



# REPUBLIC OF CROATIA

## INLAND WATERWAY SECTION



Bucharest, 28 October 2011



## Croatian inland waterway network



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Length of the joint sector of  
the Danube River is 137.5 km





# Port of Vukovar



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## Location of Port of Vukovar in wider region

- **The only Croatian inland port on Danube river**
- **Guaranteed navigability and accessibility 365 days a year**
- **Connected to road corridor VII. and near road corridor V.c**



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## Present port operators

- Luka Vukovar – transshipment and storage of general and bulk cargo
- Nautica Vukovar – transshipment and storage of liquid cargo, bunkering station
- Vupik— transshipment and storage of grain
- Terminal Dunav - transshipment and storage of liquid cargo



## Development plans:

- Port of Vukovar Master plan finished in 2004
- Feasibility study draft finished in 2006
- New Port East project
  - IPA programme 2007 – 2013



## Construction of Vukovar New Port – East

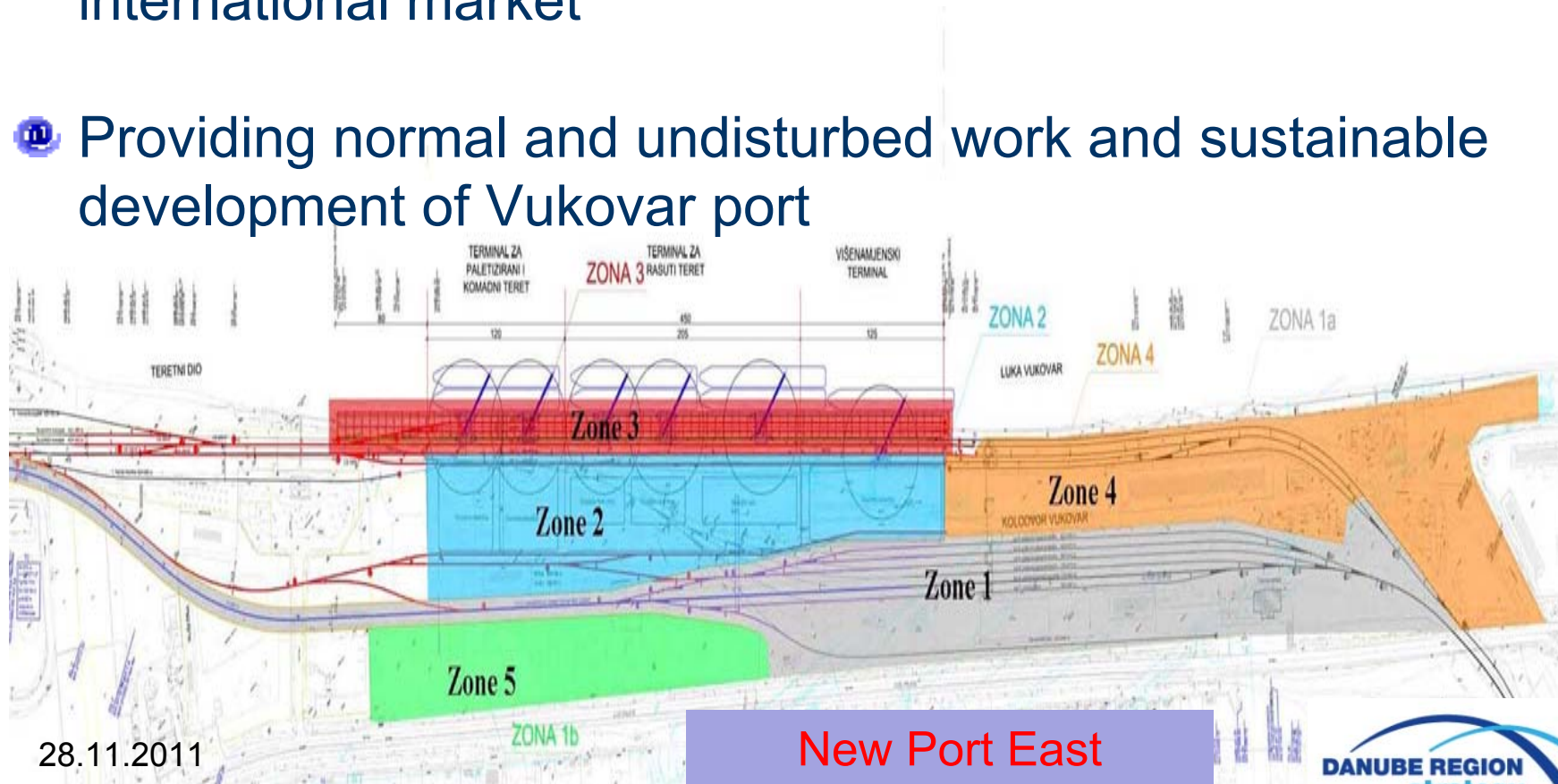
- Bulk Cargo Terminal
- General Cargo Terminal
- Multipurpose Terminal
- Vessel waste disposal station
- Administrative centre
- **Estimated worth – 22 mil. EUR**

