

**REPUBLIC OF CROATIA
MINISTRY OF MARITIME AFFAIRS, TRANSPORT AND INFRASTRUCTURE**

**REPORT ON SHORT-TERM MEASURES FOR 2013
regarding effective waterway infrastructure
maintenance**

LINZ, 17-18 APRIL, 2013



Content

- ▶ Riverbed surveying
- ▶ Dredging of problematic areas
- ▶ Signaling of the fairway

Riverbed surveying

LOCATIONS

Regular survey

- ▶ Danube river: rkm 1295.5 - rkm 1433.1
- ▶ Drava river: rkm 0.0 - rkm 125.6
- ▶ Sava river rkm 343 - rkm 594
- ▶ Kupa river rkm 0.0 - rkm 5.9



- ▶ Hydrographic survey of the **Danube riverbed** from rkm 1295.5 to rkm 1433.1 and in cooperation with the Republic of Serbia, in order to monitor the state of riverbed morphology
- ▶ Hydrographic survey of the **Sava riverbed** from rkm 210.8 to rkm 591.0 in order to monitor the state of riverbed morphology
- ▶ Detailed hydrographic survey will be done when required, on specific locations, depending on the program drafting for projects

Riverbed surveying

FREQUENCY



- ▶ Depth and width of the waterway are monitored via our team for marking - approximately once a week (nautical sonar)
- ▶ On the river sections with low depth or low width hydrographic survey is made when is required
- ▶ Hydrographic survey of the Danube and Sava river will be done during the current year

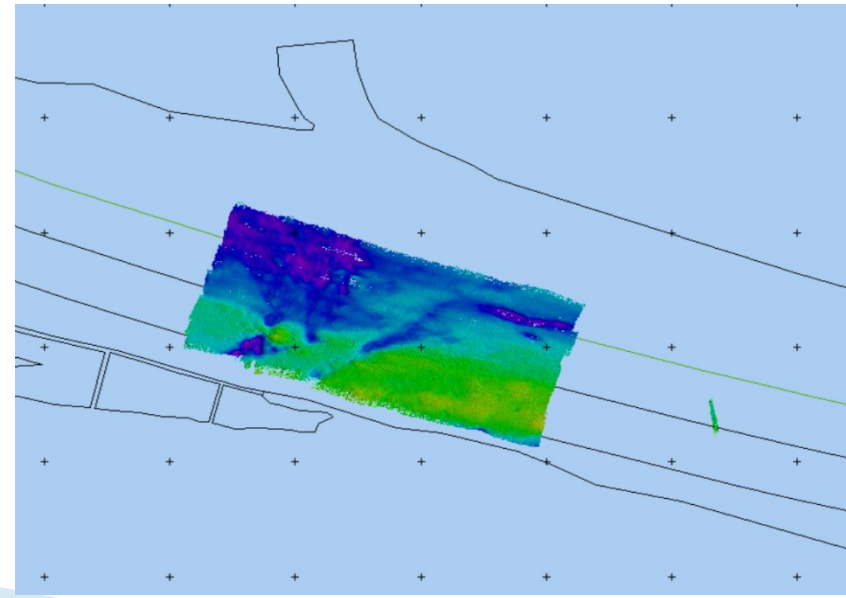
Riverbed surveying

EQUIPMENT

- ▶ Regular survey: Nautical sonar- echo sounder
- ▶ Hydrographic survey: single beam
- ▶ In more challenging sections: multi-beam

BUDGET

- ▶ Only project development is made by external contractors - app 33.333 €
(all other costs will be provided by the Agency for inland waterways)



Dredging of problematic areas

- Dredging interventions will be done only in critical sections during the year(sections with low depth) on the Danube, Sava and Drava rivers
- BUDGET: app 443.200,00 €

Dredge refuler on Drava river



Signaling of the fairway

LOCATIONS

- ▶ Danube river : rkm 1295.5 to rkm 1433.1
- ▶ Drava river: rkm 0.0 to rkm 125.6 (upstream to km 198,6 is performed by Hungary)
- ▶ Sava river: rkm 343 to rkm 594 (downstream till the border with R. of Serbia rkm 210,8 to rkm 343 signalling actions are taken by Bosnia and Hercegovina)
- ▶ Kupa river: rkm 0.0 to rkm 5.0

- ▶ Signaling actions will be taken continuously in the current year

Marking plan on a joint section of the Danube river between R. of Croatia and R. of Serbia

DESNA OBALA	Udaljenost od ušća u km	LJUEVA OBALA	DESNA OBALA	Udaljenost od ušća u km	LJUEVA OBALA
	1433.0			1425.5	
	1433.0			1425.3	
	1432.8			1425.3	
	1432.0			1425.0	
	1432.0			*1424.5	
	1431.0			1424.2	
	1430.2			1424.0	
	1430.0			1423.7	
	1429.0			1423.5	
	1429.0			1423.2	
	1428.1			1423.0	
	1428.0			1422.2	
	1427.75			1422.0	
	1427.6			1421.5	

Signaling of the fairway

SIGNALLING ACTIVITIES

- ▶ Kilometer marks (land signaling)
- ▶ Coastal marks (land signaling)
- ▶ Floating marks

PURPOSE:

- ▶ Realignment of the fairway
- ▶ Informing the traffic
- ▶ Regulation of the navigation

BUDGET:

- ▶ app 573.333,00 €



Danube river near village Dalj

Thank you for your kind attention!

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