

DANUBE COMMISSION

Joint Workshop on Waterway Management of EUSDR/PA and the
Danube Commission
March 4, 2025, Budapest

The Directorate for Inland Waterways, Republic of Serbia

- Review of fairway conditions on the Danube in 2024 -

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*Review of fairway conditions on the Danube in 2024 (PLOVPUT)
Danube Commission, Budapest, 04.03.2025.*

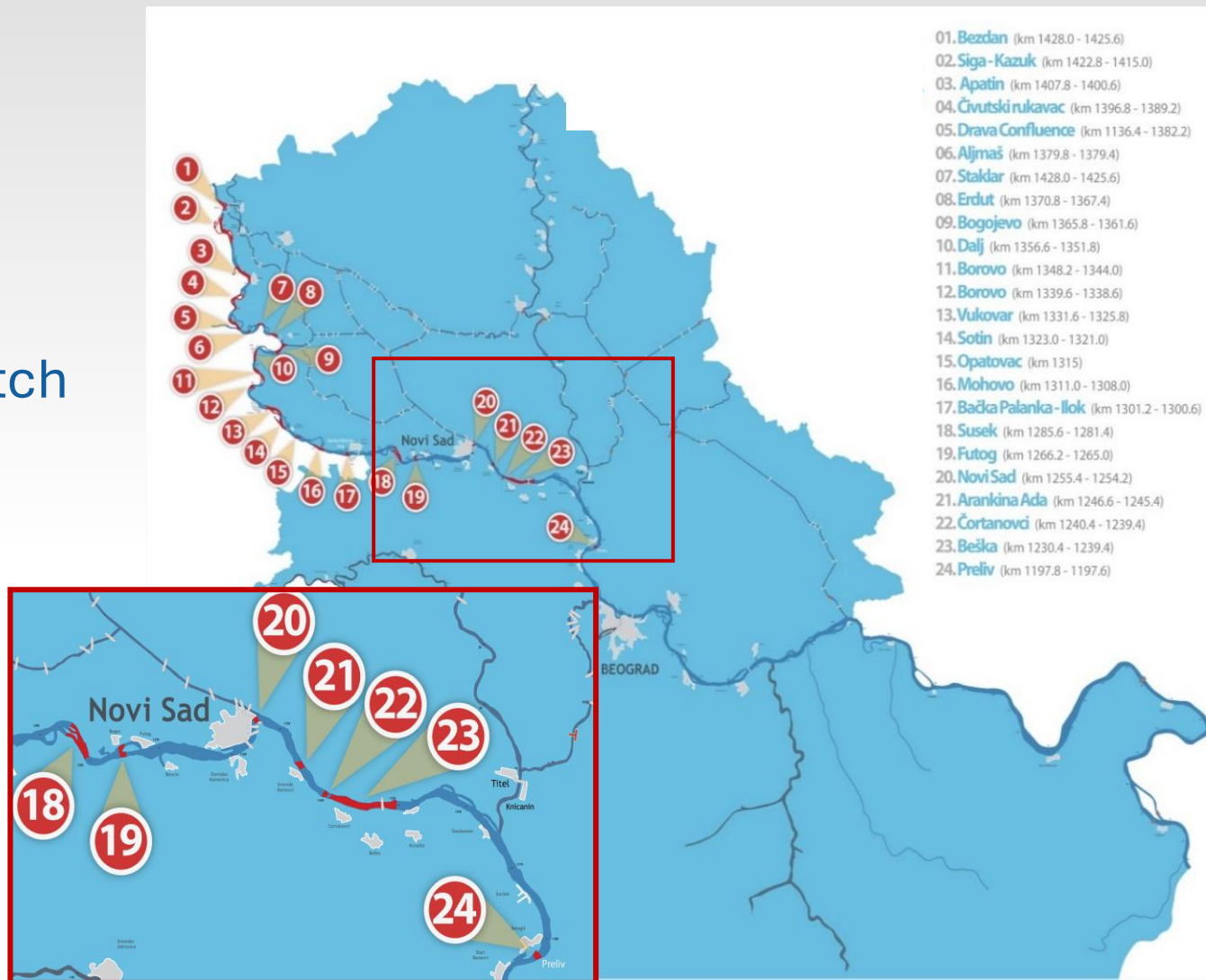


*Republic of Serbia
Ministry of Construction, Transport and Infrastructure
Directorate for Inland Waterways*



Critical sectors (CS) for navigation on the Danube

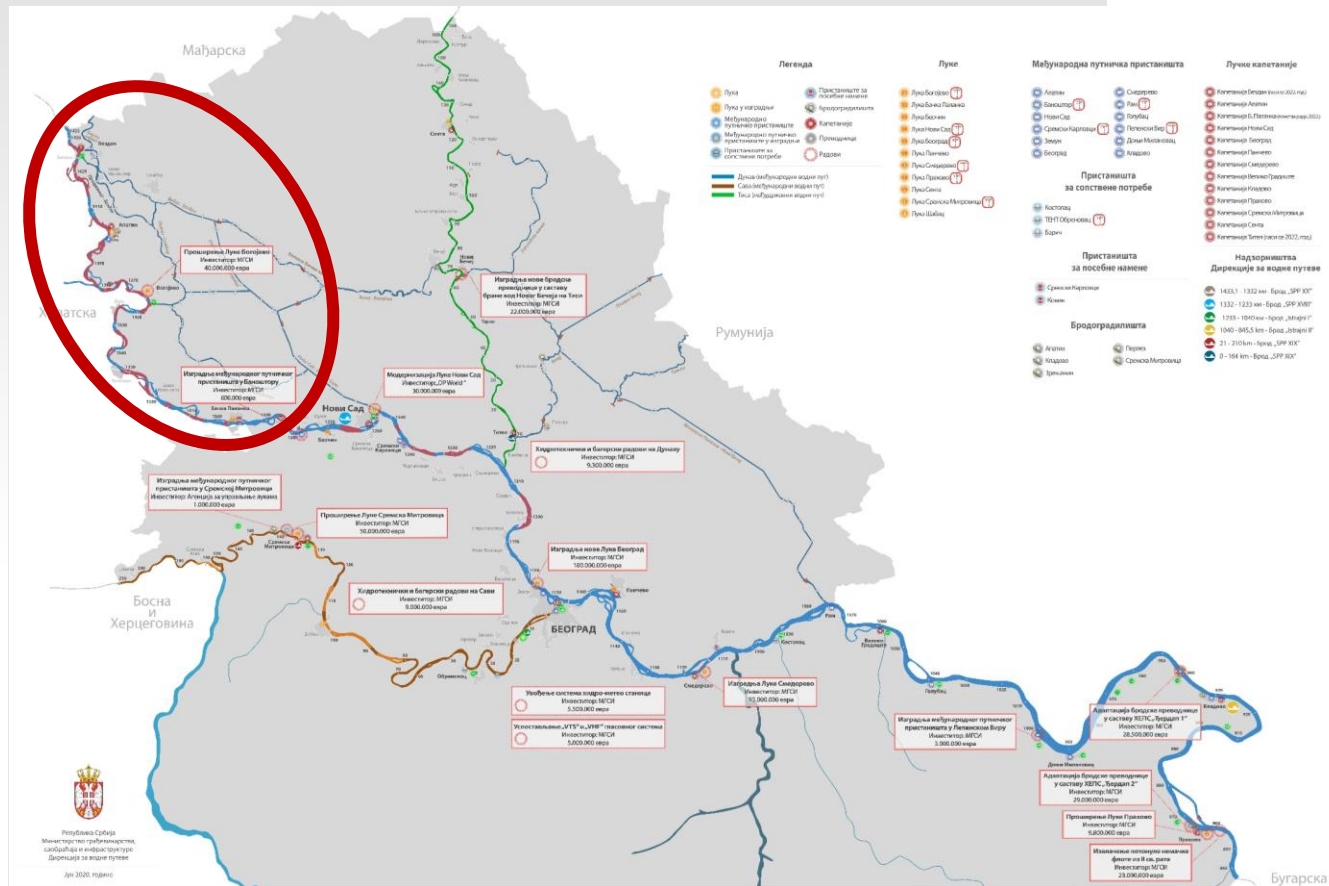
- 24 CS on the Danube
 - 17 SRB-CRO common stretch
 - 7 exclusively SRB



