



Doc. No. 1R-59-D-22-1/1-2

**Conscious** of the importance of the Sava River for the economic, social and cultural development of the region,

**Desirous** of development of the inland navigation on the Sava River,

**Having regard** to the European Agreement on Main Inland Waterways of International Importance (AGN), and in particular Annex III thereof,

**Believing** that public authorities can contribute significantly to the development of the waterway of the Sava river through their engagement to the provision and maintenance of an appropriate waterway based on internationally agreed classifications and parameters,

**In accordance** with Article 16 Paragraph 1 (a) and 2 of the Framework Agreement of the Sava River Basin and Article 9 Paragraph 1 of the Protocol on the Navigation Regime to the Framework Agreement of the Sava River Basin, the International Sava River Basin Commission (hereinafter: Sava Commission), has adopted the following

## **DECISION 2/22**

### **on adoption of the**

#### **PLAN FOR WATERWAY MARKING AND MAINTENANCE ON THE SAVA RIVER AND ITS NAVIGABLE TRIBUTARIES FOR THE YEAR 2022**

1. The Plan for Waterway Marking and Maintenance on the Sava River and its Navigable Tributaries for the Year 2022 is attached to this Decision as its integral part.
2. The Parties shall adopt the measures necessary to implement this Decision and notify the ISRBC.
3. This Decision shall be binding upon all the Parties unless any of the Sava Commission members withdraws his/her vote within 30 days after the decision has been made or informs the Sava Commission that the Decision is subject to approval of the relevant authority of his/her her State.

4. If no member withdraws his/her vote nor informs the Sava Commission that the Decision is subject to approval of the relevant authority of his/her State, the Decision shall enter into force on April 15, 2022.
5. Upon entry into force, this Decision shall be binding in its entirety and directly applicable in the Parties.
6. The Sava Commission Secretariat shall notify the Parties of the entry into force of the Decision.

*Zagreb, March 15, 2022*



Ms Duška Kunštek  
Chair of the Sava Commission

# **PLAN FOR WATERWAY MARKING AND MAINTENANCE ON THE SAVA RIVER AND ITS NAVIGABLE TRIBUTARIES FOR THE YEAR 2022**



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## 1. DESCRIPTION OF CRITICAL SECTORS

### 1.1. LIST OF CRITICAL SECTORS

#### 1.1.1. Critical sectors at the Sava River section entirely in Croatia

No	Name of the sector	Section (rkm)		Length of the section
		from	to	
1	Prelošćica	583,7	584,2	0,5
2	Blinjski Kut	581,0	582,0	1
3	Gušće 2*	573,0	576,0	3
4	Gušće 1	570,0	572,0	2
5	Bobovac	559,9	560,7	0,8
6	Lonja – Strmen*	552,0	556,0	4
7	Lonja1	549,0	549,8	0,8
8	Puska	541,4	542,3	0,9
9	Višnjica*	523,0	525,0	2
<b>TOTAL:</b>				<b>42,5</b>

\*Particularly restricting sectors (note form the Agency for Inland Waterways - Croatia)

#### 1.1.2. Critical sectors at the Sava River joint section between Croatia and Bosnia and Herzegovina

No	Name of the sector	Section (rkm)		Length of the section
		from	to	
1	Dolina *	445,5	449,5	4
2	Davor Mlature	429,0	431,0	2
3	Davor ušće Vrbasa	426,5	427,2	0,7
4	Grlić*	394,0	395,0	1
5	Migalovci – ušće Ukrine*	377,5	382,0	4,5
6	Jaruge–Novi Grad*	322,0	329,0	7
7	Savulje	310,5	311,5	1
8	Tolisa	275,0	277,0	2
9	Gunja*	220,0	223,0	3
10	Račinovci	210,8	212,7	1,9
<b>TOTAL:</b>				<b>42,5</b>

\*Particularly restricting sectors (note form the Agency for Inland Waterways - Croatia)

**1.1.3. Critical sectors at the Sava River section in Serbia**

No	Name of the sector	Section (rkm)		Length of the section
		from	to	
1	Confluence of the Drina River	177,0	184,0	7,0
2	Sremska Mitrovica	126,8	134,0	7,2
3	Klenak	106,0	112,6	6,6
4	Šabac	90,0	104,0	14,0
5	Kamičak	82,2	88,2	6,0
<b>TOTAL:</b>				<b>40,8</b>

*Note: Stretch from rkm 177 to rkm 178 of the critical sector Confluence of the Drina River is on the territory of Republic of Serbia, while the remaining stretch from rkm 178 to rkm 184 is a joint sector between Republic of Serbia and Bosnia and Hercegovina.*

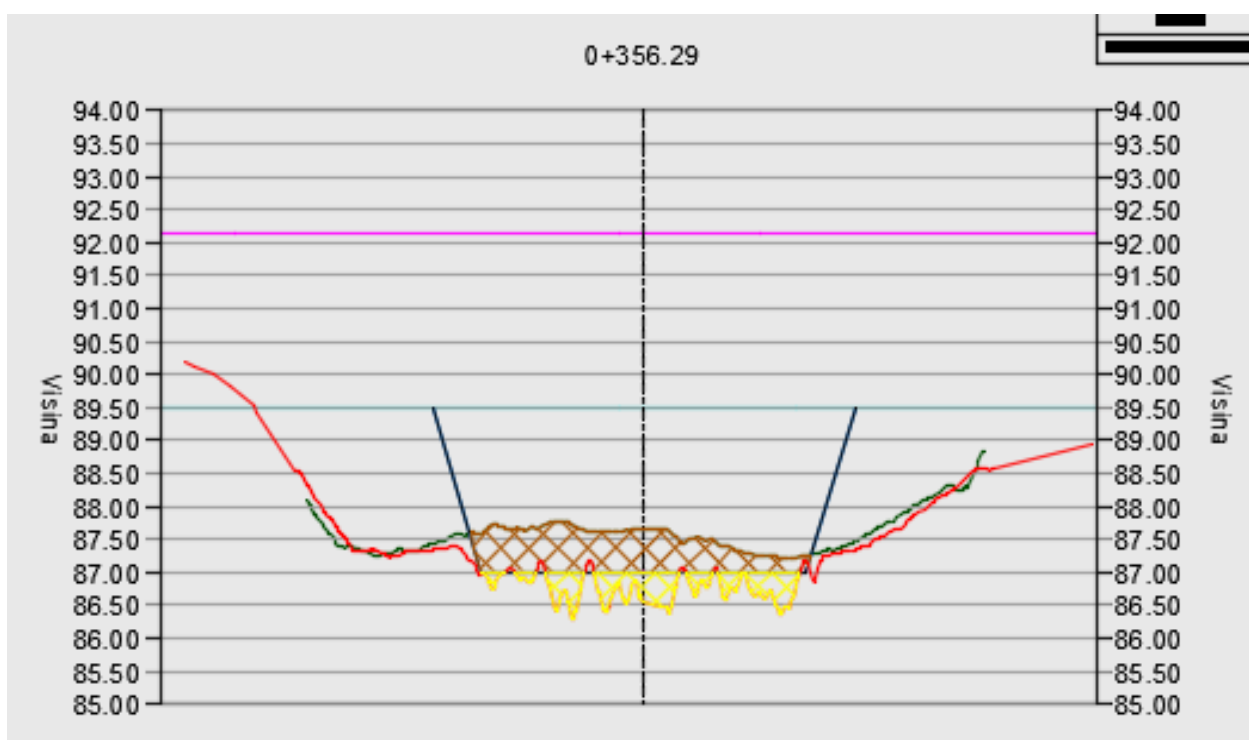
## 1.2. HYDROMORPHOLOGICAL CHANGES AT SPECIFIC SECTORS

### 1.2.1. Hydromorphological changes at the Sava River section in Croatia

#### Critical sector: Preloščica

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

#### Profile at rkm 584+050 (EV 1895)



legend: ——— August 2018 ——— December 2018

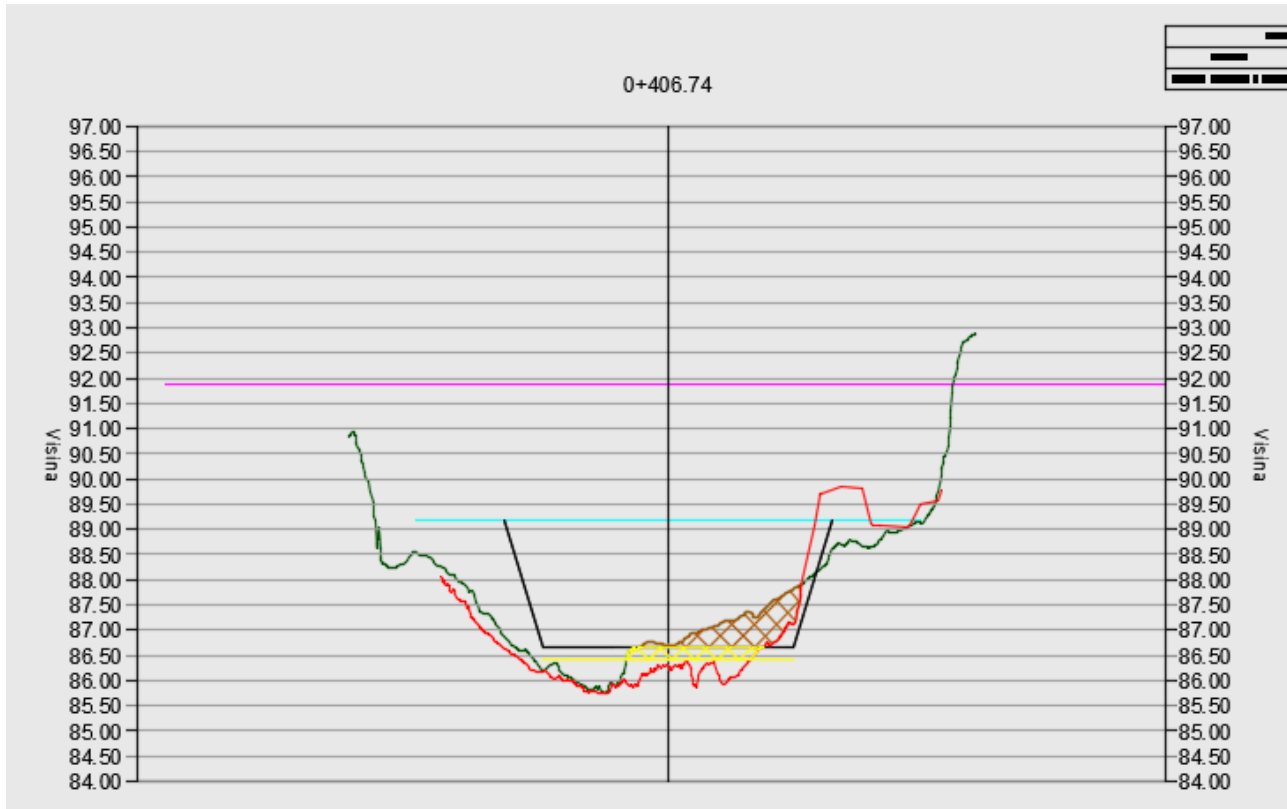
- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
584,05	50	50,0	50,0	2,5	2,3