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## Project goals

- Accomplishing high quality of port services and achieving competitiveness of Vukovar port in the international market
- Providing normal and undisturbed work and sustainable development of Vukovar port



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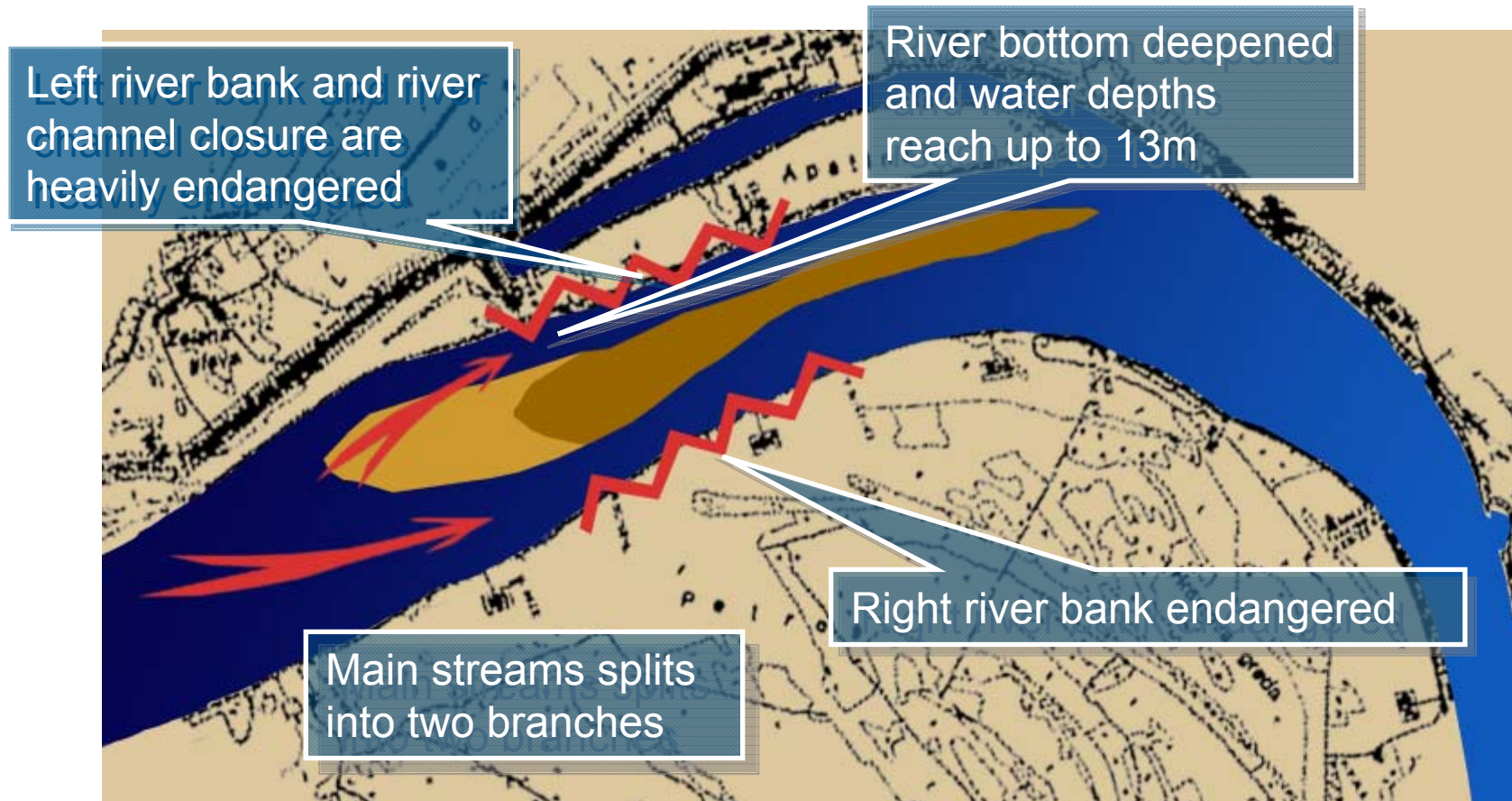


## SECTORS WITH NAVIGATION PROBLEMS

- Sector Apatin
- Sector Sotin – bank erosion problems, bifurcation
- Sector Mohovo – problems with variable depths
- confluence of Drava – sedimentation of the mouth of Drava
- there are other potentially problematic sectors for navigation due to bank erosion (Šarengrad, Vukovar, dalj) or problems with sediment deposition



Apatin section is one of **the most critical** sections for navigation  
It creates problems for both sides, Croatian and Serbian



## APATIN Section



On the Croatian side of this part of the Danube River, there is a nature park Kopacki Rit, a unique reserve of plants and birds



## APATIN Section



On the Serbian side of this part of the Danube River, there is a town of Apatin, with it's shipyard, port and marine



