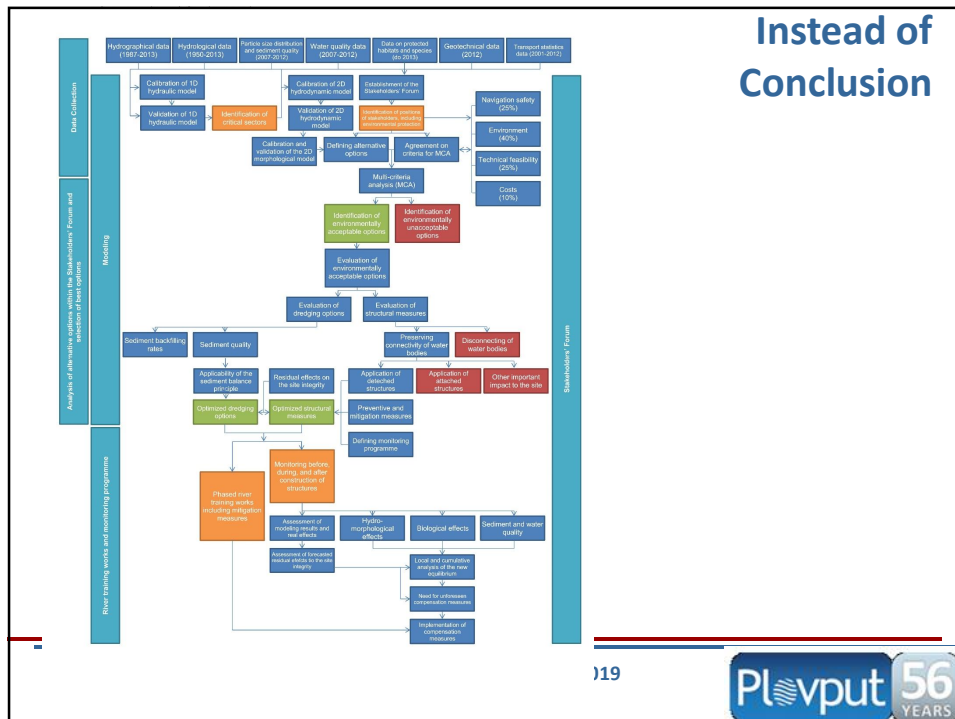


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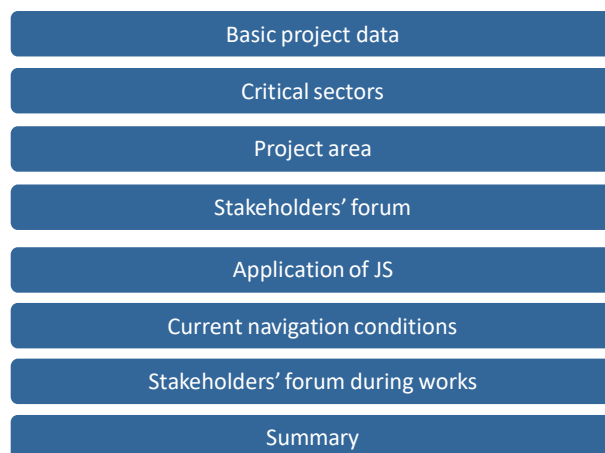
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Instead of Conclusion



Summary



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**Thank you
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Dr Jasna Muskatirovic



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