**Critical sector: Blinjski Kut**

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

**Profile at rkm 581+300 (EV 1880)**



**legend:**      — April 2018      — December 2018

*Note: Dredging works performed in 2018.*

- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

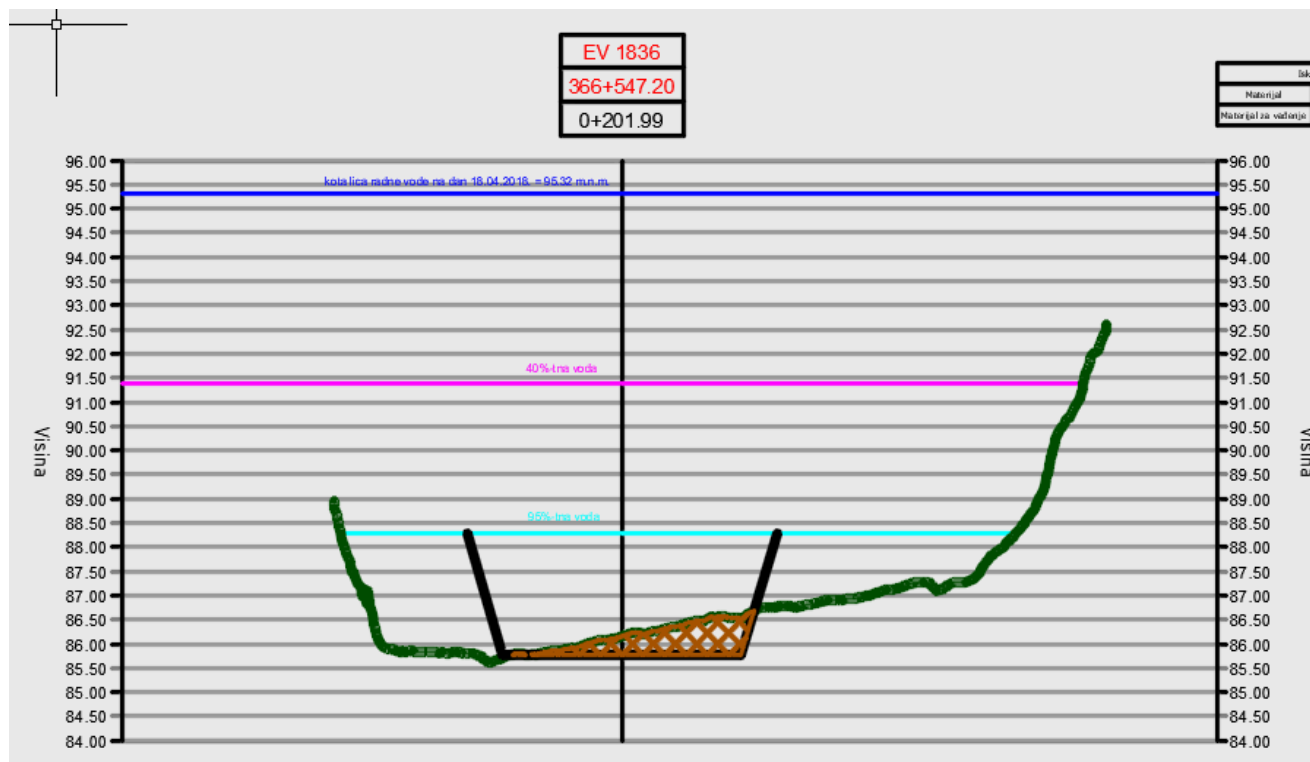
rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
581,3	50	45,0	50,0	3,4	2,2



**Critical sector: Gušće 2**

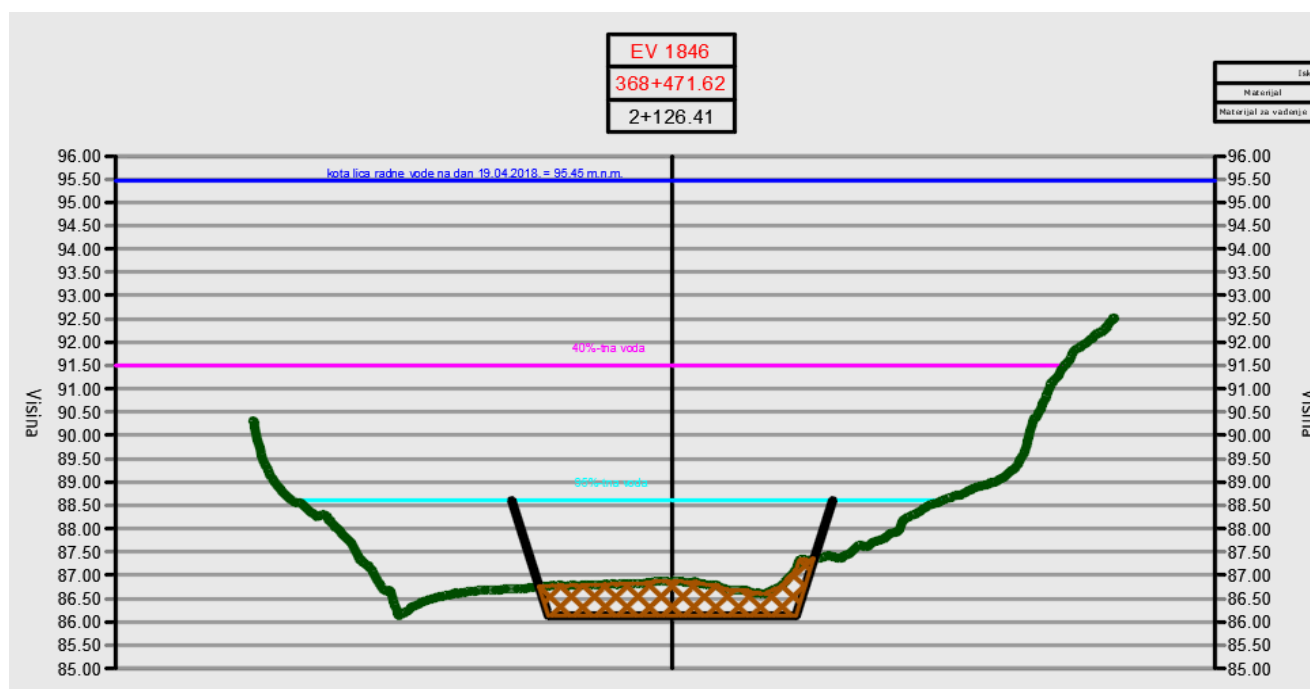
- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

**Profile at rkm 573+100 (EV 1836)**



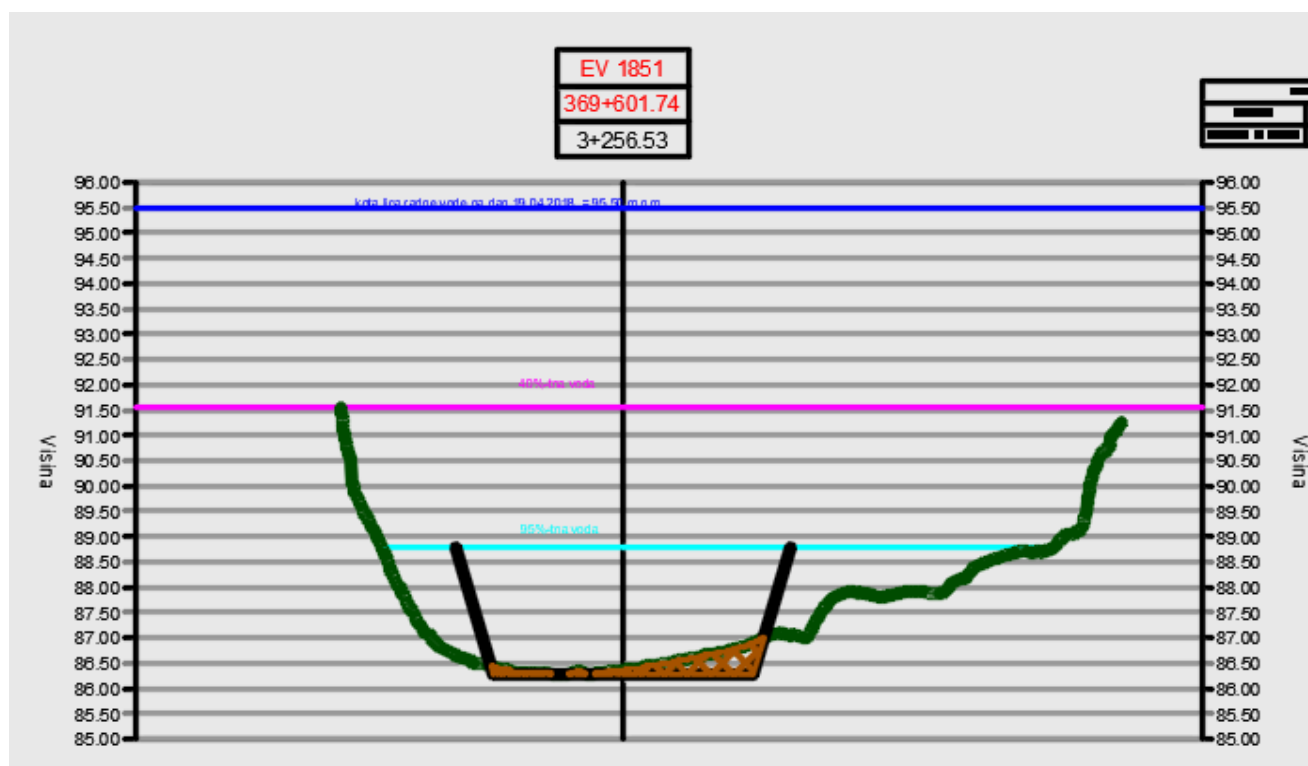
legend: ——— May 2018

**Profile at rkm 574+700 (EV 1846)**



legend: ——— May 2018

### Profile at rkm 575+800 (EV 1851)



legend: ——— May 2018

*Note: Dredging works were partly completed in 2018 from rkm 573,0 to rkm 573.*

(b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

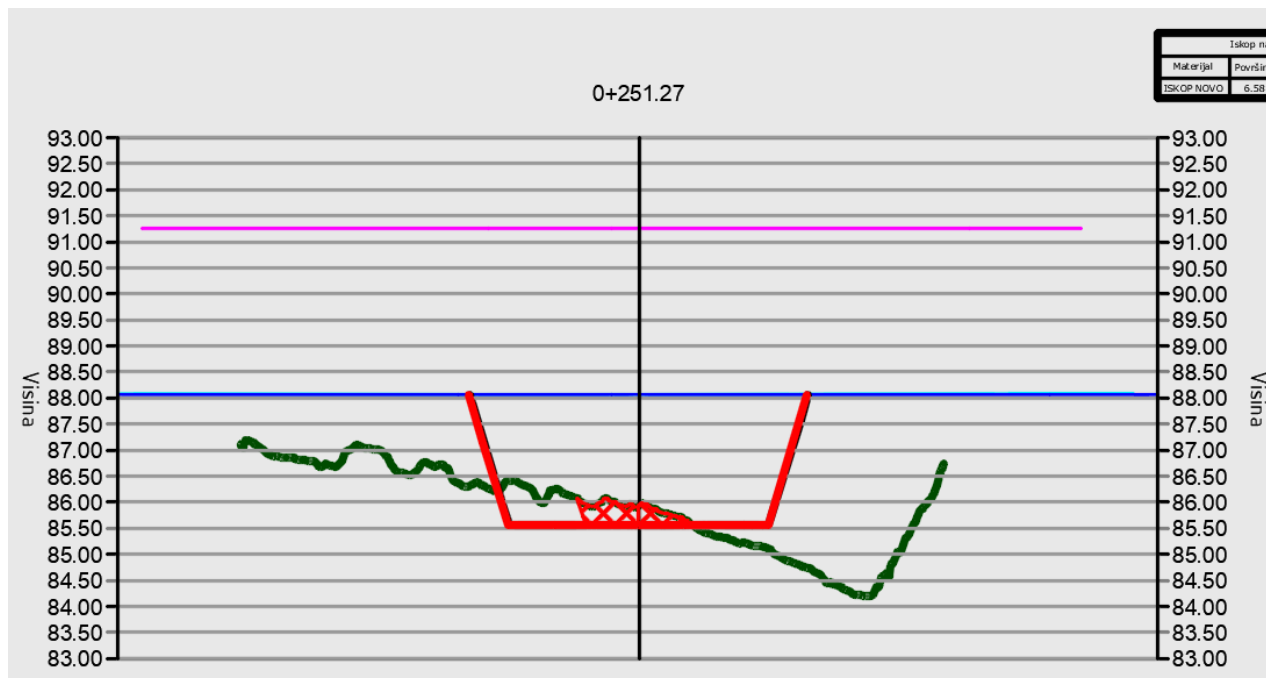
rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
573,1	50	50,0	50,0	2,4	2,4
574,7	50	0,0	0,0	2,5	1,75
575,8	50	0,0	0,0	2,5	1,75