## APATIN Section



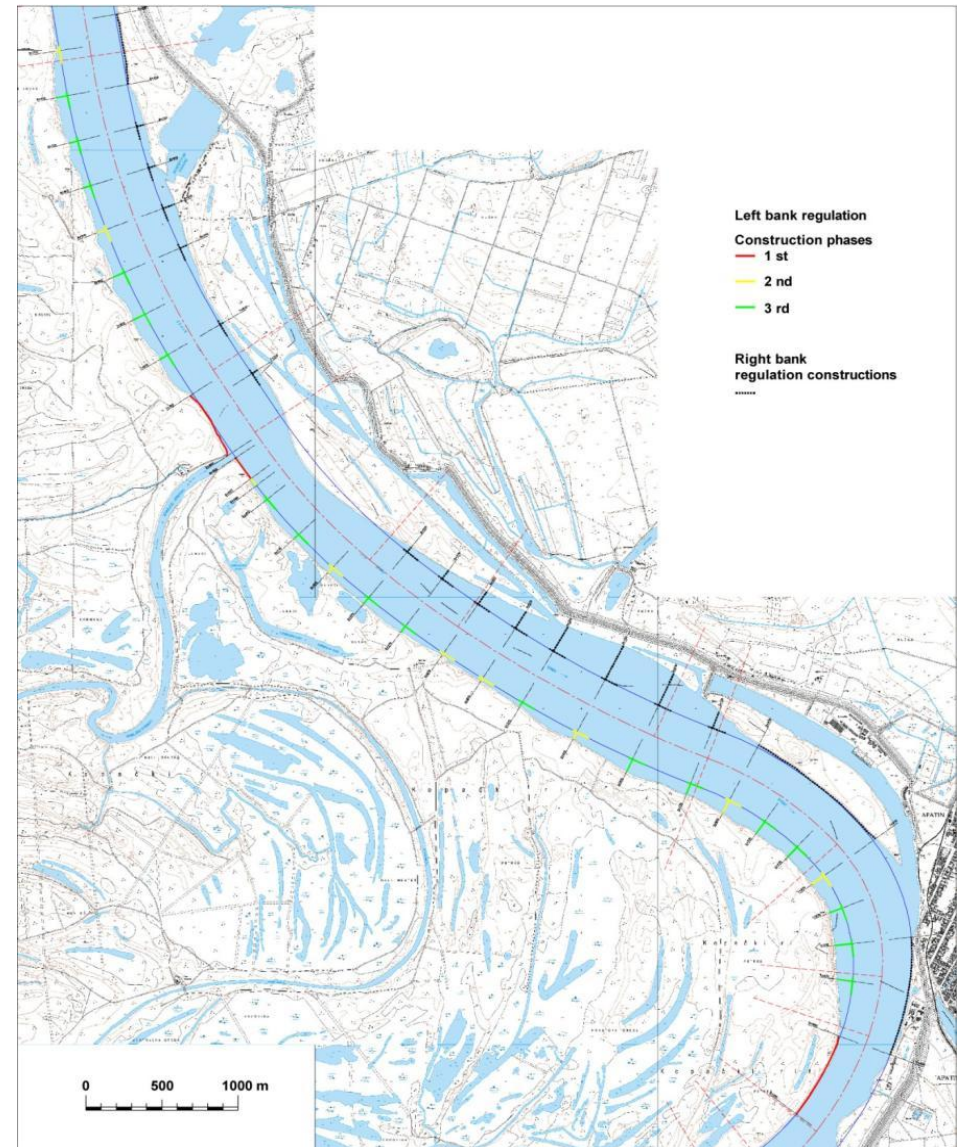
**Solution:**  
Large scale river training works with  
joined forces from both countries

**APATIN Section**



# REGULATION SOLUTION

- REGULATION SOLUTION WAS DEFINED INTEGRALLY FOR THE WHOLE REACH
- OBJECTS WERE DEFINED FOR BOTH BANKS
- PHASES OF WORKS AND BoQs WERE MADE FOR RIGHT BANK
- INVESTMENT VALUE ESTIMATE FOR THE RIGHT BANK - AROUND 20.000.000,00 € FOR 10 KM





# Rehabilitation and Improvement of the Sava River Waterway

- Upgrading the Sava basin in to the international navigation class IV

Project beneficiaries:

- Ministry of the Sea, Transport and Infrastructure
- Agency for Inland Waterway
- Shipping companies

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- Reliability and safety of navigation on the river Sava are the crucial factor which influences on the attractiveness of the port.
- The lack of these activities and investments would stoppage of navigation on the river Sava and its usage in terms of transport services. Such trends would be in contrast with a general transport policy of the European Union, and in parallel Croatia which acts as an initiator of the Sava River Basin Commission and a signatory of the AGN Agreement what proves its commitments for the preservation of the Sava basin as an important transport resource in the region.
- The development of the waterway on the river Sava contributes to the enhanced traffic integration in the region between the neighbouring countries and offers a good chance for the rehabilitation.