Activities on the common SRB-CRO sector



- Preparing FAIRway 2 works (2020 – ongoing)
 - Joint project of Austria, Croatia and Serbia
 - Co-financed by EU
 - Prepare variants for future infrastructure related measures on the SRB - CRO common Danube section



Co-financed by the European Union
Connecting Europe Facility



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Activities on the common SRB-CRO sector

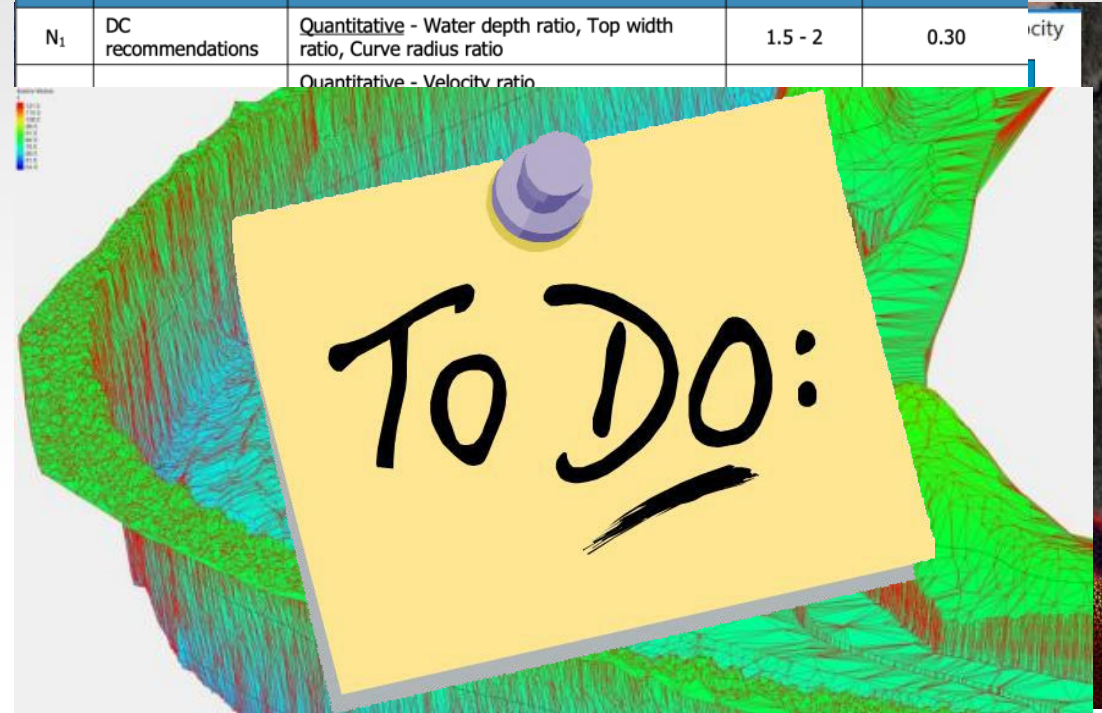


Data Collection, hydraulic and morphological modelling of the Danube River and the Sava River in the Republic of Serbia

• Outputs:

- ✓ • 1D hydraulic model for the entire Serbian and Croatian common Danube stretch + ENR 2023
- ✓ • Redefinition and prioritization of navigational bottlenecks
- ✓ • Definition of parameters for the multi-criteria analysis
- ⚠ • Definition of alternative solutions for prioritized sectors and hydrodynamic and morphological 2D modelling
- ✗ • Development of the integrated study on alternative solutions and definition of next steps for future investments.

Code	Criteria	Indicators	Acceptable Score	Weighting coefficient
N ₁	DC recommendations	Quantitative - Water depth ratio, Top width ratio, Curve radius ratio	1.5 - 2	0.30
		Quantitative - Velocity ratio		
F ₂	Financial aspects	Quantitative - Investment and maintenance costs/avoided users costs as benefit	0.25 - 2	0.10
C	Climate change vulnerability	Qualitative - Aspects of climate change sensitivity and adaptivity	0.25 - 2	0.05



exp. 06/2025

Activities on the SRB sector

- 7 CS
 - 18. Susek
 - 19. Futog
 - 20. Novi Sad
 - 21. Arankina Ada
 - 22. Čortanovci
 - 23. Beška
 - 24. Preliv
- Hydrographic surveys (2024)
 - 1430 cross-sections
 - km 1295+400 – km 1132+200

Form fields and options:

- ID profila (delimiter: ,)
- Reka: Dunav
- Vrsta deonice: Cela duzina reke
- Deonica: Dunav
- Uzvodna KM: 1295.500
- Nizvodna: 1132.000
- Referentne koordinate: UTM 34 (E, N)
- Vrsta profila:
 - 168 Evidencioni (EP)
 - 117 Kontrolni (KP)
 - 302 Plicaci (PL)
 - 258 Zimovnici (ZM)
 - 818 Novi -200m (NO)
 - 612 Dopunski -50m (DP)
 - 4 Vodomeri (VS)
 - 10 Mostovi (MO)
 - 164 Sidrista (SI)
- Buttons: Konv., H, 426

