

WATERWAY TRANSPORT IN THE REPUBLIC OF CROATIA

Duška Kunštek PhD Civ. Eng.
**Head of Directorate of Inland
Navigation**
*Ministry of Sea, Transport and
Infrastructure*

Zagreb, 26.09.2023.

JOINT MEETING OF THE INSPECTION BODIES

CESNI



TOPICS

- INLAND WATERWAYS IN THE REPUBLIC OF CROATIA
- RIVER PORTS IN THE REPUBLIC OF CROATIA
- ON GOING AND PLANED PROJECTS
- MODERNIZATION OF VESSEL FLEET ON INLAND WATERWAYS

INLAND WATERWAYS IN REPUBLIC OF CROATIA



Waterway	Waterway section	Length of section rkm	Waterway class
DANUBE	1295+500 (Ilok) – 1433+100 (Batina)	137,60	Class VI.c



INLAND WATERWAYS IN REPUBLIC OF CROATIA

- 17 CRITICAL SECTORS in total length 76.4 rkm
- On most sections, insufficient waterway width was identified as a bottleneck.
- On four sections bottlenecks is insufficient depth. These are the section of the "Mohovo canal", the section of Sotin, the section in the zone rkm 1397 - "Jewish arm" and the section of Apatin.
- Critical sectors are being rehabilitated and waterway maintenance is being carried out continuously to ensure almost interrupted transport on Danube river.



PROJECTS OF IMPROVEMENT AND MODERNIZATION OF THE DANUBE WATERWAY

- FAIRway Croatia - coordinated implementation of the Master Plan for the rehabilitation and maintenance of the Danube waterway
- Reconstruction of a waterway on the Danube section from 1321 rkm to 1324 rkm near Sotin
- Development of the waterway marking system of the Republic of Croatia
- Preparation of FAIRway 2 works on the Rhine - Danube corridor
- Winter harbor Opatovac



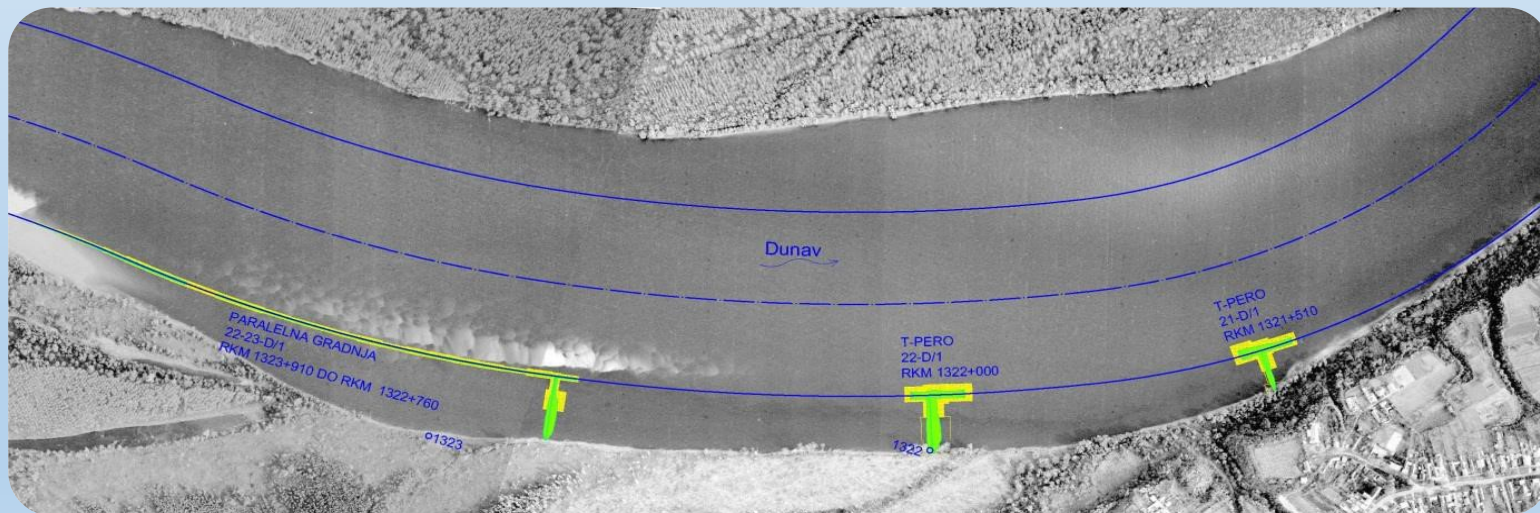
FAIRWAY CROATIA - COORDINATED IMPLEMENTATION OF THE MASTER PLAN FOR REHABILITATION AND MAINTENANCE OF THE DANUBE WATERWAY