## Activities

- Construction of groynes to concentrate the river flow
- Construction of bank protections to avoid erosion caused by new groynes and to protect eroding banks
- Construction of sills on the bottom of the river to increase the water level
- Rehabilitation of existing groynes and bank protections
- Dredging to increase the water depth.

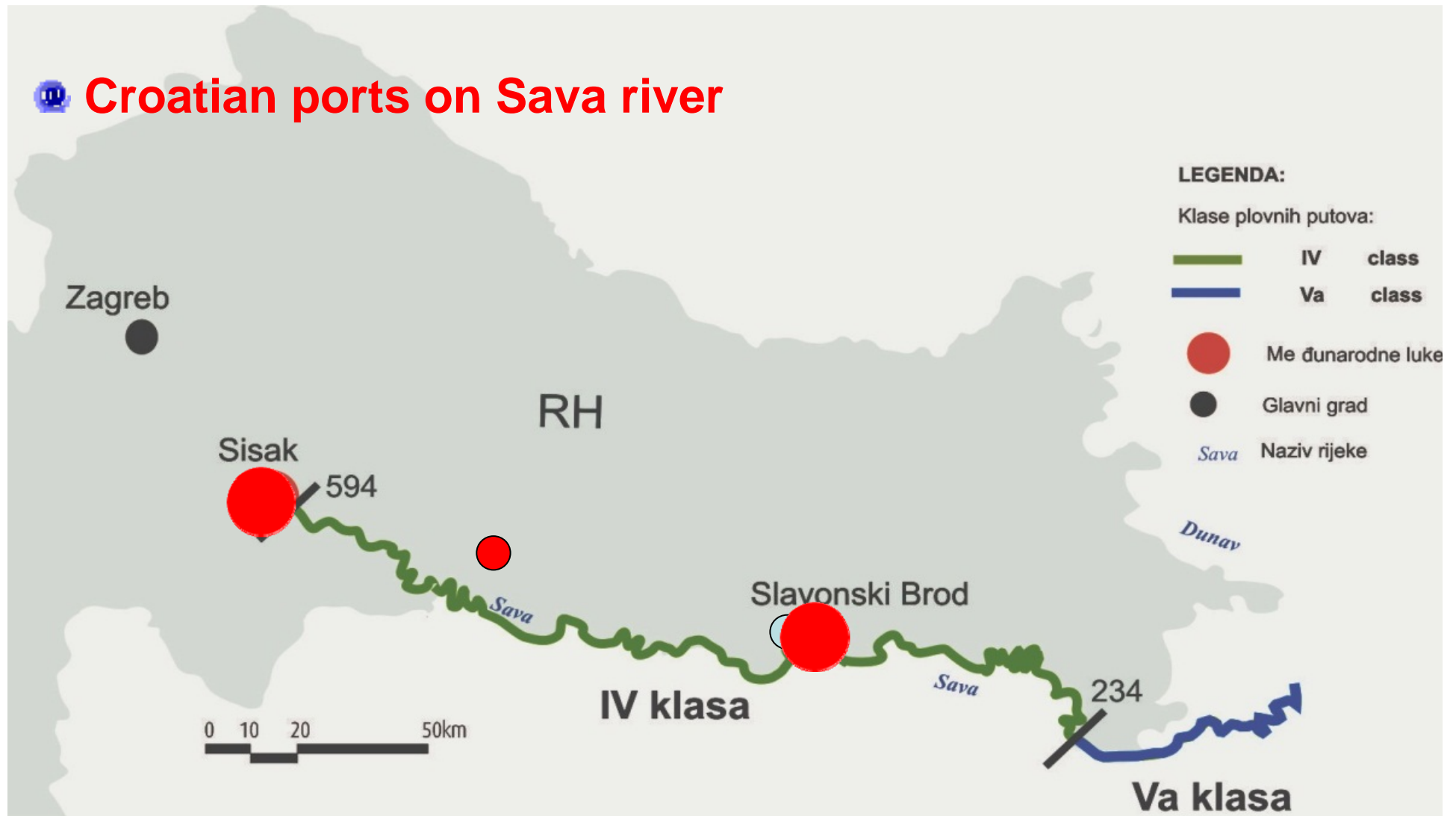


## Project status

- Completed project documentation:
  - preliminary design, feasibility study, EIA, Location Permit
- Main design
  - in 2012, funded by EU (IPA TOP 2007-2013)
- Estimated start of works in 2014
  - (application for EU funding)
- **Estimated cost of works – 50.000.000 €**



## Croatian ports on Sava river



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## Extract from the development plan

- Utility dock on the river Kupa in Sisak
- Public passenger dock on the river Kupa in Sisak
- Master plan of the Sisak New port on river Sava



# 1. Utility dock on the river Kupa in Sisak



- Location along the left bank of the river Kupa, rkm. 2+000 do 2+700
- The project will provide safe berthing to vessels up to 10 meters in length
- Total of 194 berths with its associated infrastructure

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## 2. Public passenger dock on the river Kupa in Sisak