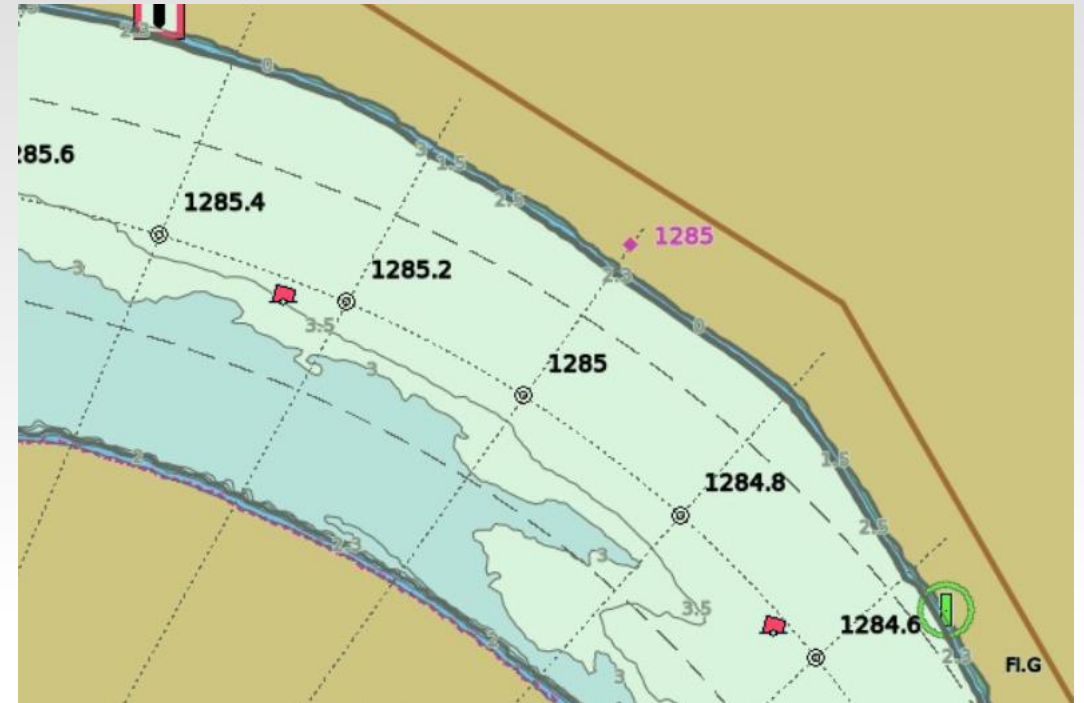
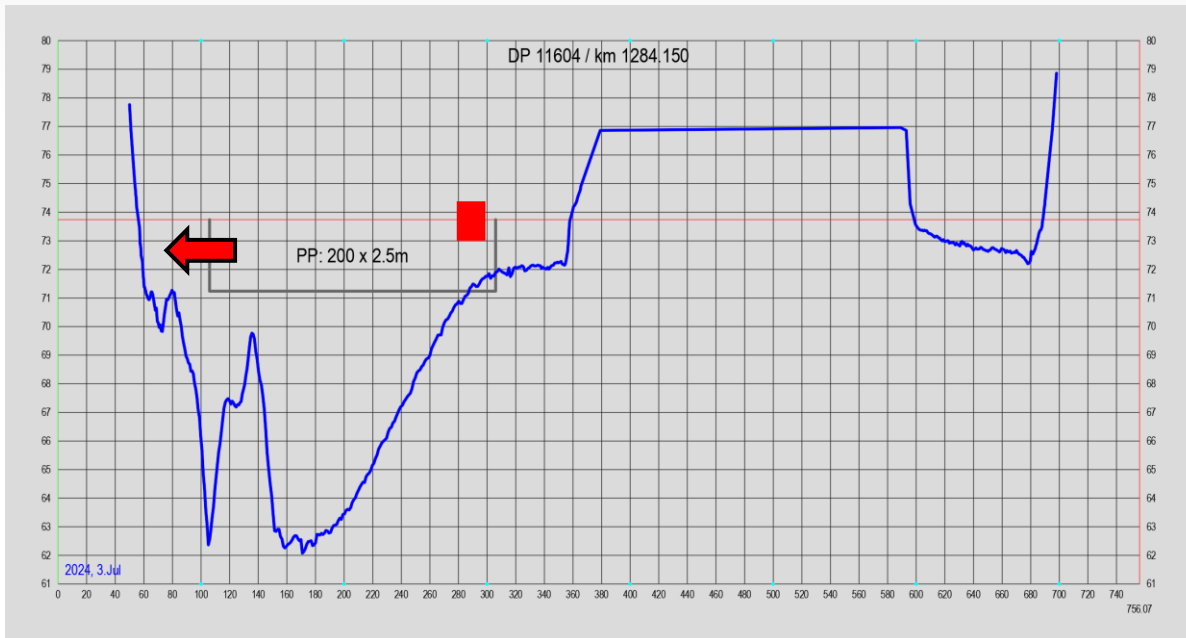
CS Susek (km 1287+000 – km 1281+000)

Gauging Station Bačka Palanka

„0“=73.97mm,ENR=47cm,HNL=578cm

Critical CS: km 1284+150

- min fairway depth: 2m
- available width: 175m (200m)