*Dredging works planned in 2022.*

### Critical sector: Gušće 1

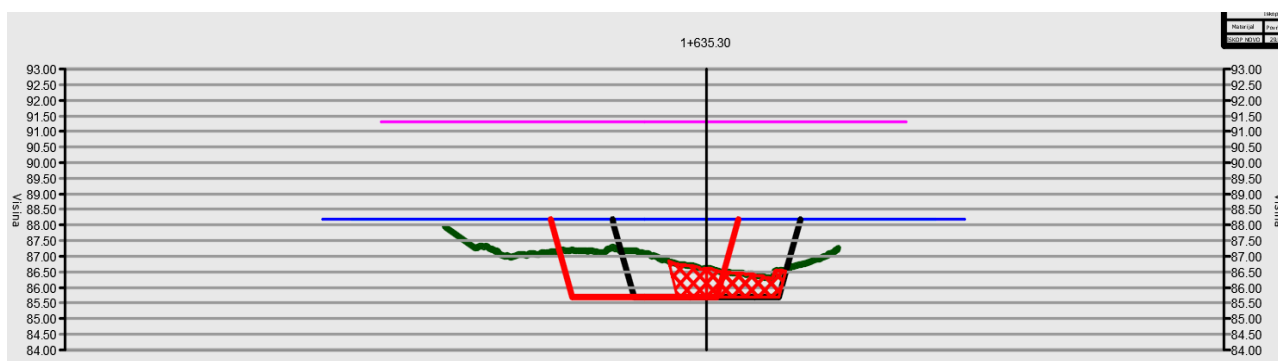
- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

#### Profile at rkm 570+500 (EV 1823)



legend: September 2018

#### Profile at rkm 571+500 (EV 1830)



legend: September 2018

*Note: Dredging works performed in 2018 in a narrowed profile with a partially translated waterway route*

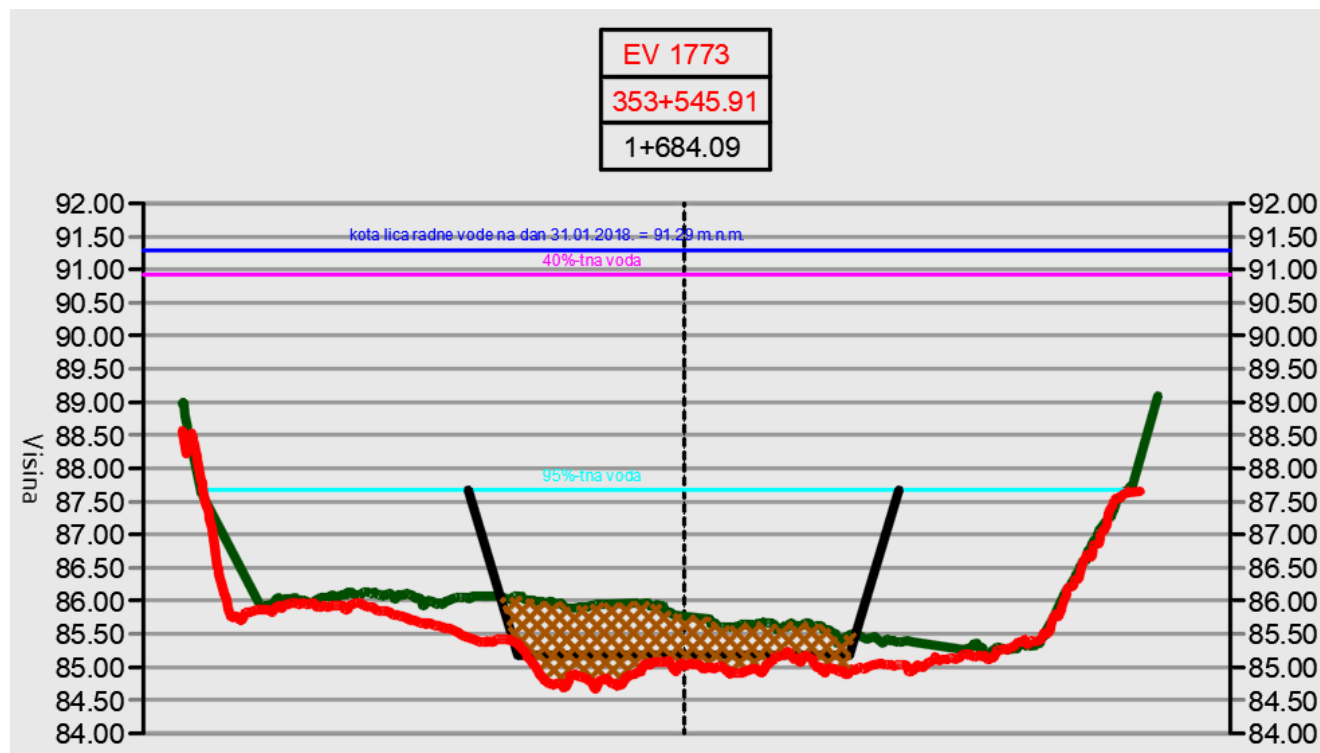
- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
570,05	50	0,0	60,0	3,3	2,4
571,5	50	0,0	35,0	2,4	2,4

### Critical sector: Bobovac

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

#### Profile at rkm 560+150 (EV 1773)



legend: ——— 2017 ——— January 2018

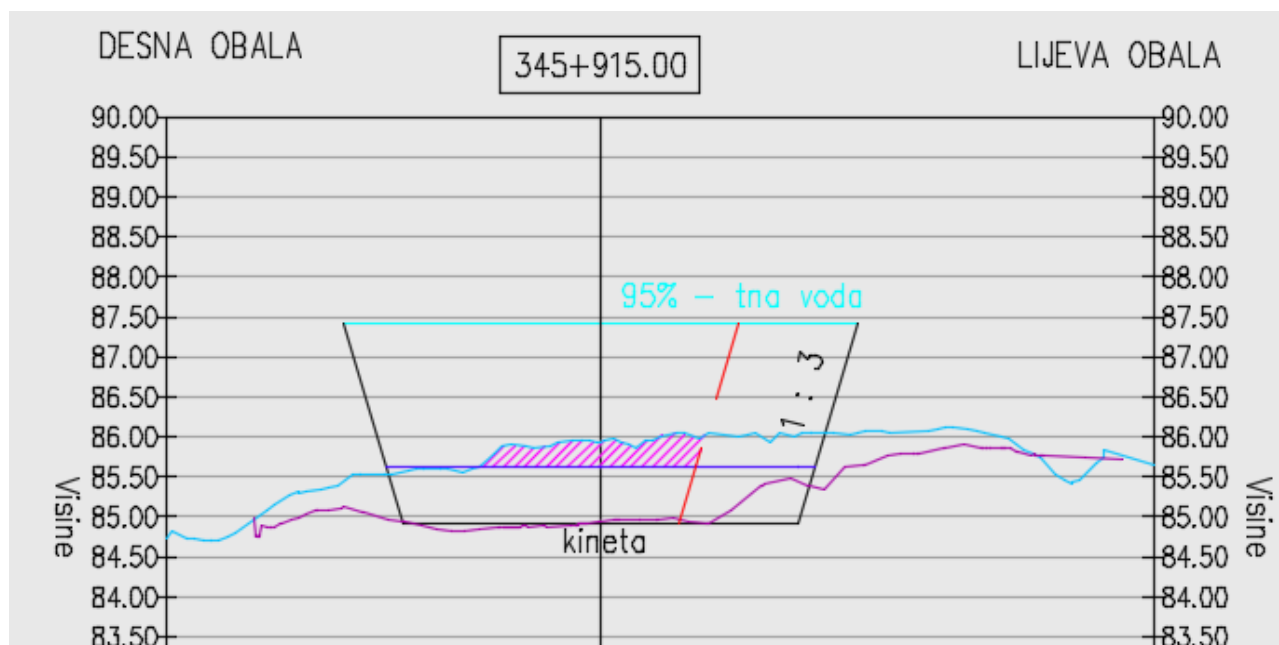
*Note: Dredging works performed in 2017.*

- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
560,15	50	0,0	0,0	2,4	1,6

**Critical sector: Lonja – Strmen**

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

**Profile at rkm 552+850 (EV 1734)**


**legend:**      — **May 2013**      — **October 2013**

- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

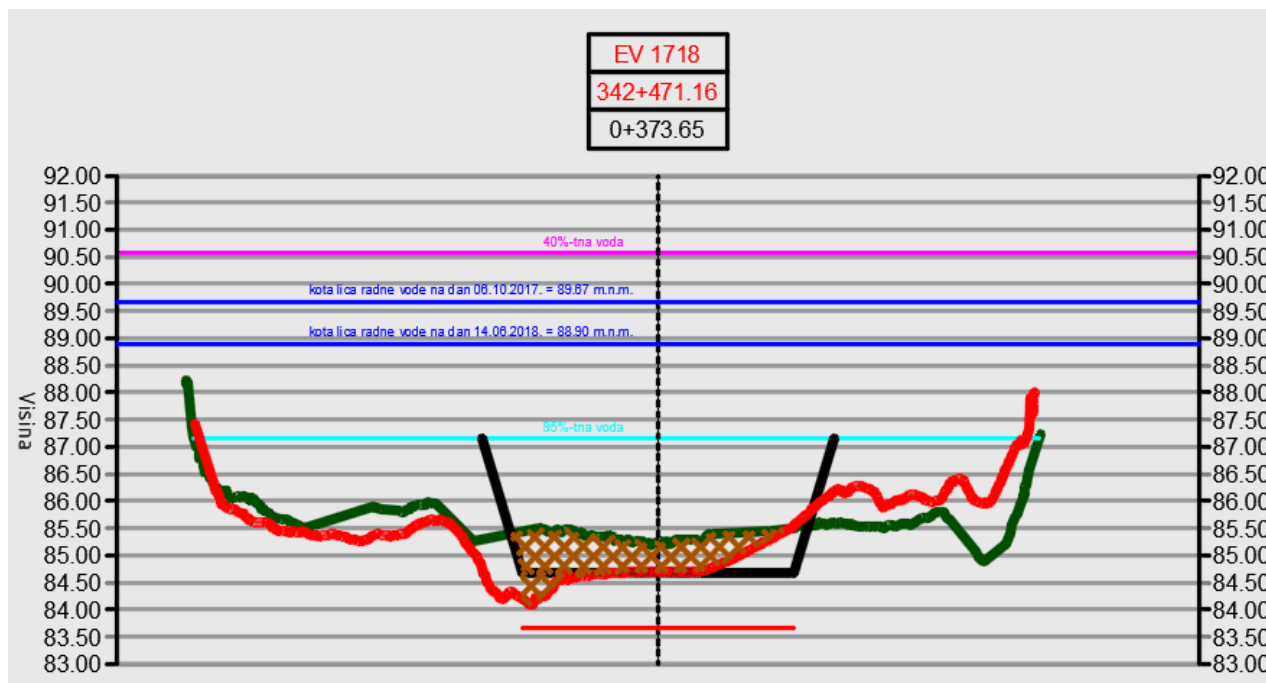
rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
552,85	50	0,0	13,0	2,7	1,4