- Total project costs: **2.252.000 €**
- Implementation period: **2015. – 2021.**
- A modern vessel for marking waterways was procured, ensuring faster, more efficient and safer performance of marking activities
- A modern vessel for recording and monitoring the condition of waterways was procured, while providing up-to-date and accurate data on the condition of depths on the Danube waterway was ensured
- A network of water level measurement stations has been developed and a forecast of water levels on the Danube River has been developed, which enables shipowners to be precise in planning routes on the Danube River in the Croatian sector
- A waterway management system (WAMOS) has been developed that includes all collected survey data in one central location for the purpose of planning future waterway activities



RECOSTRUCTION OF WATERWAY ON THE DANUBE SECTION FROM 1321 RKM TO 1324 RKM NEAR SOTIN

- Total contracted costs: **3,515,333 €**
- Implementation period: 2020 – 2023 - **finished**
- This project envisages the protection of the coast and the improvement of navigation conditions through the construction of waterway regulatory buildings (navigation safety facilities), one long longitudinal water structure and two T-structures
- Aim is to **establish a higher level of navigation safety** throughout the year and to improve navigability conditions on this saction of Danube River.



RECONSTRUCTION OF WATERWAY ON THE DANUBE SECTION FROM 1321 RKM TO 1324 RKM NEAR SOTIN

Construction works are finished!



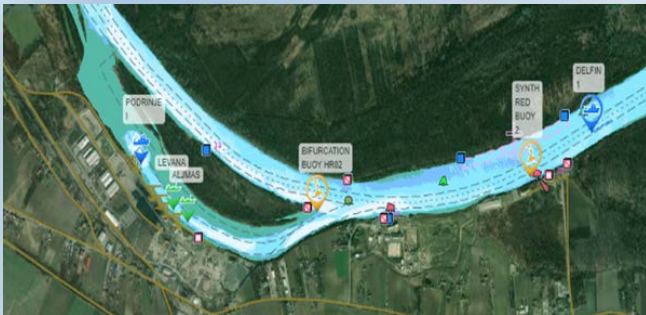
DEVELOPMENT OF THE WATERWAY MARKING SYSTEM OF THE REPUBLIC OF CROATIA

- Total project costs: **3.626.024 €**
- Implementation period: 2020. – 2023.
- It consists:
 - Procurement of **two new vessels** for marking waterways,
 - Procurement of **buoys with AIS AtoNs**
 - Development of RIS system by **upgrading functionality for monitoring and managing waterway markings** (position, light, depth, system status, sending alerts to users, etc.)