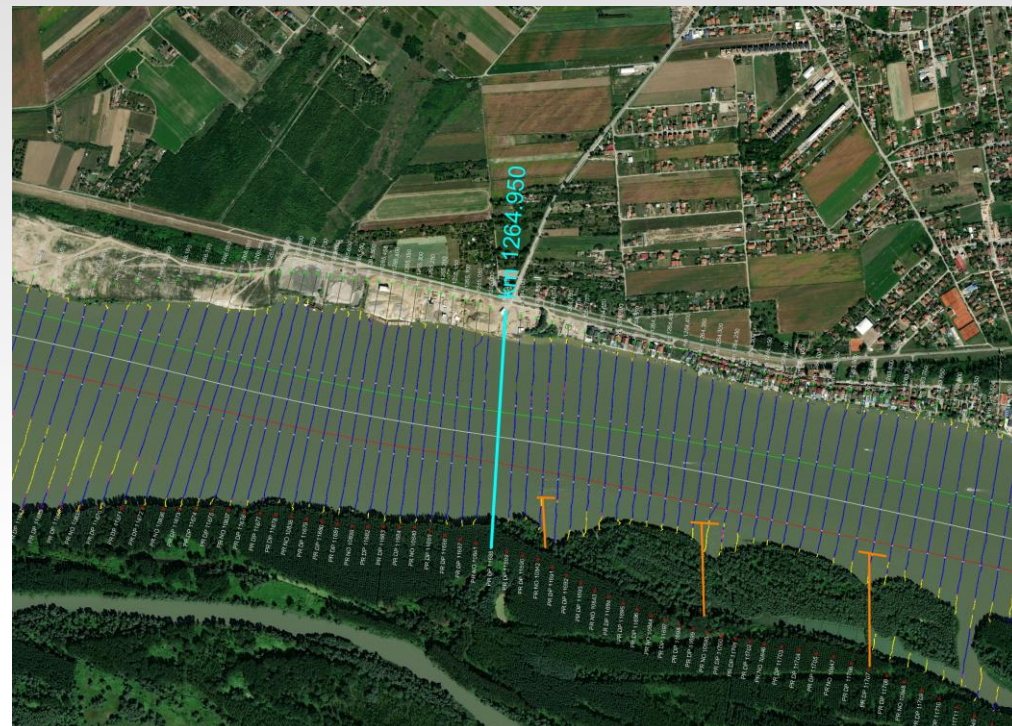
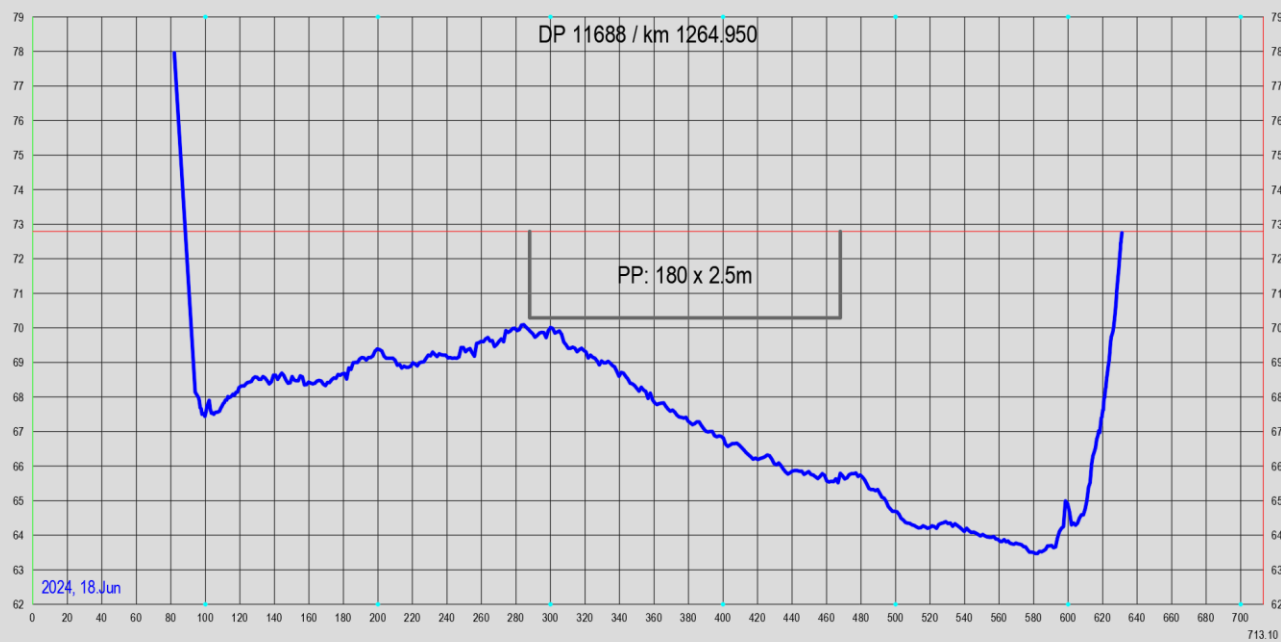


- Required water level for fairway dimensions 2,5/200 on GS Backa Palanka: $H_{req}=109\text{cm}$
- 2024: Number of days on GS Backa Palanka with water level $H < H_{req}$: 15

CS Futog (km 1267+400 – km 1261+600)

Critical CS: km 1264+950

- min fairway depth: 2.7m
- available width: 180m



- Favorable morphological development of the riverbed was achieved by the construction of an detached groin (km 1263+350) and a chevron (km 1262+800)
- 2024: Number of days on GS Novi Sad with water level $H < H_{req}$: 0



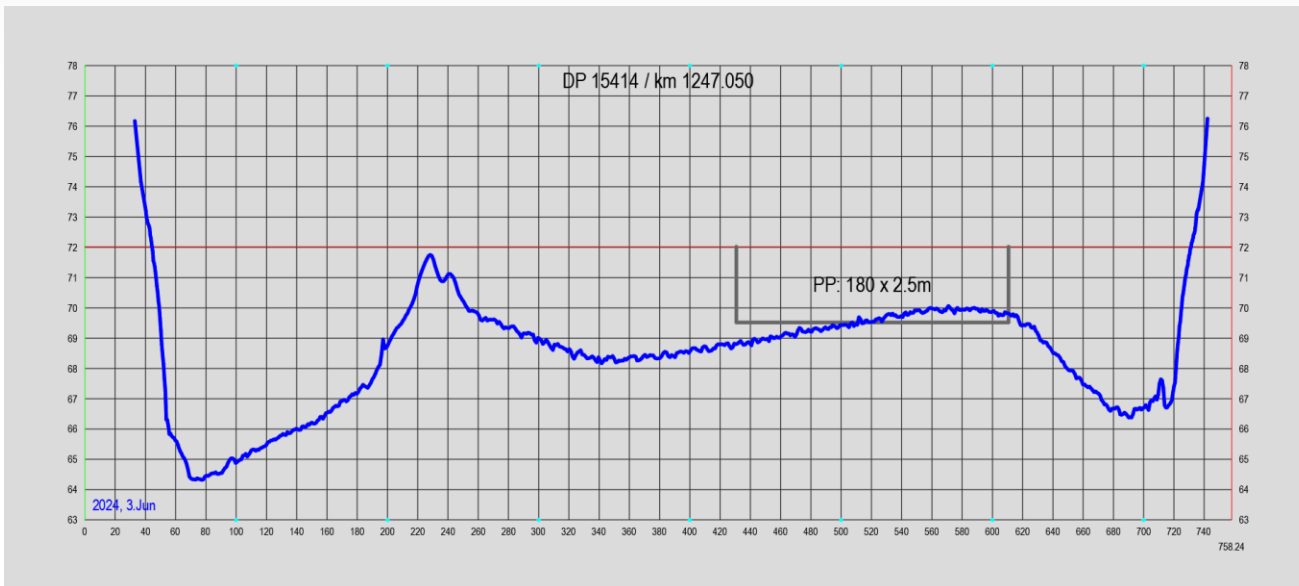
CS Arankina Ada (km 1248+000 – km 1244+800)