*Dredging works planned in 2022.*

### Critical sector: Lonja 1

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

#### Profile at rkm 549+500 (EV 1718)



legend: — October 2017 — June 2018

*Note: Dredging works performed in 2017 and 2018.*

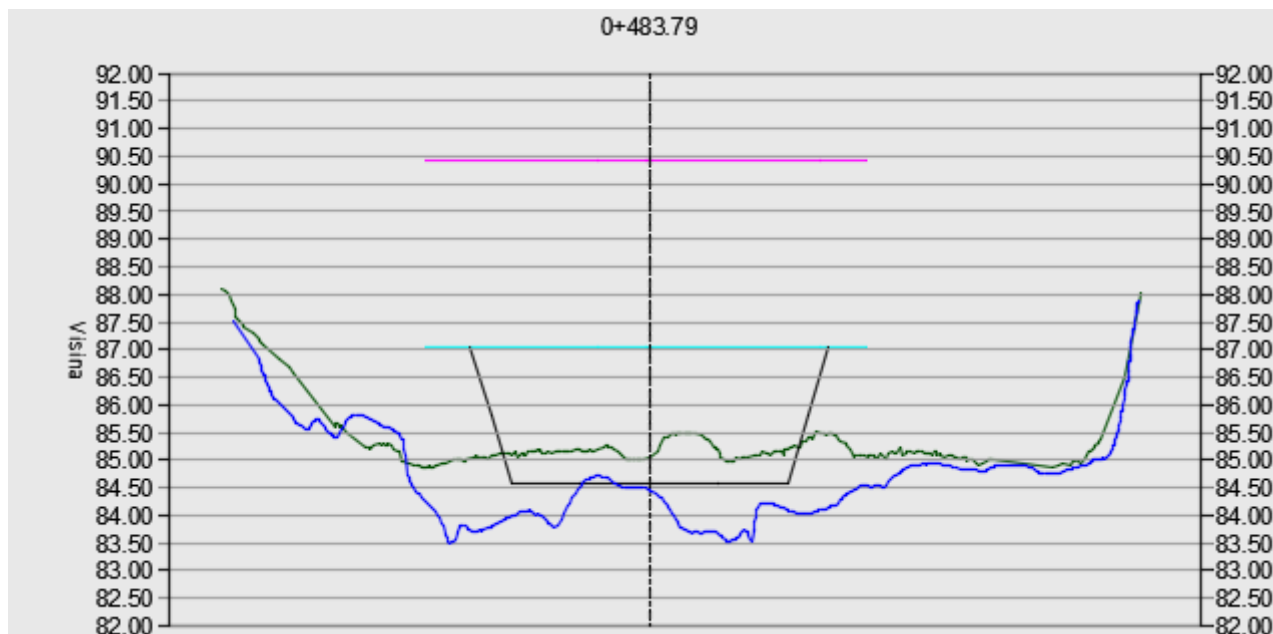
- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
549,5	50	0,0	0,0	2,2	1,5

**Critical sector: Puska**

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

**Profile at rkm 541+950 (EV 1679)**



**legend:**      — **May 2017**      — **October 2017**

*Note: Dredging works performed in 2017.*

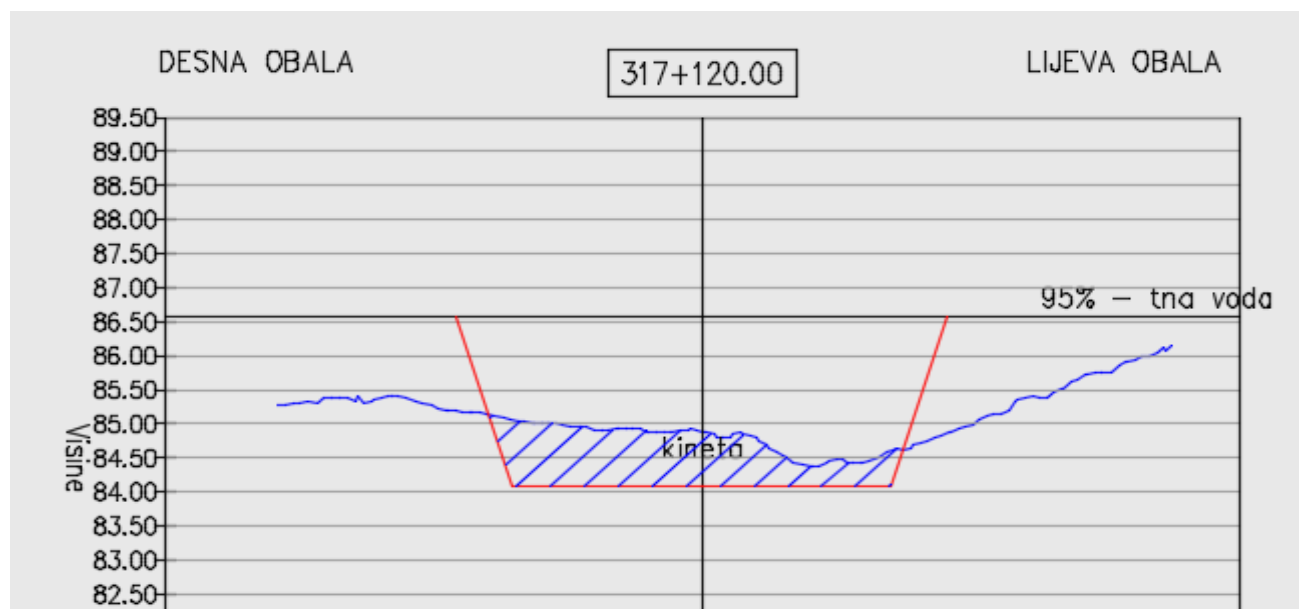
- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
523,9	50	64,0	49,0	3,5	2,2

### Critical sector: Višnjica

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

#### Profile at rkm 523+900 (EV 1587)



legend: ——— 2011

- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
523,9	50	0,0	0,0	2,2	1,5

*Dredging works planned in 2022.*

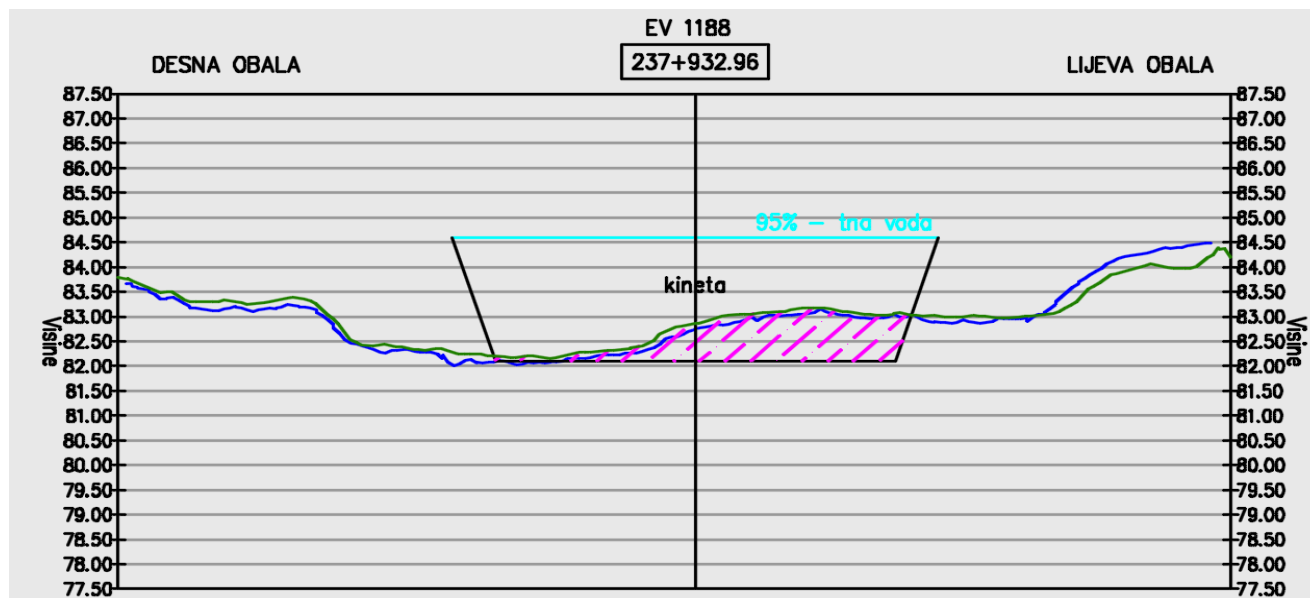


## 1.2.2. Hydromorphological changes the Sava River joint section between Croatia and Bosnia and Herzegovina

### Critical sector: Dolina

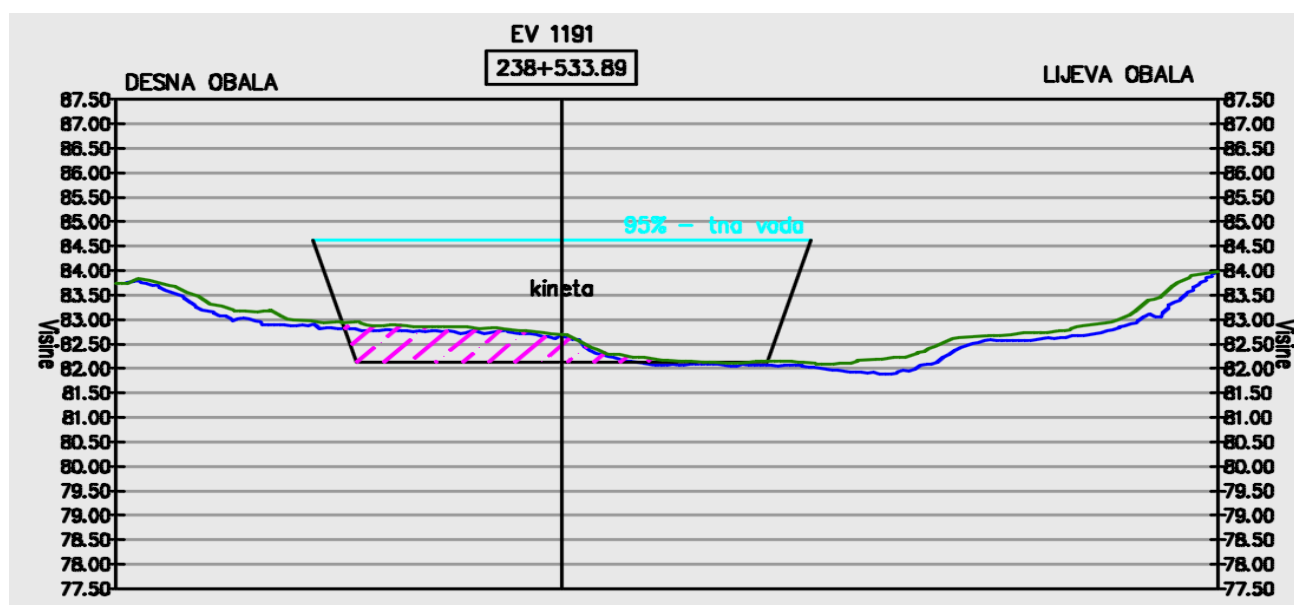
- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

#### Profile at rkm 446+200 (EV 1188)



legend: ----- 2011 ----- 2011

#### Profile at rkm 446+900 (EV 1191)



legend: ----- 2011 ----- 2011

(b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

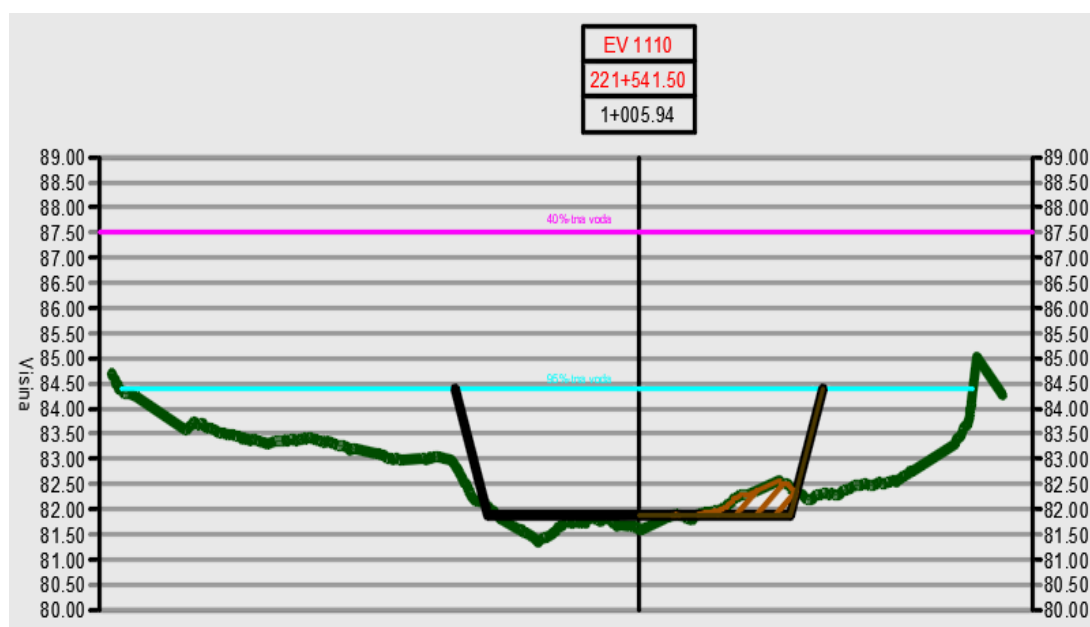
rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
446,2	70	0,0	0,0	2,4	1,4
446,9	70	11,0	29,0	2,5	1,8