- For accepting ships there will be placed ponton "Biokovo"
- It will be set in part of the river Kupa r.km 3+900 to 4+000 r.km.
- 4 bollards for a berth at a distance of 40 m and 2 bumpers

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### 3. Master plan of the Sisak New port on river Sava



- On the waterway of the river Sava (E-80-12) near Sisak is the intended location of the New Port Sisak
- Bounded by the Sava River to the north, Blinja creek to the east, the railroad Zagreb - Volinja to the south side



## Port Authority Slavonski Brod



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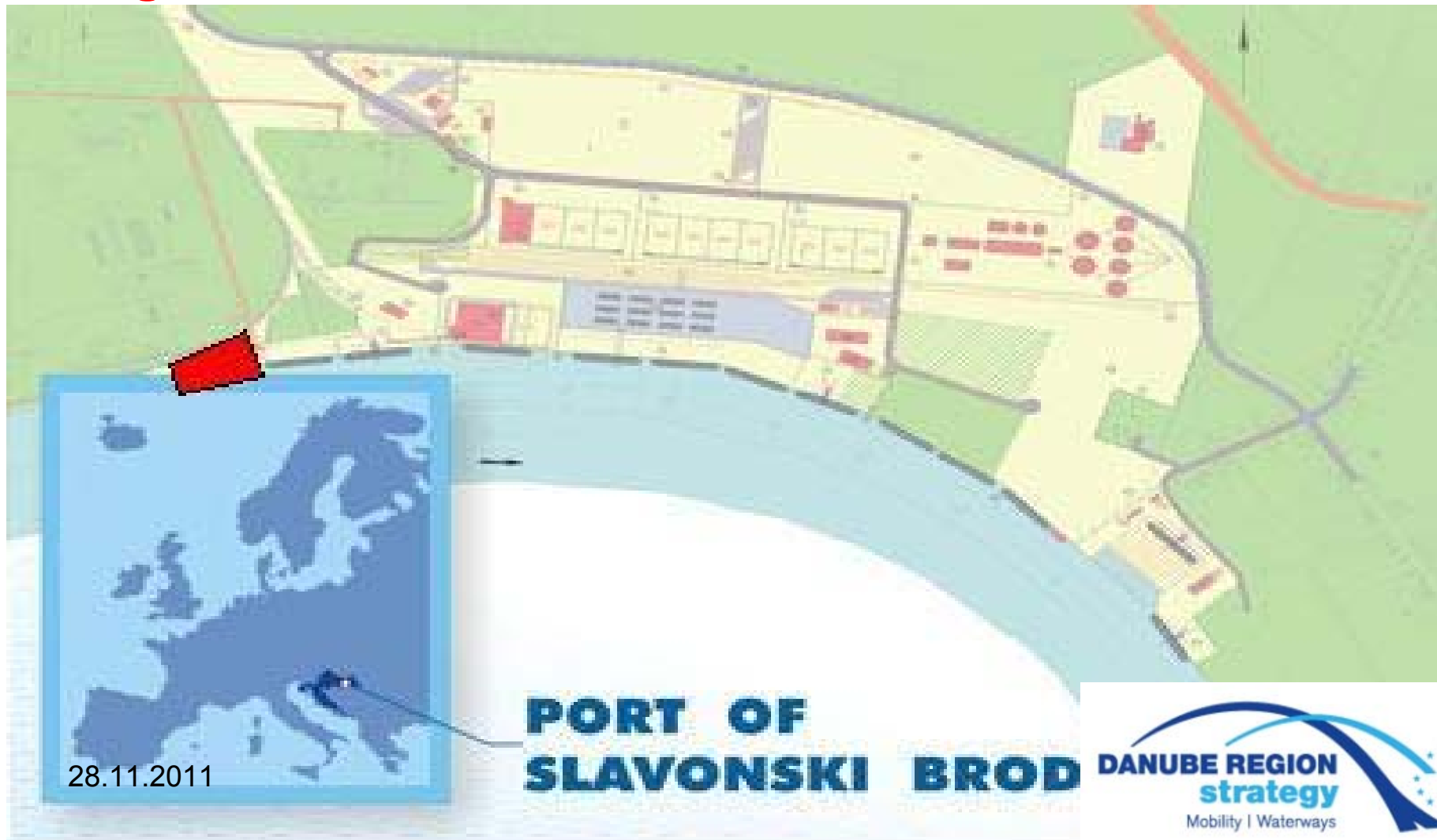
## Port Authority Slavonski Brod

### - Dangerous Goods Terminal in the Port Area Slavonski Brod

- The Port Area Slavonski Brod is connected with the international corridors and local economy of Slavonski Brod by means of road and railroad infrastructure.
- The port of Slavonski Brod is in a bordering area with Bosnia and Herzegovina, on the X traffic corridor and in close vicinity of the junction of the X and Vc traffic corridors.
- Due to this fact, this port can be developed as an intermodal port centre.