Gauging Station Novi Sad

„0“=71.73mm, ENR=57cm, HNL=574cm

Critical CS: km 1247+050

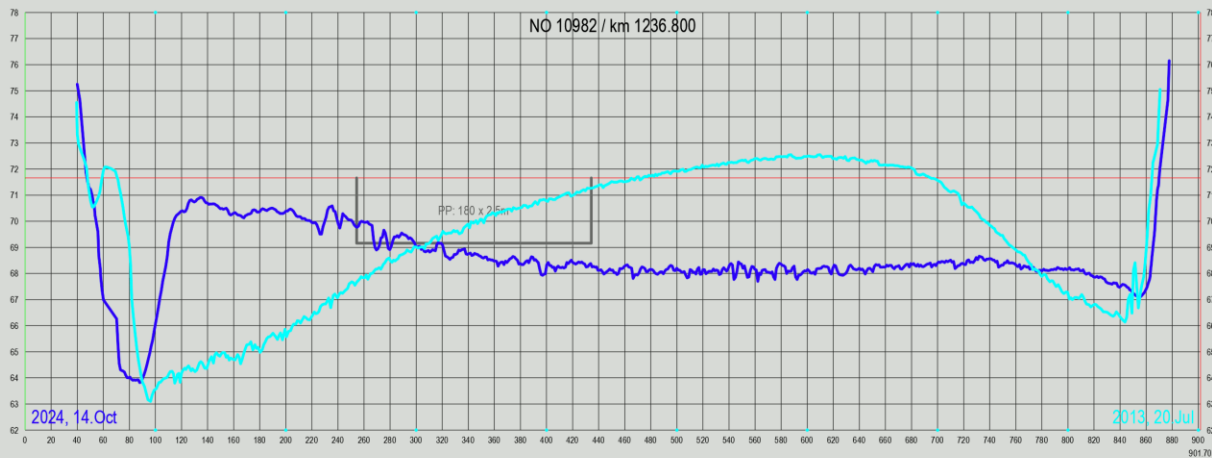
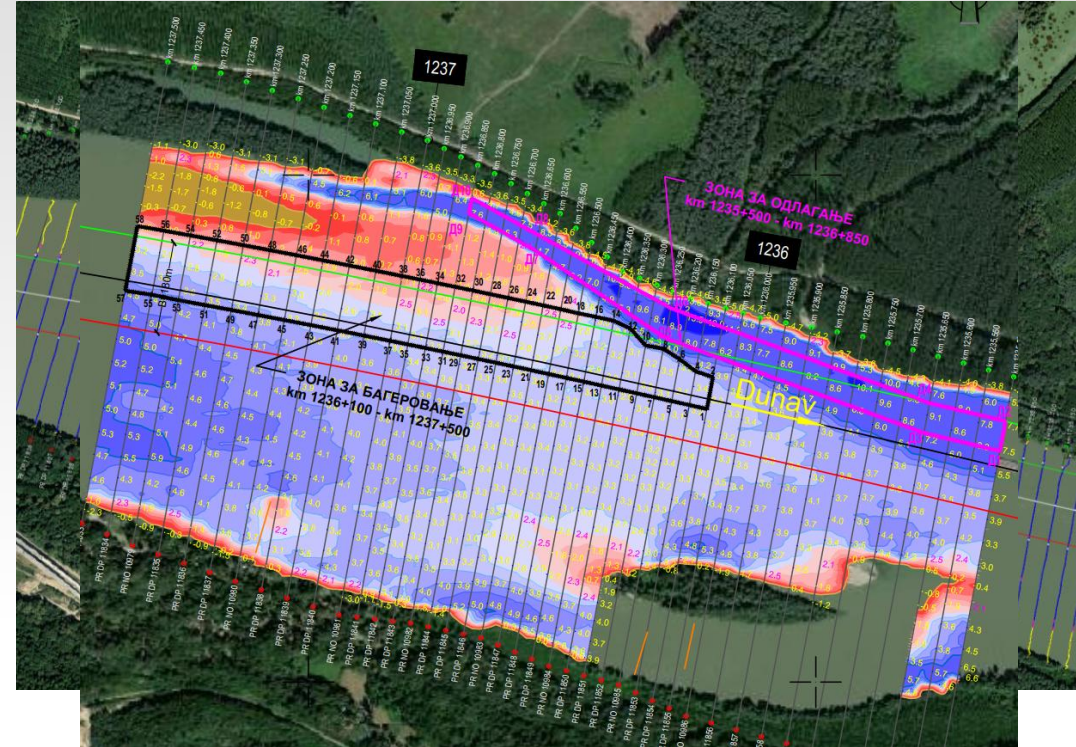
- min fairway depth: 2m
- available width: 180m



- Required water level for fairway dimensions 2,5/180 on GS Novi Sad: $H_{req}=111\text{cm}$
- 2024: Number of days on GS Novi Sad with water level $H < H_{req}$: 46

CS Čortanovci (km 1241+600 – km 1235+000)

- Critical CS: km 1236+500 – km 1237+200
 - Available width: 180m
 - Dynamically changing over time
 - Sandbank shifting from right → left