*Dredging works planned in 2022.*

### Critical sector: Davor Mlature

(a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

#### Profile at rkm 430+000 (EV 1110)



legend: ----- October 2017

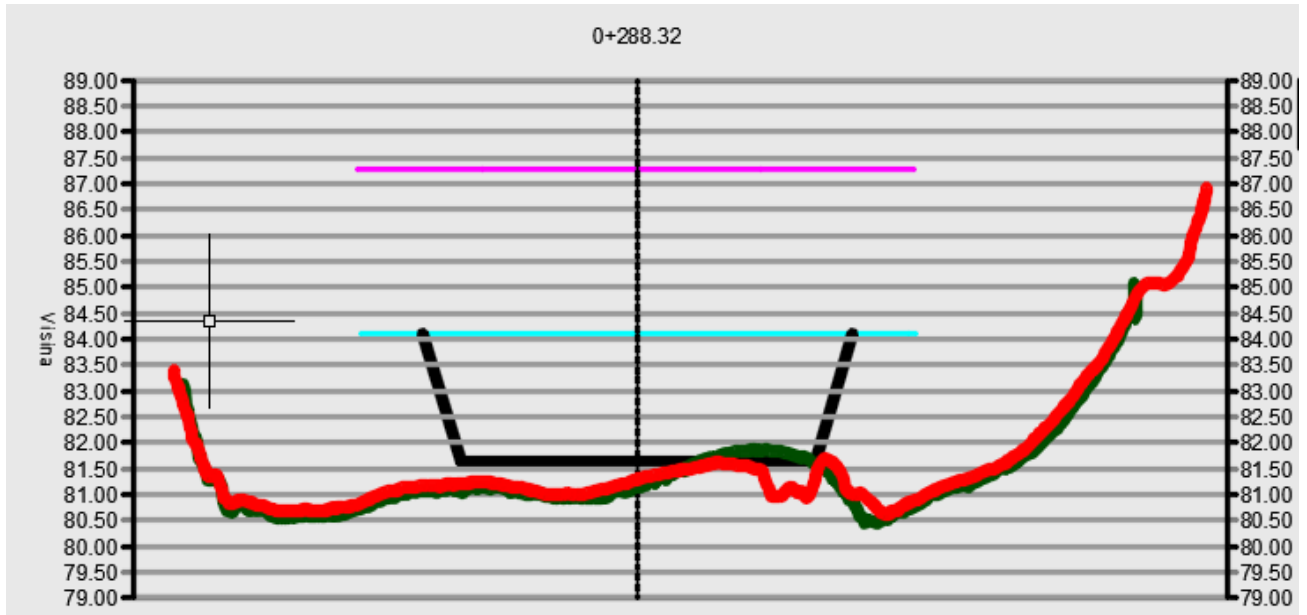
(b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
430,0	70	46	46	3,04	1,8

**Critical sector: Davor – Ušće Vrbasa**

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

**Profile at rkm 426+700 ( EV 1093)**



**legend:**      ——— **October 2017**                      ——— **January 2018**

*Note: Dredging works performed in 2017.*

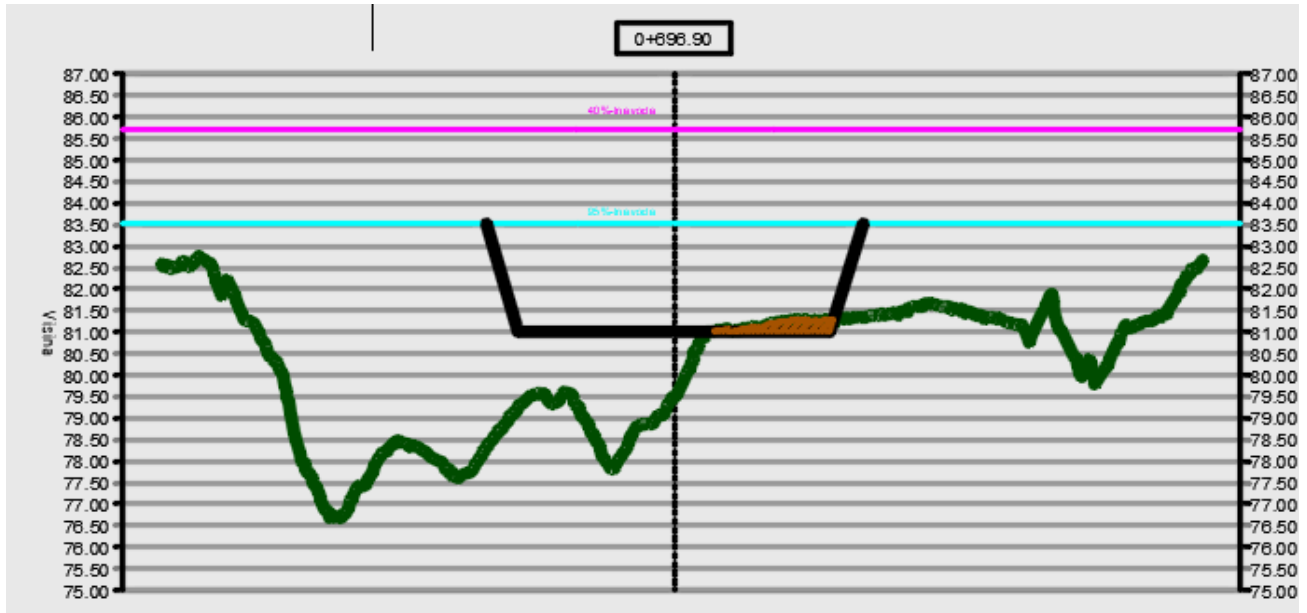
- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
426,7	70	45	80	3,1	2,5

**Critical sector: Grlić**

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

**Profile at rkm 394+700 (EV 941)**



**legend:**      ——— 2017

- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

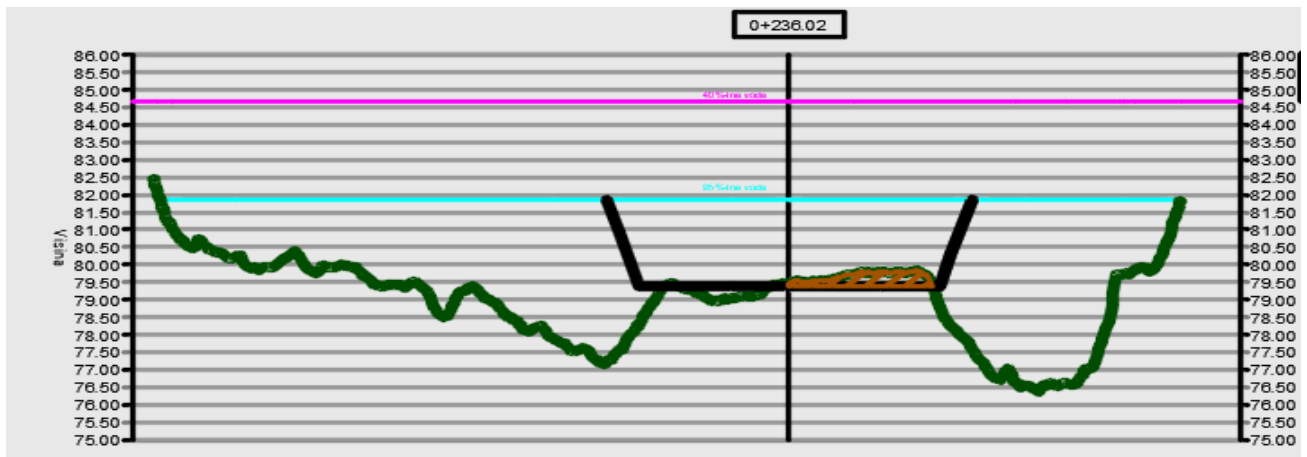
rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
394,7	70	40	101	6,8	2,2

*Dredging works planned in 2022.*

**Critical sector: Migalovci – Ušće Ukrine**

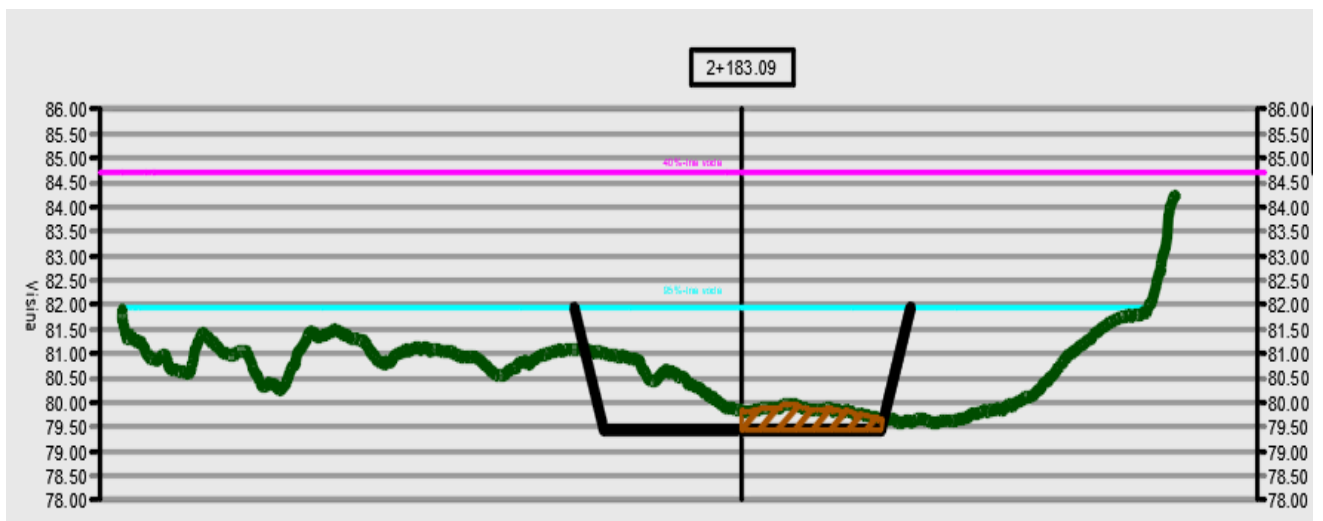
(a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