## Port Authority Slavonski Brod - Dangerous Goods Terminal in the Port Area Slavonski Brod





## **Port Authority Slavonski Brod**

### **- Dangerous Goods Terminal in the Port Area Slavonski Brod**

#### ***The importance of the future Terminal:***

- Storage and transshipment of petroleum products, to:
  - ship supply and reception of oil-water and fecal,
  - transshipment of petroleum products to final beneficiary.
- Current ship supply is unsafe because waste disposal of liquids (water, oil, fecal) not exist.
- Dangerous goods Terminal is relevant for environmental protecting on Sava river (water, coast, plants, animals) - in Croatia and the other countries.

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## Port Authority Slavonski Brod

### - Dangerous Goods Terminal in the Port Area Slavonski Brod

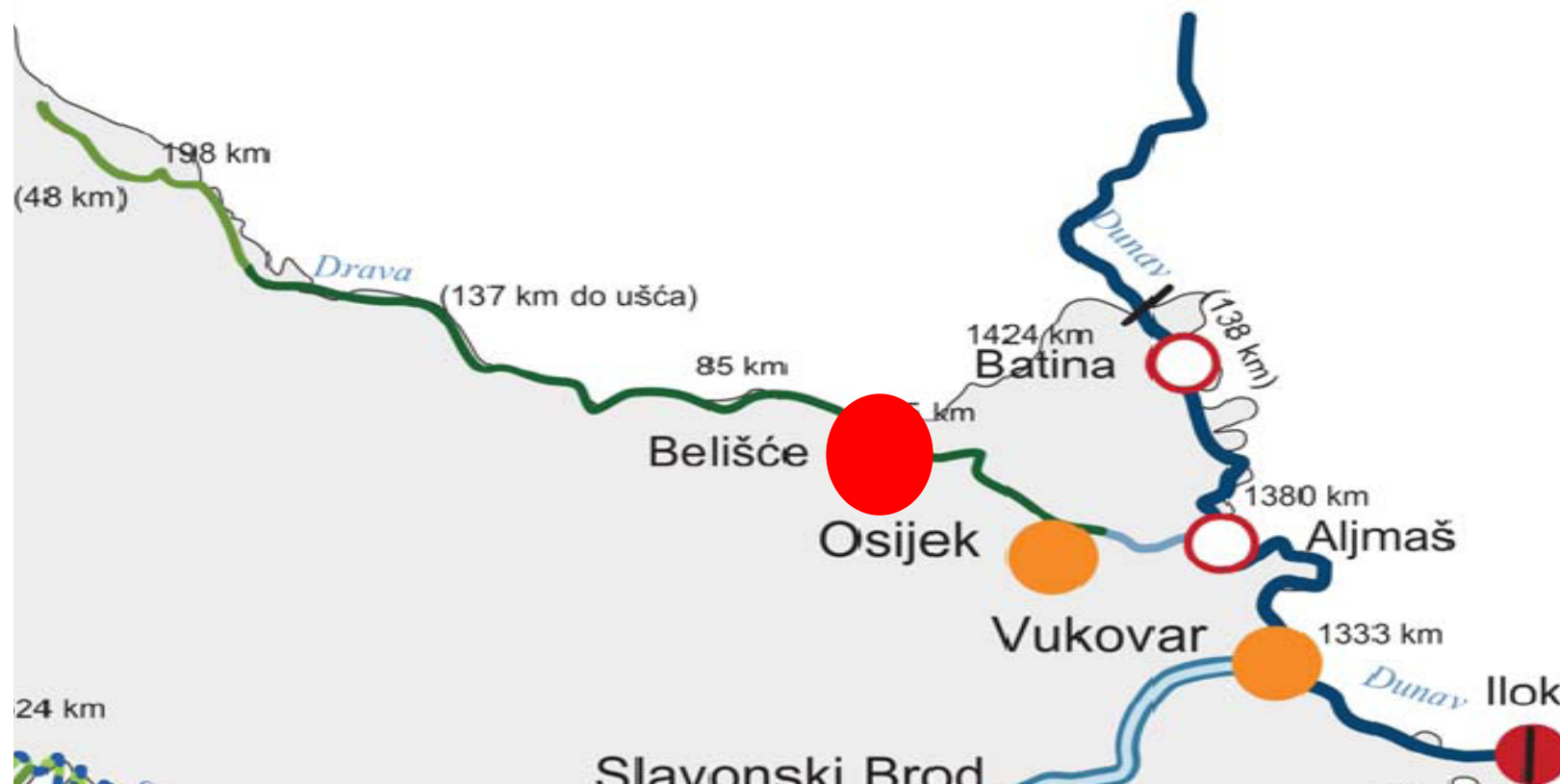
- Project documentation for this project proposed to be co-financed by IPA Programme, Component IIIa.
- Related project:
  - “Rehabilitation and improvement of the Sava River Waterway”.