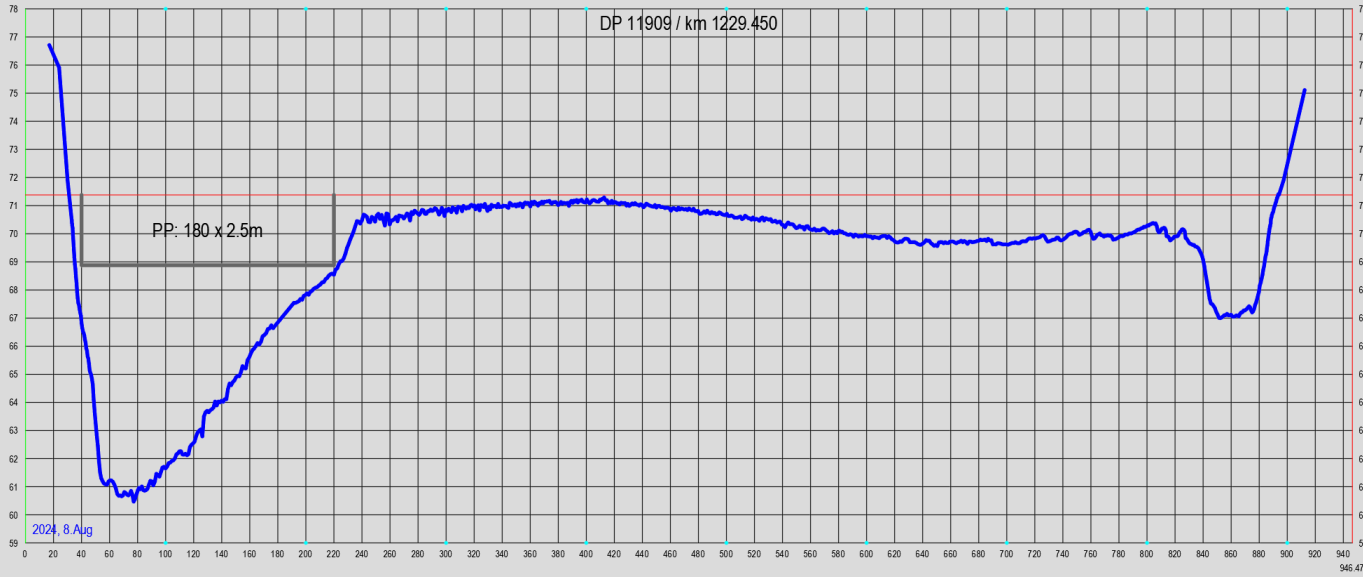
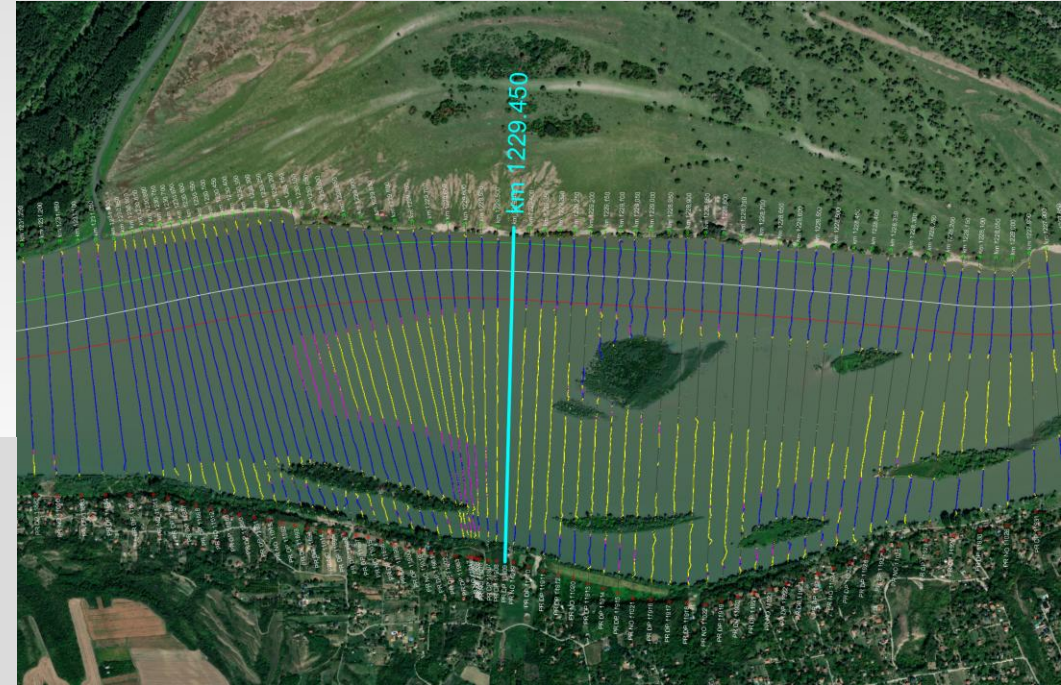
- 2024: Left bank “endangered”
- Apr 2024: ~48.000m³ dredged
- Apr 2025: ~137.000 m³ dredged (ongoing)
- Intense monitoring & surveying

CS Beška (km 1232+000 – km 1226+600)

Gauging Station Slankamen

„0“=69.68mm, ENR=117cm, HNL=623cm

- Critical CS: km 1229+450
 - Min fairway depth: 2.7m
 - Available width: 180m

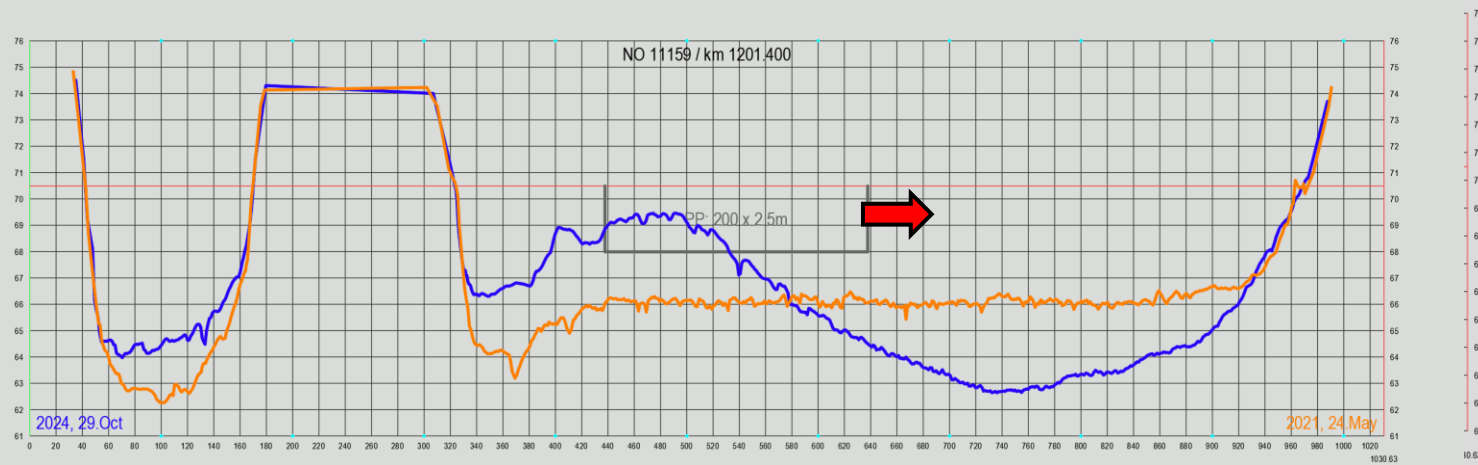
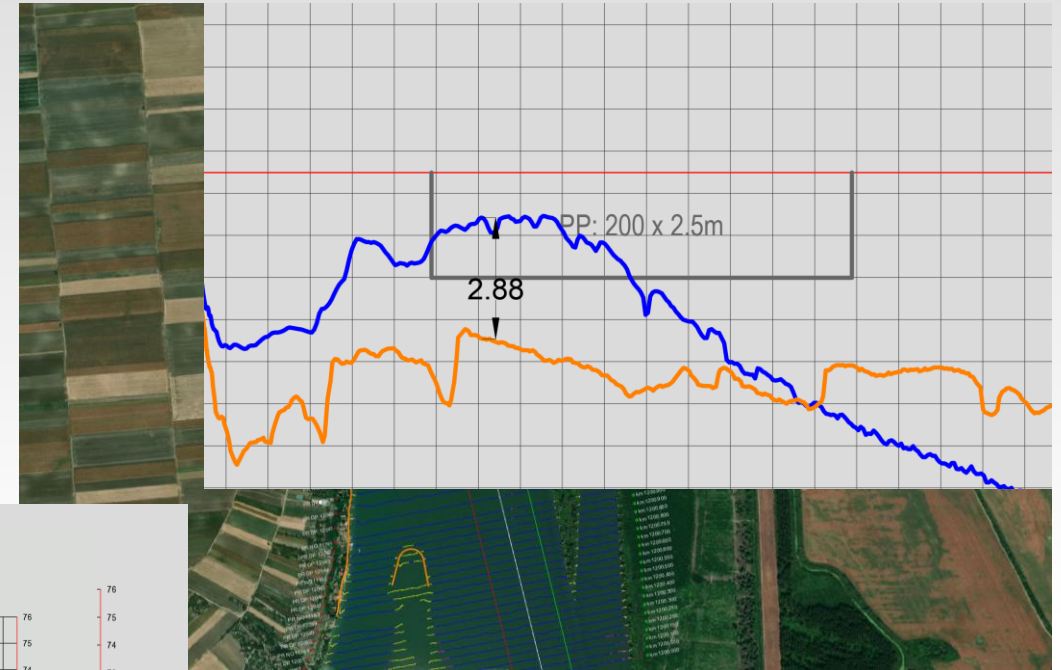