**Profile at rkm 377+400 (EV 852)**



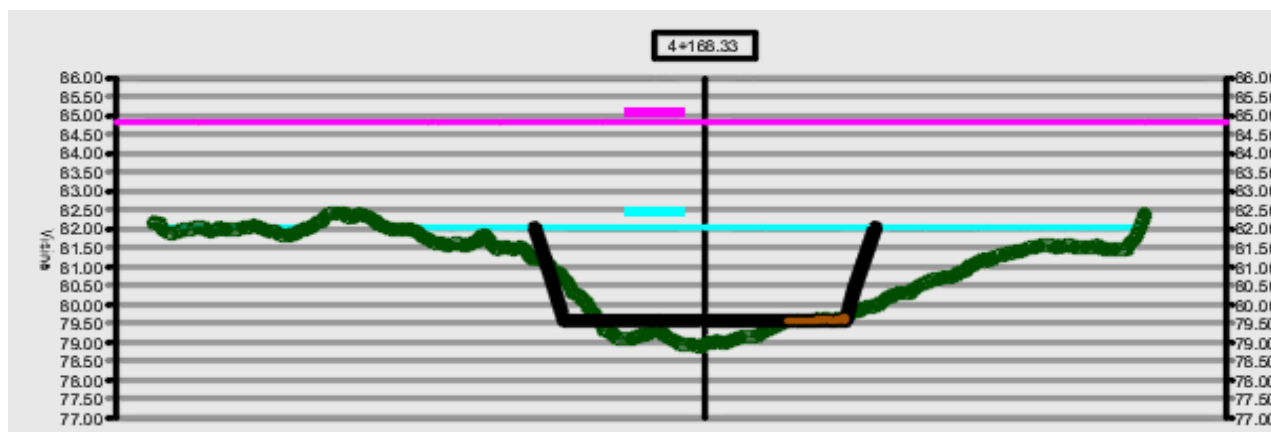
legend:  2017

**Profile at rkm 379+500 (EV 862)**



legend:  2017

### Profile at rkm 381+500 (EV 873)



legend: ——— 2017

(b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

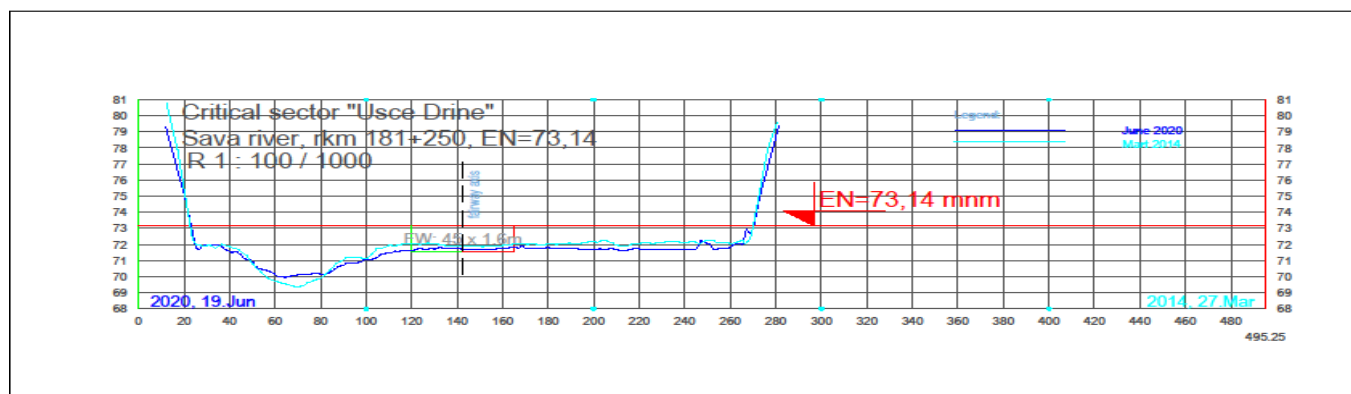
rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
377,4	70	30	65	5,0	2,0
379,5	70	0	0	2,4	0,8
381,5	70	45	45	3,1	0,9

*Dredging works commenced in 2020 and should be finished in 2022.*

### 1.2.3. Hydromorphological changes at the Sava River section in Serbia

#### Critical sector: Confluence of the Drina River

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey - June 19, 2020)

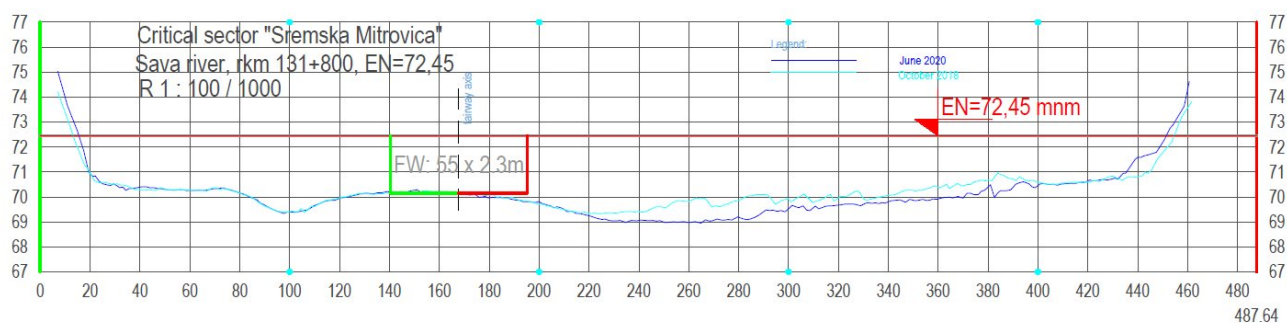


- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
183+400	45	22	88	2.0	1.3
183+200	45	38	53	2.2	1.4
183+150	45	36	51	2.4	1.3
182+450	45	21	36	1.8	1.5
182+350	45	22	37	1.8	1.4
181+400	45	28	44	2.0	1.3
181+300	45	15	30	2.1	1.2
181+250	45	-	14	1.8	1.3
181+200	45	-	18	2.6	1.4
178+900	45	19	34	3.7	1.1
178+850	45	9	24	1.9	1.2
178+800	45	17	17	1.7	1.2
178+750	45	22	37	2.7	1.3
178+600	45	29	44	4.5	1.1
177+800	45	21	37	7.0	1.5
177+750	45	9	24	7.2	1.1
177+700	45	13	28	5.4	0.9

## Critical sector: Sremska Mitrovica

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

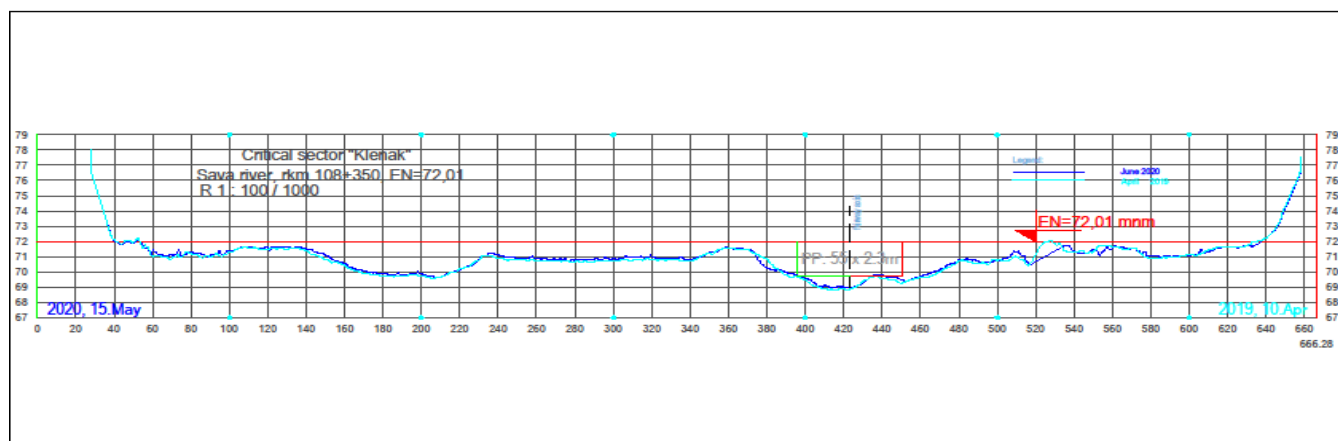


- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
131+800	55	30	40	2.7	2.2
131+750	55	41	51	3.3	2.1
126+950	55	40	50	3.5	2.2

## Critical sector: Klenak

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)



Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
110+700	55	49	59	2.7	2.2
110+650	55	45	55	2.7	2.1
109+450	55	45	58	3.5	2.1
108+400	55	46	46	4.5	2.1
108+350	55	39	39	3.0	2.2
107+550	55	45	50	2.9	2.2
107+450	55	47	56	2.7	2.2



**Critical sector: Šabac**

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

*Note: Dredging works performed in 2018, 2019 and 2020 assured fairway parameters required by the waterway class through the whole stretch of critical sector „Šabac“.*

- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
-	55	55			

**Critical sector: Kamičak**

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

*Note: Dredging works performed in 2017 assured fairway parameters required by the waterway class through the whole stretch of critical sector „Kamičak“.*

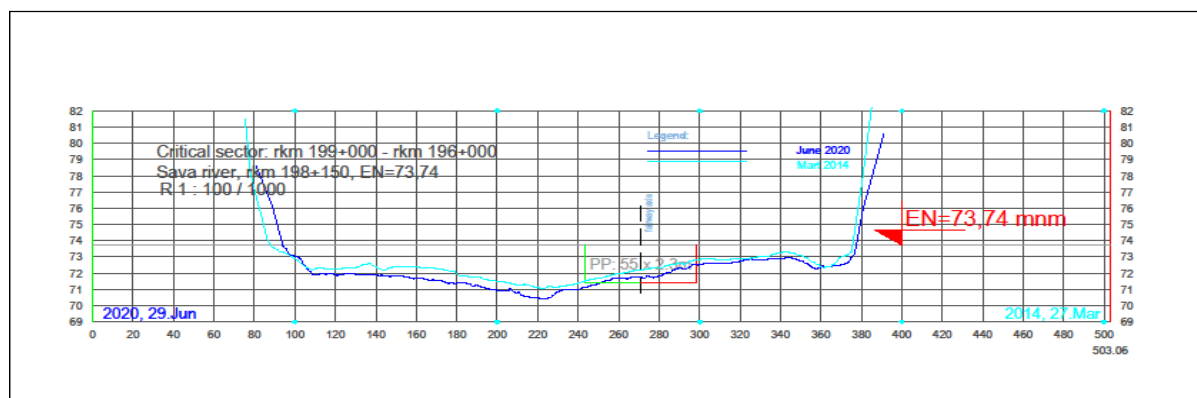
- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
-	55	55			

## Other sectors at the river stretch in Serbia with noticeable changes in river bed morphology

### River stretch: rkm 199+000 - rkm 196+000

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)



- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
198+750	55	46	57	5.3	1.9
198+200	55	40	50	3.6	1.9
<b>198+150</b>	<b>55</b>	<b>9</b>	<b>18</b>	<b>2.7</b>	<b>1.2</b>
198+100	55	17	27	2.6	1.2
198+050	55	39	39	3.4	1.6

### River stretch: rkm 196+000 - rkm 193+000

- (a) Characteristic cross-section profiles at critical sectors – hydromorphological changes in profiles (according to annual bathymetric survey)

- (b) Waterway data/available (reduced) fairway parameters assessed to the waterway class

rkm	B-theor	B-navigable	B-available	Hmax-available	Hmin-theor
	55	55			

**Explanation of values in tables with Waterway data/available (reduced) fairway parameters assessed to the waterway class**



















<b>rkm</b> –	Profile position
<b>B – theor</b> –	Defined (theoretical) fairway width
<b>B-navigable</b> –	Available waterway width corresponding to appropriate vessel draft at the low navigable water level LNL in defined (theoretical) fairway
<b>B-available</b> –	Available waterway width corresponding to appropriate vessel draft at the low navigable water level LNL in defined (theoretical) fairway in the whole cross section profile
<b>Hmax- available</b> –	Maximal depth in the available fairway corresponding to the low navigable water level LNL
<b>Hmin-teor</b> –	Minimal depth in the defined (theoretical) fairway corresponding to the low navigable water level LNL

*Note: Hydromorphological changes at specific sectors and parameters shown above were calculated in accordance with waterway class given in table below (ISRBC Decision 5/17 on Adoption of the Classification of the Sava River waterway), while the profiles with depicted morphological changes were provided by relevant waterway agencies from Croatia and Serbia*




















Section of the Sava River		Length (km)	Waterway Class
downstream (rkm)	upstream (rkm)		
<b>0.0</b> Sava Mouth	<b>81.0</b> Kamičak	81.0	Va
<b>81.0</b> Kamičak	<b>176.0</b> Rača	95.0	IV
<b>176.0</b> Rača	<b>196.0</b> Domuskela	20.0	III
<b>196.0</b> Domuskela	<b>313.7</b> Slavonski Šamac Šamac	117.7	IV
<b>313.7</b> Slavonski Šamac Šamac	<b>338.2</b> Oprisavci Rit kanal	24.5	III
<b>338.2</b> Oprisavci Rit kanal	<b>371.2</b> Slavonski Brod Brod	33.0	IV
<b>371.2</b> Slavonski Brod Brod	<b>594.0</b> Sisak	222.8	III




















## 2. MARKING PLAN




















### 2.1. CODES OF SIGNS USED IN MARKING PLAN



















MAIN SIGNS FOR WATERWAY MARKING	
A.1a	 No entry
A.2	 No overtaking
A.3	 No overtaking convoys by convoys
A.4	 No passing or overtaking
A.5	 No berthing (i.e. no anchoring or making fast to the bank)
A.6	 No anchoring or trailing of anchors, cables or chains
A.7	 No making fast to the bank
A.8	 No turning
A.9a	 Do not create wash
A.10	 No passing outside the area marked (in openings of bridges)
A.11	 Entry prohibited, but prepare to get underway
A.12	 Motorized crafts prohibited
A.13	 All sports or pleasure craft prohibited
A.14	 Water skiing prohibited
A.15	 Sailing vessels prohibited
A.16	 All craft other than motorized vessels or sailing craft prohibited
A.17	 Use of sailboats prohibited
A.18	 End of zone for high speed navigation of small sport and pleasure craft