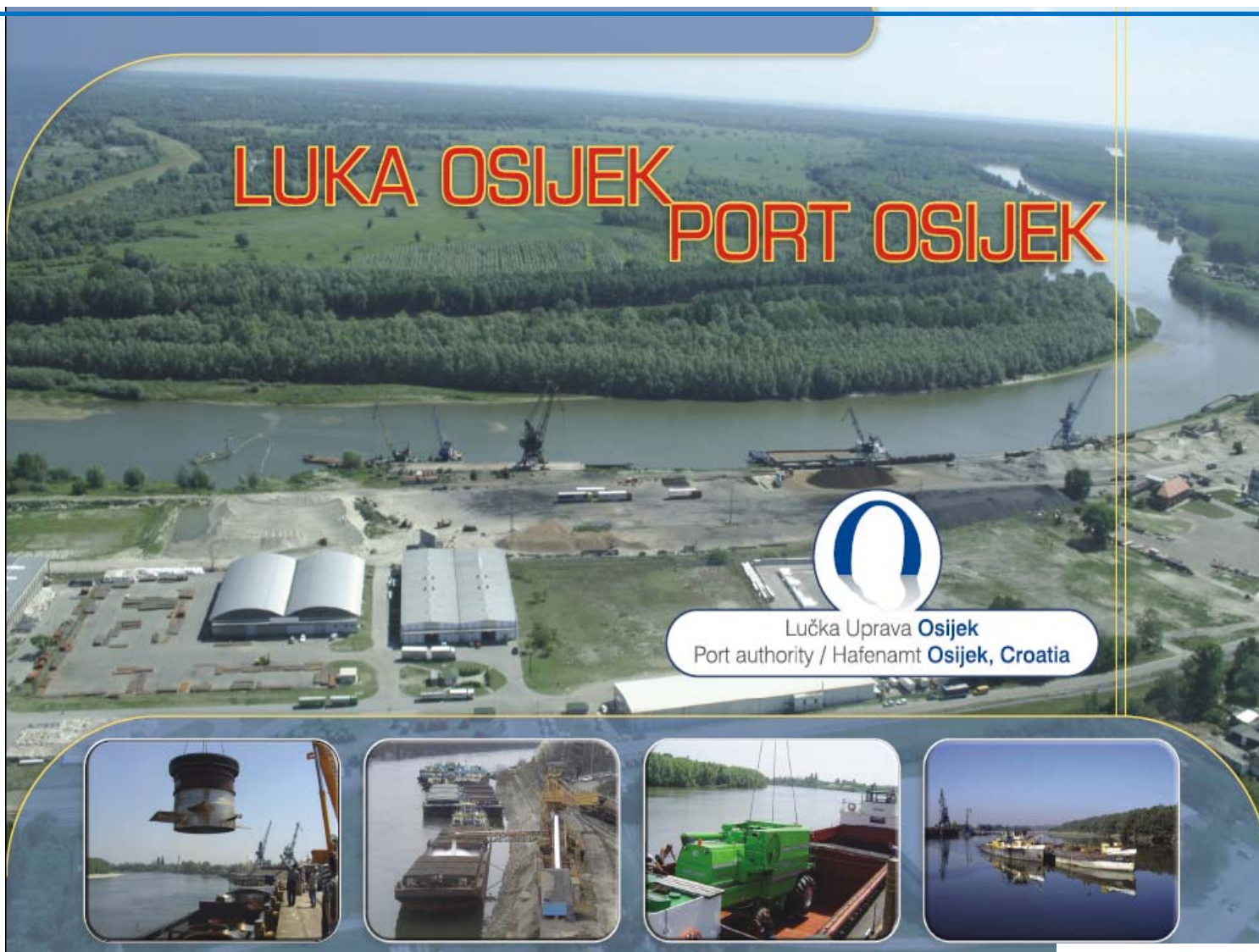
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## Croatian ports on Drava river