- Required water level for fairway dimensions 2,5/180 on GS Slankamen: $H_{req}=97\text{cm}$
- 2024: Number of days on GS Slankamen with water level $H < H_{req}$: 6



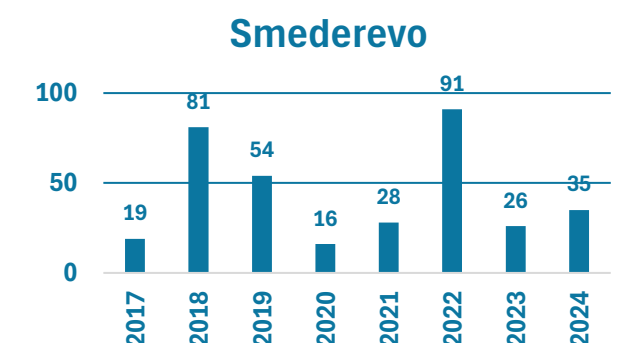
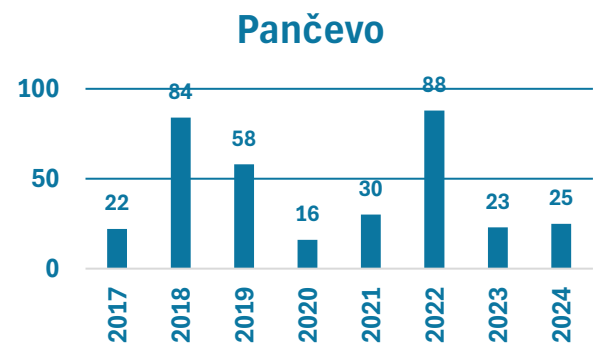
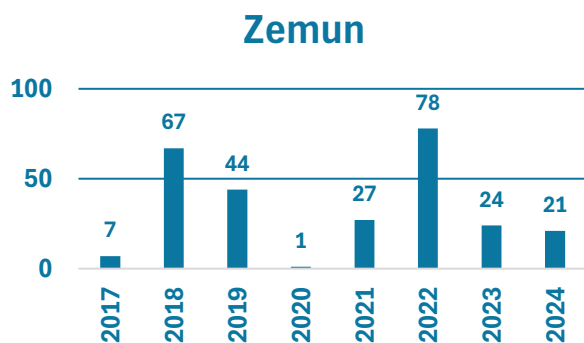
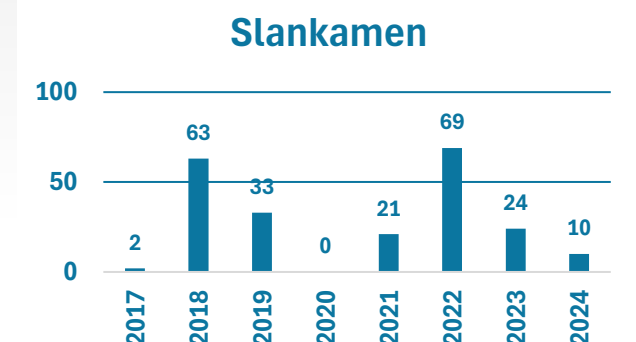
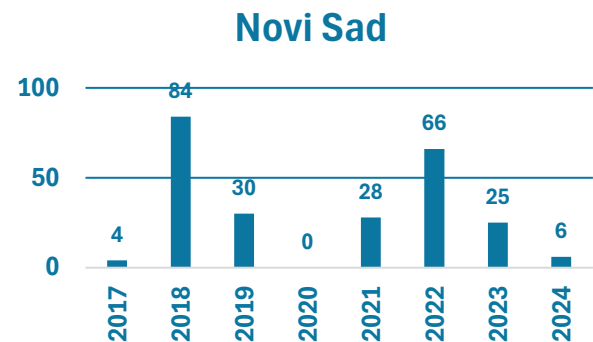
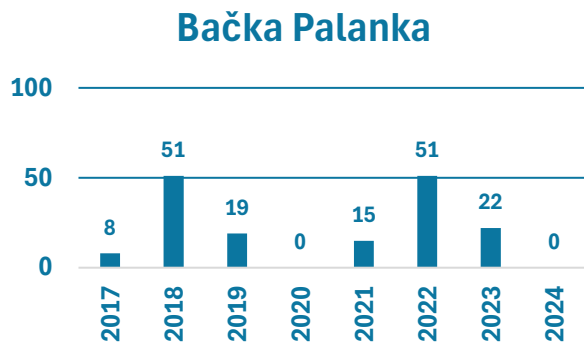
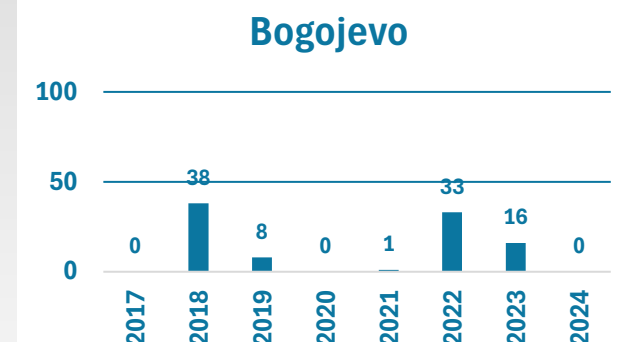
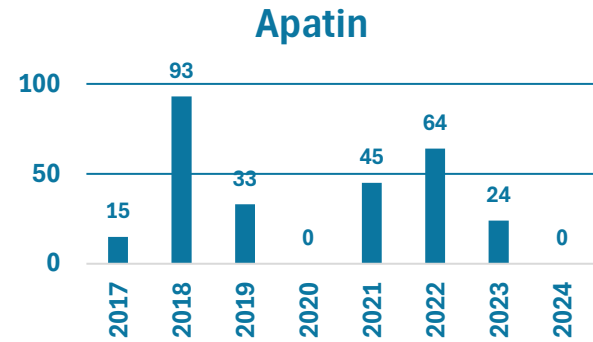
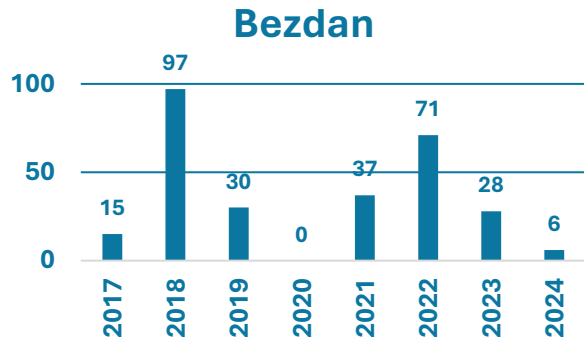
CS Preliv (km 1207+000 – km 1195+000)