DEVELOPMENT OF THE WATERWAY MARKING SYSTEM OF THE REPUBLIC OF CROATIA

Real-time navigation status



Position of floating markers and current depths in real time



Upgrading of RIS system



Higher safety and efficiency on the waterway



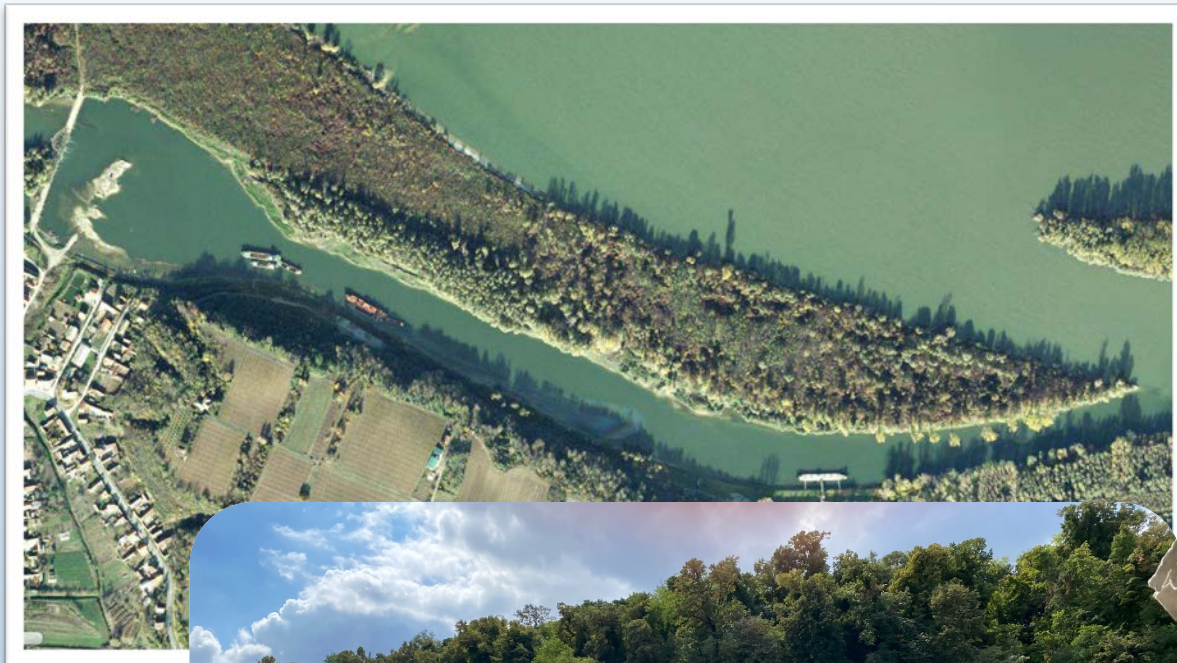
PREPARATION OF FAIRWAY 2 WORKS ON THE RHINE - DANUBE CORRIDOR

- Total project costs: **1.138.800 €**
- Implementation period: 2020. – 2024.
- The purpose of the project is to collect:
 - **Relevant parameters for waterway maintenance** and
 - Biodiversity on critical sections of the Danube in order to **provide a basis for a joint strategy and coordinated activities of Croatia and Serbia**, in order to maintain the Danube as an important international waterway
- The project continues the development of the **waterway management system (WAMOS)** which will contribute to more efficient planning of construction, technical improvement and traffic-technological modernization of waterways.



WINTER HARBOR OPATOVAC

- Total project costs:
4.226.000 €
- Implementation period:
2020. – 2023.
- Construction works in
progress...
- First inland winter harbor
in Republic of Croatia on
1314 rkm of the river
Danube
- It enables the removal of
ships during the
occurrence of ice on
waterways or some other
emergency situation that
results in the interruption
of navigation from
security reasons.