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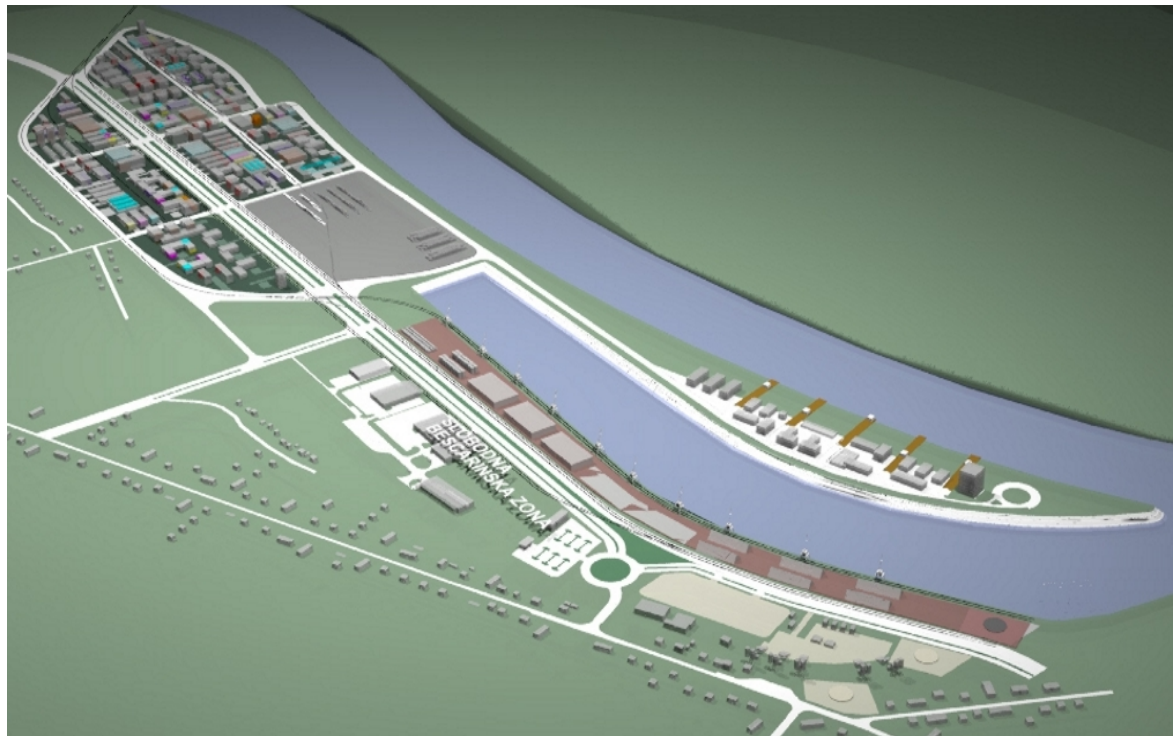


- The port of Osijek is situated on the right bank of the river Drava at rkm 14
- The vicinity of the important traffic corridors (Vc corridor in north-south direction and X. corridor in east-west direction), makes the Port of Osijek the place where the contact of all traffic types is possible, making them a complete functional traffic unity in the system of intermodal transportation
- The port area (land and water part) stretches on the surface of 150 hectares



# Projects

- 🇪🇺 Construction of Bulk cargo terminal
- 🇪🇺 Construction of South quay



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## Construction of Bulk cargo terminal will include :

- construction of dock for transshipment of bulk cargo in length of 260m
- crane rails in length of 100m
- extension of transshipment rail road in length of 500m
- towboat (370kW power engine and 30m length ) for needs of manoeuvring within port basin and bringing in and out of cargo ships and barges
- Final long term target is enabling acceptance and storage of bulk cargo and increasing reloading capacity up to 2,5 mil tons per year
- **The total value of the project is 19.000.000 EUR.**



## **Construction of South quay will include :**

- - 100m construction new vertical quay wall – downstream from existing wall
- - 230m reconstruction existing inclined in half-inclined quay wall to connection with bulk cargo terminal
- - 500m construction new quay wall –upstream from existing wall
- - 100m reconstruction existing vertical quay wall
- **The total value of the project is 62.000.000 EUR.**



## CroRIS – status quo

NtS – Notices to Skippers published by Harbour Master's Offices Sisak, Slavonski Brod, Vukovar and Osijek

ENC maps (standard 2.1), free of charge:

- 📍 Danube (rkm 1294 – rkm 1433)
- 📍 Drava (rkm 0 - rkm 23)
- 📍 Sava (rkm 207 – rkm 594)



## CroRIS – status quo

*Data Gateway* - electronic reporting available but not operational, testing phase on the European level

User Id	Ship Right	Suspended	Report Format	Plovilo	Delete Rights
davorhrg@crup.crup.bulris.org	Creator	<input type="checkbox"/>		Vessel 1	<input type="button" value="Obrisi prava pristupa"/>
test@gmail.com	Primatelj	<input type="checkbox"/>	PDF dokument	Vessel 1	<input type="button" value="Obrisi prava pristupa"/>
davorhrg@crup.crup.bulris.org	Creator	<input type="checkbox"/>		Vessel 2	<input type="button" value="Obrisi prava pristupa"/>
davorhrg@crup.crup.bulris.org	Creator	<input type="checkbox"/>		Vessel 3	<input type="button" value="Obrisi prava pristupa"/>
davorhrg@crup.crup.bulris.org	Creator	<input type="checkbox"/>		Vessel 4	<input type="button" value="Obrisi prava pristupa"/>

*ERI* – electronic reporting available but not operational, international data exchange related problems



## CroRIS – next steps

**Danube AIS network infrastructure upgrade**

**Improvement of voice VHF coverage on the Danube waterway**

**NtS upgrade to the latest standard**

**Design and development of National HULL database  
- key element of electronic reporting**

**RIS index development - unique identification code  
for every single infrastructure element that is  
important for RIS – ERI, Inland ECDIS and NtS.**



## CroRIS – next steps

**Full RIS implementation on the Sava river waterway**

- 📶 AIS network, 7 locations**
- 📶 Integration into existing CroRIS system**
- 📶 Implementation of ERI system for the Sava waterway**

**Voice VHF coverage on the whole Sava waterway**

**Enforcement of AIS usage for all vessels navigating into Croatian ports from 2013**



**Thank you  
for your attention!**