- Critical CS: km 1201+400
 - Available width: 200m
 - Significant changes in 2024
 - 2 surveying campaign
 - 19th Aug.
 - 29th Oct.



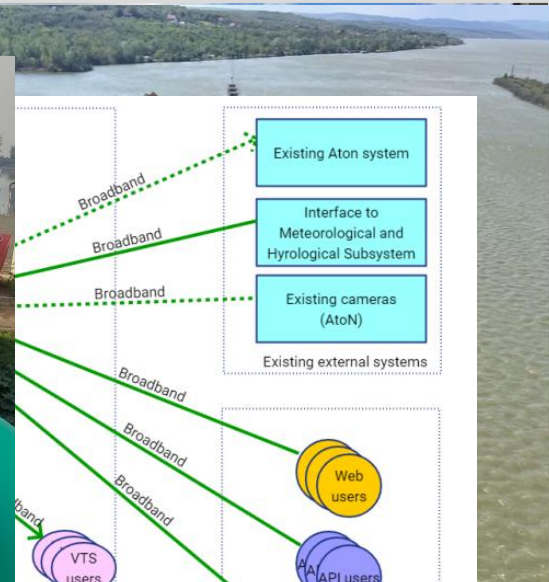
- Sandbank build-up in the middle of the fairway
- Gained ~3m in height in 14 months
- Proper marking
- Intense monitoring & surveying

Hydrological conditions – No. days below LNWL

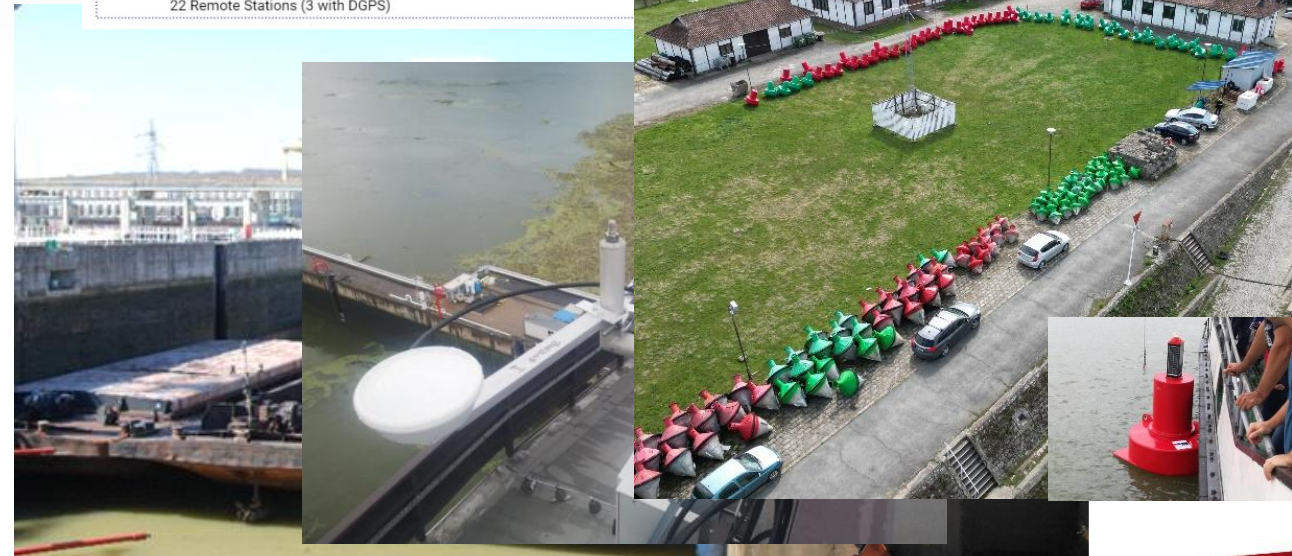


International projects - finished

- ✓ Upgrade of Iron Gate I lock (2021)
- ✓ Upgrade of Iron Gate II lock (July 2024)
- ✓ VTS and Voice VHF Network (Dec. 2023)
- ✓ AtoN's on the Sava River (July 2024)



22 Remote Stations (3 with DGPS)



DANUBE COMMISSION

Expert Meeting on Hydrotechnical Issues

March 5, 2025, Budapest

THANK YOU FOR YOUR KIND ATTENTION



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Ministry of Construction, Transport and Infrastructure - Directorate For Inland Waterways, Plovput