PORT OF VUKOVAR

- Part of the **core TEN-T network**, located at 1335 rkm on the right bank of the Danube
- There are 7 terminals in the Port area
- Possibility of accepting cereals, bulk, liquid, pallet and general cargo
- Access by rail, road and river
- Possibility of manipulating high, heavy and large loads
- The length of the port vertical quay is 55 m with a concrete wall, and vertical shore of 205 m with „dolphins”
- The port has 13,000 m² of storage capacity for dry bulk and general cargo, and 10,000 m³ of storage space for liquid cargo



INLAND WATERWAYS IN REPUBLIC OF CROATIA – RIVER DRAVA



Waterway	Waterway section	Length of section rkm	Waterway class
DRAVA	0+000 (Danube estuary) – 14+000 (Osijek port of Nemetin)	14,00	IV. class
	14+000 (Osijek port of Nemetin) – 55+450 (Belišće)	41,45	III. class



PORT OF OSIJEK



- It is part of a comprehensive TEN-T network, located at rkm 12 + 265 to rkm 16 + 428 on the right bank of the Drava River
- It has the possibility of accepting bulk and general cargo
- The port has two warehouses, with a total storage capacity of 5000 m² for general and bulk cargo
- Access by rail, road, river is available
- The total length of the vertical quay is 330 m



INLAND WATERWAYS IN REPUBLIC OF CROATIA – RIVER SAVA



Waterway	Waterway section	Length of section rkm	Waterway class
SAVA	210+800 (Račinovci) – 313+700 (Sl. Šamac)	102,90	IV. class
	313+700 (Sl. Šamac)– 338+200 (Oprisavci)	24,50	III. class
	338+200 (Oprisavci)– 371+200 (Sl. Brod-grad)	33,00	IV. class
	371+200 (Sl. Brod-grad)– 594+000 (Sisak-Galdovo)	222,80	III. class



PORT OF SLAVONSKI BROD

- It is part of the core TEN-T network, located 364 + 000 - 362 + 200 rkm on the left bank of the Sava River
- It has the possibility of accepting general and special cargoes
- Access by rail, road and river
- The existing vertical quay is 349 m long with manipulative plateaus with a total area of 5,810 m²
- There are four open warehouses with a total area of 22,500 m² for general, bulk and container cargo connected by industrial railway track
- Because of its position port has great potential for development into an intermodal logistics center