Main signs for waterway marking (in accordance with Navigation rules on the Sava River):  
**A: Prohibitory signs;**  
**B: Mandatory signs;**  
**C: Restrictive signs;**  
**D: Recommndatory signs;**  
**E: Informative signs.**




















A.19	 No launching or beaching of vessels
A.20	 Water bikes prohibited
B.1	 Proceed in the direction shown by the arrow
B.2a	 Move to the side of the fairway on your port side
B.2b	 Move to the side of the fairway on your starboard side
B.3a	 Keep to the side of the fairway on your port side
B.3b	 Keep to the side of the fairway on your starboard side
B.4a	 Cross fairway to port
B.4b	 Cross fairway to starboard
B.5	 Stop as prescribed in Regulations
B.6	 Do not exceed the speed indicated (in km/h)
B.7	 Give a sound signal
B.8	 Keep a particularly sharp lookout
B.9a	 Do not enter or cross the main waterway until certain that this will not oblige vessels proceeding on it to change their course or speed
B.9b	 Do not enter or cross the main waterway until certain that this will not oblige vessels proceeding on it to change their course or speed
B.10	 Vessels proceeding on the main waterway must, if necessary, change course and speed to allow vessels to leave harbours or tributary waterways
B.11a	 Obligation to enter into radiotelephone link
B.11b	 Obligation to enter into a radiophone link on the fairway as indicated on the board
C.1a	 Depth of water limited

<b>C.1b</b>		Depth of water limited
<b>C.2a</b>		Headroom limited
<b>C.2b</b>		Headroom limited
<b>C.3a</b>		Width of passage or fairway limited
<b>C.3b</b>		Width of passage or fairway limited
<b>C.4</b>		There are restrictions on navigation: make enquiries
<b>C.5</b>		The fairway lies at a distance from the right (left) bank
<b>D.1a</b>		Recommended fairway in both directions
<b>D.1b</b>		Recommended fairway in both directions
<b>D.1c</b>		Recommended fairway only in the direction indicated (passage in the opposite direction prohibited)
<b>D.1d</b>		Recommended fairway only in the direction indicated (passage in the opposite direction prohibited)
<b>D.1e</b>		Recommended fairway only in the direction indicated (passage in the opposite direction prohibited)
<b>D.1f</b>		Recommended fairway only in the direction indicated (passage in the opposite direction prohibited)
<b>D.2a</b>		Recommendation to keep within the area indicated (in openings of bridges or weirs)
<b>D.3a</b>		You are recommended to proceed in the direction shown by the arrow
<b>E.1a</b>		Entry permitted (general sign)
<b>E.2</b>		Overhead cable crossing
<b>E.3</b>		Weir
<b>E.4a</b>		Ferry-boat not moving independently

















<b>E.4b</b>		Ferry-boat moving independently
<b>E.5</b>		Berthing (anchoring or making fast to the bank) permitted
<b>E.5.1</b>		Berthing permitted on the stretch of water of the breadth measured from, and shown on the board in meters
<b>E.5.2</b>		Berthing permitted on the stretch of the water bounded by the two distances measured from, and shown on the board in meters
<b>E.5.3</b>		Maximum number of vessels permitted to berth abreast
<b>E.5.4</b>		Berthing area reserved for pushing-navigation vessels that are not required to carry the marking
<b>E.5.5</b>		Berthing area reserved for pushing-navigation vessels that are required to carry one blue light or one blue cone
<b>E.5.6</b>		Berthing area reserved for pushing-navigation vessels that are required to carry two blue lights or two blue cones
<b>E.5.7</b>		Berthing area reserved for pushing-navigation vessels that are required to carry three blue lights or three blue cones
<b>E.5.8</b>		Berthing area reserved for vessels other than pushing-navigation vessels that are not required to carry the marking
<b>E.5.9</b>		Berthing area reserved for vessels other than pushing-navigation vessels that are required to carry one blue light or one blue cone
<b>E.5.10</b>		Berthing area reserved for vessels other than pushing-navigation vessels that are required to carry two blue lights or two blue cones
<b>E.5.11</b>		Berthing area reserved for vessels other than pushing-navigation vessels that are required to carry three blue lights or three blue cones
<b>E.5.12</b>		Berthing area reserved for all vessels that are not required to carry the marking
<b>E.5.13</b>		Berthing area reserved for all vessels that are required to carry one blue light or one blue cone
<b>E.5.14</b>		Berthing area reserved for all vessels that are required to carry two blue lights or two blue cones
<b>E.5.15</b>		Berthing area reserved for all vessels that are required to carry three blue lights or three blue cones
<b>E.6</b>		Anchoring or trailing of anchors, cables or chains permitted
<b>E.7</b>		Making fast to the bank permitted

E.7.1		Berthing area reserved for loading and unloading vehicles. (Maximum duration of berthing permitted may be added on an information plate below the board)
E.8		Turning area
E.9a		The waterways being approached are considered to be tributaries of the waterway
E.9b		The waterways being approached are considered to be tributaries of the waterway
E.10a		This waterway is considered to be a tributary of the waterway being approached
E.10b		This waterways is considered to be a tributary of the waterway being approached
E.11a		End of a prohibition or obligation applying to traffic in one direction only, or end of a restriction
E.11b		End of a prohibition or obligation applying to traffic in one direction only, or end of restriction
E.13		Drinking-water supply
E.14		Telephone
E.15		Motorized vessels permitted
E.16		Sports or pleasure craft permitted
E.17		Water skiing permitted
E.18		Sailing vessels permitted
E.19		Craft other than motorized vessels or sailing craft permitted
E.20		Use of sailboards permitted
E.21		Zone authorized for high speed navigation of small sport and pleasure craft
E.22		Launching or beaching of vessels permitted
E.23		Possibility of obtaining nautical information by radio-telephone on the channel indicated

E.24		Water bikes permitted
E.25		Available power supply
E.26		Winter harbour
E.26.1		Maximum number of vessels allowed in the winter harbour
E.27		Winter shelter
E.27.1		Maximum number of vessels allowed in the winter shelter - Maximum number of vessels permitted to berth abreast - Maximum number of rows of vessels permitted to berth abreast
		Kilometer mark
















































1.A		Red buoy with light
1.B		Red buoy without light
1.C		Red float with a topmark
1.D		Red spar
1.F		Buoyage and marking of danger points and obstacles: right-hand side - spar-buoy
1.F1		Buoyage and marking of danger points and obstacles: right-hand side - spar
2.A		Green buoy with light
2.B		Green buoy without light
2.C		Green float
2.D		Green spar
2.F		Buoyage and marking of danger points and obstacles: left-hand side - spar-buoy
2.F1		Buoyage and marking of danger points and obstacles: left-hand side - spar
3.A		Bifurcation buoy with light
3.B		Bifurcation buoy without light
3.C		Bifurcation float with a topmark
3.D		Bifurcation spar
3.E		Bifurcation of the fairway with mark that indicates on which side it is preferable to pass
3.F		Bifurcation of the fairway with mark that indicates on which side it is preferable to pass
3.F1		Bifurcation of the fairway with mark that indicates on which side it is preferable to pass

Signs for fairway marking:  
(in accordance with Navigation rules on the Sava River):  
**1-3: Floating signs for fairway marking;**  
**4-6: Marks on land indicating the position of the fairway in relation to the banks;**  
**8: Additional marking for navigation by radar**

3.E1		Bifurcation of the fairway with mark that indicates on which side it is preferable to pass
4.A		Fairway near the right bank - with light
4.B		Fairway near the right bank - without light
4.C		Marking cross-overs - Right bank: with light
4.D		Marking cross-overs - Right bank: without light
4.F		Unlighted bank mark on the right bank marking danger points and obstacles
5.A		Fairway near the left bank - with light
5.B		Fairway near the left bank - without light
5.C		Marking cross-overs - Left bank: with light
5.D		Marking cross-overs - Left bank: without light
5.F		Unlighted bank mark on the left bank marking danger points and obstacles
6.A		Buoyage and marking of danger points and obstacles: bifurcation with light
6.B		Buoyage and marking of danger points and obstacles: bifurcation without light
8.C		Additional marking for navigation by radar: Marking of bridge piers (if necessary)
8.C1		Additional marking for navigation by radar: Yellow floats with radar reflector (placed upstream and downstream from piers)
8.C2		Pole with radar reflector placed upstream and downstream from bridge piers




















































## 2.2. SAVA RIVER

### SAVA
















































DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	594.0			583.3	
	593.0			583.0	
	592.0		 	582.0	
	591.1			581.6	
	591.0			581.4	
	590.0			581.1	
	589.0			581.0	
	588.0			580.7	
	587.8	 		580.0	
	587.0			579.0	  
	586.5			579.0	
	586.0			578.2	  
  	585.0			578.2	
	585.0			578.0	
	584.5			577.0	
	584.1			576.2	
	584.0			576.0	  
	583.5			576.0	





















































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	575.1			566.0	
	575.0	  		565.1	
	575.0		  	565.0	
	574.8			565.0	
	574.5		 	564.5	
	574.0			564.0	
	573.5			563.7	
	573.0			563.0	
	572.0			562.9	
	571.0			562.6	
	570.0	  	  	562.0	
	570.0			562.0	
	569.0			561.0	
	568.0			560.0	
	567.3	  	  	559.0	
	567.3		 	559.0	
	567.0			558.0	
  	566.0			557.1	








































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	557.0			546.0	
	556.0			545.0	
	555.4			544.0	
	555.0			543.0	 
	554.8			542.1	
	554.2			542.0	
 	554.0			541.5	
	553.0	  		541.0	
	553.0			540.0	
	552.5			539.0	  
	552.0			539.0	
	551.0			538.0	
	550.5			537.9	
	550.0			537.0	
	549.0		 	536.0	
	548.0			535.2	
	547.0	 		535.0	
	546.0	  		534.0	












































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	533.0			520.0	
	532.6			519.0	
	532.1			518.5	  
	532.0	 		518.5	
	531.0	  		518.0	
	531.0			517.4	 
	530.0			517.0	
	529.0			516.3	
	528.8			516.2	
	528.0			516.0	
	527.0	 		515.9	
	526.0			515.8	
	525.5		 	515.6	 
	525.0			515.0	
	524.0			514.0	  
	523.0			514.0	  
	522.0			514.0	
	521.0			513.0	







































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	512.0			497.0	
	511.0	 		496.0	
	510.5			495.0	
	510.0			494.0	
	509.0			493.5	
	508.0			493.0	
	507.0			492.0	
	506.0			491.5	
	505.0			491.0	
	504.0			 490.0	
	503.0			 489.0	
	502.8			 488.0	
	502.0		  	487.0	
	501.0			487.0	
	500.9			486.7	
	500.0			486.0	
	499.0			485.0	  
	498.0			485.0	









































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	484.0			467.0	
	483.0			466.2	
	482.0			466.0	
	481.0			465.0	
	480.0			464.5	
	479.0			464.4	
	478.0			464.2	
	477.0			464.0	
	476.0			463.0	
	475.0			462.0	  
	474.0			462.0	
	473.0			461.0	 
	472.0			460.0	  
	471.0			460.0	
	470.0			459.0	
	469.0			458.0	
	468.0			457.0	 
	467.9			456.0	 

















**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	455.5			447.0	
	455.0			446.0	
	454.1			445.0	
	454.0			444.0	
	453.1			443.0	
	453.0			442.3	
	452.8			442.0	
	452.0			441.0	
	451.4			440.0	
	451.0			439.0	
	450.0			438.0	
	449.3			437.9	
	449.0	 		437.0	
	448.8			436.0	
	448.6			435.0	
	448.2			434.2	
	448.1			434.0	
	448.0			433.0	

**SAVA**

















DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	432.0			421.0	
	431.0			420.5	
	430.5			420.5	
	430.3			420.2	
	430.0			420.0	
	429.1			419.7	
	429.0			419.0	
	428.5			418.0	
	428.0	 		418.0	
	427.0			417.0	
	426.9			416.4	
	426.8			416.0	
	426.0	 		415.0	
				414.0	
	425.0			413.0	
	424.0			412.4	
	423.0			412.0	 
	422.0	 		411.0	