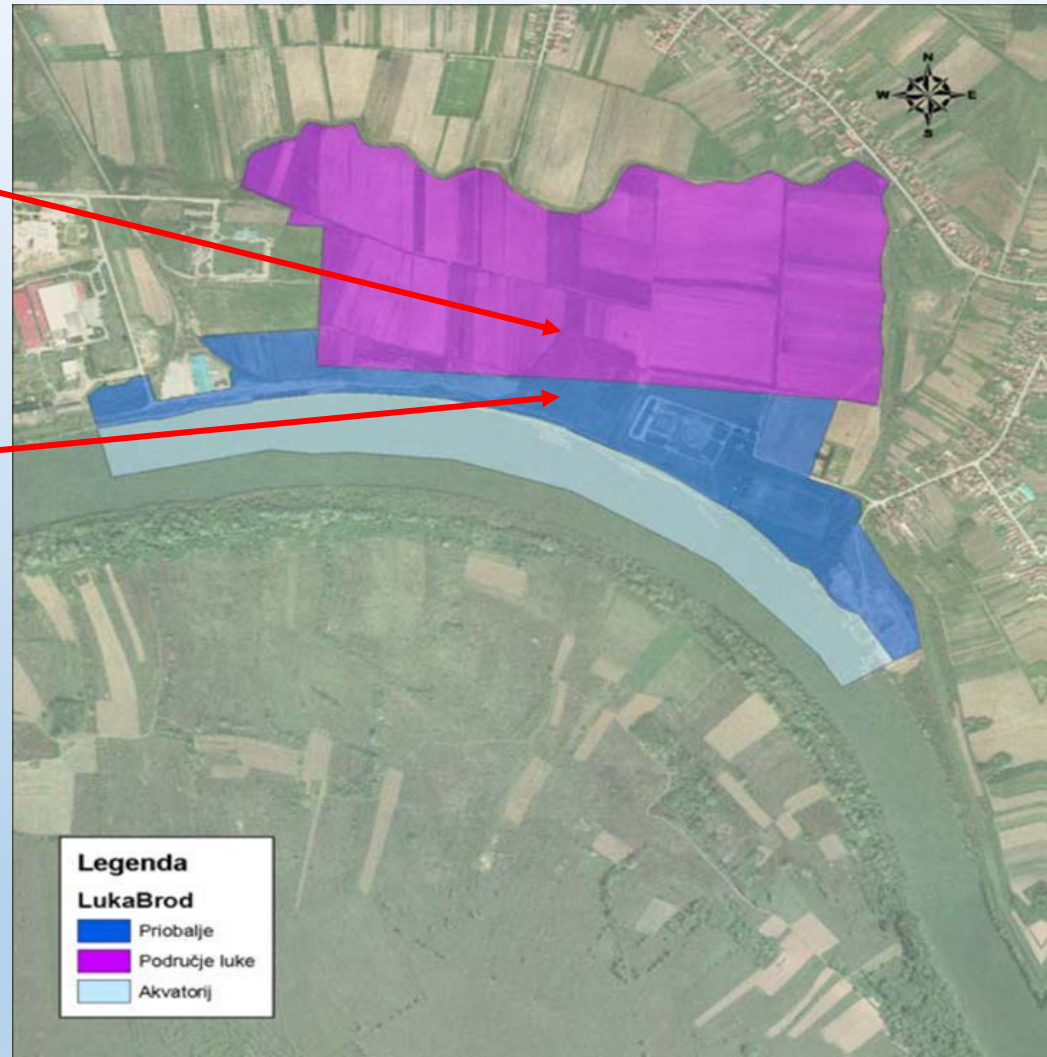
PORT OF SLAVONSKI BROD

Economic zone

- roads for heavy cargo,
- rainwater drainage,
- electricity,
- telecommunications network and public lighting

Operational zone

- 3 vessel berths with a total length of 349 m with manipulative plateaus and total area of 5,810 m²
- two container terminals of 5,500 m² and 1,400 m²
- industrial railway track



PORT OF SLAVONSKI BROD – OPERATIONAL ZONE

- Construction of vertical quay No. 4 berth in length of 107 m and No. 5 in length of 122 m with handling and logistic area behind quays of 1.400 m² size
- Container terminal, 1.400 m²
- Port weigh house for trucks and other vehicles
- Finished in 2021



PORT OF SLAVONSKI BROD – OPERATIONAL ZONE

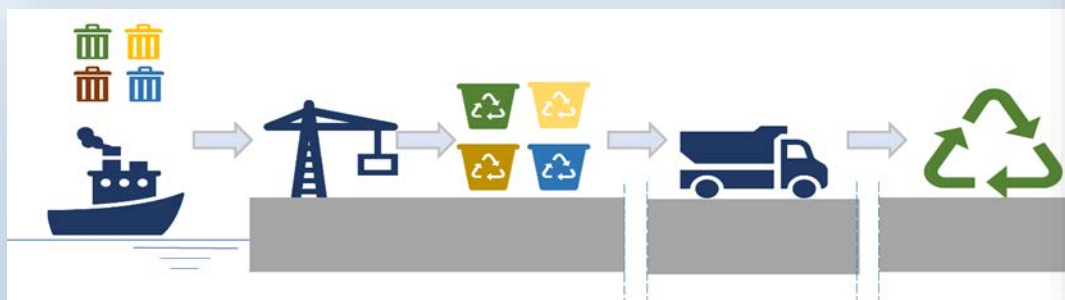


PORT OF SLAVONSKI BROD – BUILDING RETROSPECTIVE



REPUBLIKA HRVATSKA
Ministarstvo mora, prometa
i infrastrukture

ONGOING PROJECT FOR SHIP WASTE COLLECTION



- Equipping ports with waste management infrastructure
- Three municipal ports for receiving waste from vessels, one for each waterway - Sava in the port of Slavonski Brod , The Drava in the port of Osijek and the Danube in the port of Vukovar
- Estimated cost approx. In total 1,9 ml € (635.000 € per port)
- Implementation period 6/2026
- Grant agreement was signed in October 2021 for the preparation of project documentation for the dangerous goods terminal in the port of Slavonski Brod
- Within dangerous goods terminal will be established waste reception facility



INLAND PASSENGER PORTS

- The Republic of Croatia has an increasing passenger traffic on inland waterways, and a significant number of landing cruises in passenger ports
- The main motives that attract visitors to the rivers include:
 - the natural beauty of the river landscape
 - cultural heritage along rivers
 - gastronomy and in general the traditional culture of the area along the rivers
- The passenger ports are located in **Batina, Aljmaš, Vukovar, Ilok and Osijek**
- From 2021. new projects for passenger ports are being prepared that will provide a higher level of service for port users in the Republic of Croatia

In the passenger ports on Croatian rivers in 2019, more than 600 river cruisers docked. But already now, the indicators of 2023 are extremely promising, where this year is expected to be almost as successful as the record-breaking 2019.



Transfer from load transport to touristic transport...

- increasing the number of vessels in urban areas
- adjustment of urban embankments to ports for touristic vessels
- adjustments of river stretches to port locations due to docking, mooring and maneuvering
- increase of small ports for small and medium vessels

The destination's revenue from river cruises is €5 million on average per year. If, on the other hand, the total investment in the construction of the infrastructure of passenger piers on the Danube, Drava and Sava rivers (planned pier in Slavonski Brod included) of about €10 million is considered, it can be concluded that all investments are justified.



VUKOVAR



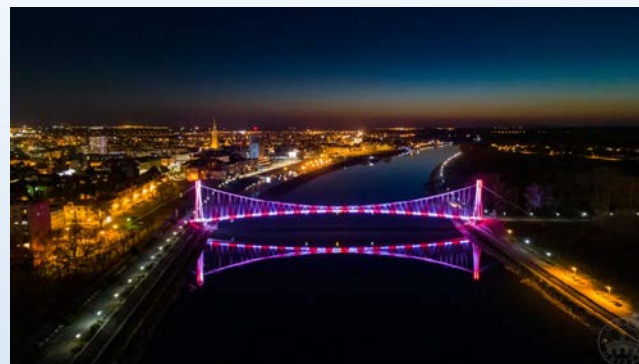
ALJMAŠ, BATINA



ILOK



OSIJEK



SLAVONSKI BROD



SISAK



LEGAL FRAMEWORK FOR IWT

- **Law on Navigation and Inland Ports Official Gazette 144/21 in force since 04.01.2022.**
- The law is in compliance with norms issued by the EU and will ensure a better regulatory frame for inland navigation in Croatia

GOVERNMENTAL SUPPORT AND FINANCING

- IWT is back on the political agenda
- More support and interest is visible through understanding and funding
- **In the next 5 years, Croatia plans to invest 83.2 million euros of national funds in port infrastructure**



POOR COORDINATION BETWEEN BUSINESS SECTOR AND GOVERNMENTAL AUTHORITIES

- Government with aid program encourage shipowners for further investment and provide support for the development of shipping
- **The planned investments in a form of aids for the period until 2026. are provided in deminimis and GBER programs (GREENING OF FLEET)**

VESSEL FLEET MODERNIZATION IN INLAND NAVIGATION

- The planned investments for the period of 2024. - 2026. are provided in the amount of **12 mil EUR**

2023 process of development of Programs of State Aids for period 2024-2026 for investments as follow:

- enabling undertakings to go beyond Union standards for environmental protection or to increase the level of environmental protection in the absence of Union standards
- early adaptation to future Union standards
- energy efficiency measures
- improving professional skills - internship for the apprentice
- innovations



THANK YOU FOR YOUR ATTENTION!

Duška Kunštek, PhD Civ.Eng.
Tel: 00385 1 61 69 134
Mob: +38598359468
Email: duska.kunstek@mmpi.hr