**SAVA**













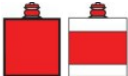
















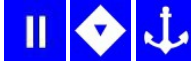







DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	410.0	km		395.0	km
	409.0	km		394.8	
	408.0	km		394.0	km
	407.0	km		393.0	km
	406.0	km		392.0	km
	405.0	km		391.0	km
	404.0	km		390.0	km
	403.0	km		389.9	
	402.0	km 		389.3	
	401.1			389.1	
km	401.0			389.0	km
	400.5			388.7	
	400.0	km 		388.6	
	399.0	km		388.3	
	398.0	km		388.0	km
	397.4			387.0	km
	397.0	km		386.0	km
	396.0	km		385.3	










































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	410.0	km		395.0	km
	409.0	km		394.8	
	408.0	km		394.0	km
	407.0	km		393.0	km
	406.0	km		392.0	km
	405.0	km		391.0	km
	404.0	km		390.0	km
	403.0	km		389.9	
	402.0	km 		389.3	
	401.1			389.1	
km	401.0			389.0	km
	400.5			388.7	
	400.0	km 		388.6	
	399.0	km		388.3	
	398.0	km		388.0	km
	397.4			387.0	km
	397.0	km		386.0	km
	396.0	km		385.3	























**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	385.0				
	384.1				
	384.0			376.0	
	383.2			375.0	
	383.1			375.0	
	383.0			374.9	
	382.0			374.8	
	381.6			374.7	
	381.0			374.5	
	380.8			374.2	
	380.0			374.1	
	379.4			374.1	
	379.0			374.0	
	378.6			373.8	
	378.1			373.8	
	378.0			373.6	
	377.0			373.0	
	376.7			372.0	

















































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	371.5			362.8	
	371.0			362.2	
	370.1			362.0	
	370.0			361.2	
	369.0			361.0	
	368.0			360.0	
	367.3			359.0	
	367.0			358.1	
	366.9			358.0	
	366.8			357.0	
	366.6			356.0	
	366.3			355.0	
	366.0			354.0	
	365.0			353.0	
	364.0			352.0	
	363.6			351.0	
	363.2			350.0	
	363.0			349.0	

**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	348.0	km		336.0	km
	347.0	km		335.0	km
	346.0	km		334.0	 km 
	345.0	km km 		334.0	
	345.0			333.0	km
	344.0	km		332.0	km
	343.5			331.5	 
	343.0	km		331.0	km
	342.8			330.3	 
	342.2			330.0	km
	342.0	km		329.1	 
	341.0	km		329.0	km 
	340.0	km 		328.6	
	339.0	km		328.3	
	338.0	 km		328.0	km
	337.2			327.9	
	337.0	km		327.7	
	336.7			327.0	km


























**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	326.9			317.1	
	326.0	<b>km</b> 		317.0	<b>km</b> 
	325.8			316.8	
	325.5			316.6	
	325.0	<b>km</b> 		316.5	
	324.9			316.1	
	324.0	 <b>km</b> 		316.0	<b>km</b> 
	323.0	<b>km</b>  		315.0	 <b>km</b> 
	322.1			314.0	<b>km</b> 
	322.0	<b>km</b> 		313.0	<b>km</b> 
	321.7			312.9	
	321.3			312.8	
	321.0	<b>km</b> 		312.5	
	320.8			312.1	
	320.5			312.0	<b>km</b> 
	320.0	 <b>km</b> 		311.8	  
	319.0	<b>km</b>  		311.3	
	318.0	<b>km</b> 		311.0	<b>km</b> 










































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	310.9			303.0	
	310.8			302.0	
	310.0			302.0	
	309.3			301.0	
	309.0			300.5	
	308.5			300.0	
	308.0			299.8	
	307.5			299.5	
	307.4			299.0	
	307.0			298.0	
	306.6			297.0	
	306.4			296.6	
	306.0			296.0	
	305.0			295.0	
	304.7			294.6	
	304.0			294.0	
	303.5			293.7	
	303.2			293.0	

**SAVA**












































DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	292.3			279.0	 km
	292.0	km		278.0	km
	291.2			277.1	 
	291.0	km		277.0	km
	290.0	km		276.8	
	289.0	km		276.5	
	288.5			276.4	
km	288.0			276.0	km
 	287.0	km		275.8	
	286.0	km		275.4	
	285.0	km		275.2	
	284.0	km		275.0	km
	283.0	 km		274.0	km
	282.0	km		273.0	km
	281.0	km		272.5	
	280.0	km		272.0	km
	279.9			271.6	
 	279.6			271.0	km

**SAVA**










































DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	270.0			258.0	
	269.0			257.5	
	268.7			257.0	
	268.0			256.7	
	267.0			256.4	
	266.0			256.0	
	265.7			255.0	
	265.0			254.9	
	264.0			254.0	
	263.0			253.0	
	262.9			252.0	
	262.7			251.0	
	262.5			250.0	
	262.0	 		249.9	
	261.6	 		249.0	
	261.0			248.0	
	260.0			247.0	
	259.0			246.0	











































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	245.0			230.0	
	244.0			229.0	
	243.7			228.6	
	243.0		 	228.4	
	242.0			228.2	
	241.0			228.1	
	240.0			228.0	 
	239.0	 		227.5	
	238.0			227.3	
	237.0			227.0	
	236.0			226.9	
	235.0		 	226.4	
	234.5		 	226.0	
	234.0			225.0	
	233.0			224.9	
	232.0			224.0	
	231.0			223.2	
	230.4			223.0	 







































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	222.2			211.5	
	222.0			211.0	
	221.4			210.7	
	221.0			210.0	
	220.8			209.0	
	220.0			208.5	
	219.7			208.0	
	219.0			207.0	
	218.0		  	206.0	
	217.0			206.0	
	216.7			205.0	
	216.0			204.0	  
	215.5			204.0	
	215.0			203.0	
	214.0			202.0	
	213.8			201.8	
	213.0			201.0	
	212.0			200.2	






































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	200.0			184.0	
	199.0			183.4	
	198.0			183.3	 
	197.0			183.1	
	196.0			183.0	
	195.0			182.0	
	194.0			181.0	
	193.0				180.0
	192.0		 		179.7
	191.0				179.0
	190.7				178.7
	190.0			178.0	
	189.0			177.0	 
	188.0				176.9
	187.0	 			176.0
	186.0			175.2	
	185.0			175.0	
	184.3				174.8







































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	174.0			161.0	
	173.4			160.0	
	173.0			159.0	
 	172.4			158.0	
	172.0			157.0	
	171.5			156.0	
	171.0			155.6	
	170.0			155.0	
	169.0		154.0		
	168.0		153.0	 	
	167.0		152.0		
	166.0			151.0	
	165.4			150.0	
	165.0		149.0		
	164.0		148.0		
	163.0		147.0		
	162.0		146.0		
	161.4		145.0		
















































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	144.0			135.9	
	143.0			135.7	
	142.0			135.0	
	141.0			134.8	
	140.0			134.4	
	139.9			134.0	
	139.3			133.0	
	139.0			132.0	
	138.9			131.0	
	138.9			130.0	
	138.8			129.0	
	138.5			128.0	
	138.4			127.0	
	138.1			126.0	
	138.0			125.0	
	137.0			124.0	
	136.6			123.0	
	136.0			122.0	







































**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	121.0			109.3	
 	120.0			109.0	
	119.0			108.4	
	118.0			108.0	
	117.0			107.5	
	116.0		 	107.0	
	115.0			107.0	
	114.0			106.2	
	113.0			106.0	
	112.5			105.0	
	112.0		 	104.5	
	111.1			104.0	
	111.0			103.0	
	110.7			102.4	
	110.6			102.0	
	110.3			101.0	
	110.2			100.9	
	110.0			100.0	

**SAVA**
































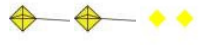









DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	99.7			91.3	
	99.0			91.0	
	98.9			90.1	
	98.5			90.0	
	98.4		  	89.0	
  	98.0			89.0	
	98.0			88.6	
	97.8			88.0	
	97.3			87.8	
	97.2			87.0	
	97.0			86.1	
	96.9			86.0	
	96.0			85.0	
	95.0			84.0	
	94.0		 	83.0	
	93.6		 	82.3	
 	93.0			82.0	
	92.0			81.0	  

**SAVA**


















































DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	81.0			68.0	
	80.0			67.0	
	79.0			66.0	
	78.3			65.0	
	78.0			64.0	
	77.0			63.0	
	76.0			62.0	
	75.3		 	61.0	
	75.0			60.0	
	74.2			59.0	
	74.1			58.6	
	74.0			58.0	
	73.0			57.3	
	72.8			57.0	
	72.0			56.0	
 	71.0			55.9	
	70.0			55.4	
	69.0			55.0	



**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	54.6			41.0	
	54.0			40.0	
	53.0			39.0	
	52.0			38.0	
	51.0			37.0	
	50.0			36.0	
	49.0			35.3	
	48.3			35.0	
	48.0			34.0	
	47.0			33.0	
	46.0	 		32.9	
	45.0			32.0	
	44.0				
	43.1			31.0	
				30.8	
	43.0			30.0	
	42.5	 		29.0	
	42.5	 		28.2	
	42.0			28.0	

**SAVA**

DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	27.9			16.2	
	27.2			16.0	
 	27.0			15.5	
	26.0			15.4	 
 	25.0			15.4	 
 	24.3			15.4	
	24.0			15.3	
	23.0			15.1	
	22.0			15.0	  
	21.0			15.0	
	20.0			14.0	
	19.6			13.0	
	19.3			12.6	
	19.0			12.0	 
  	18.0			11.0	
	17.6			10.0	
	17.0			9.0	
	16.5			8.0	

**SAVA**












DESNA STRANA	udaljenost rkm	LIJEVA STRANA	DESNA STRANA	udaljenost rkm	LIJEVA STRANA
	7.4			2.7	
	7.4			2.6	
	7.0			2.5	
	6.3			2.0	
	6.0			1.6	
	6.0			1.5	
	5.8			1.4	
	5.0			1.0	
	5.0			0.9	
	5.0			0.7	
	4.0			0.7	
	3.9			0.7	
	3.6			0.5	
	3.2			0.4	
	3.1			0.2	
	3.0			0.0	
	3.0				
	2.8				

## 2.3. KUPA RIVER

### KUPA

RIGHT BANK	Distance rkm	LEFT BANK	RIGHT BANK	Distance rkm	LEFT BANK
	140.0	km		70.0	km
km	139.0		km	65.0	
	138.0	km		60.0	km
	137.0	km	km	55.0	
	136.0	km		50.0	km
km	135.0			45.0	km
	130.0	km	km	40.0	
km	125.0			35.0	km
	120.0	km	km	30.0	
	115.0	km		25.0	km
km	110.0			20.0	km
	105.0	km	km	15.0	
km	100.0		km	10.0	
	95.0	km	km	9.0	
	90.0	km	km	8.0	
km	85.0			7.0	km
	80.0	km		6.0	km
	75.0	km		5.0	km

**KUPA**

RIGHT BANK	Distance rkm	LEFT BANK	RIGHT BANK	Distance rkm	LEFT BANK
	4.5				
	4.0				
	3.5				
	3.0				
	2.0				
	1.9				
	1.8				
	1.5				
	1.1				
	1.0				

**2.4. SUMMARY OF USED MARKING SIGNS BY TYPE**

<b>SAVA RIVER</b>	rkm 594,0 – rkm 0,0	<b>Croatia</b>	<b>B&amp;H</b>	<b>Serbia</b>	<b>All</b>
<b>Type of signs</b>	<b>Description</b>				<b>Sum</b>
Main signs for waterway marking	Prohibitory, mandatory, restrictive, recommendatory, informative signs	124	54	138	316
Buoyage of the waterway	Buoys with light, Buoy without light, Floats and spars	77	65	41	183
Marks on land indicating the position of the fairway in relation to the banks	On the water, banks, with lights and without lights	37	34	23	94
Signs for marking danger points and obstacles	Unlighted bank mark	0	4	16	20
Additional marking for navigation by radar	Radar reflectors on the bridge piers	10		12	22
Signs on the water for marking broad waterways and lakes		0	0	0	0
Extraordinary signs	Kilometer mark	252	149	196	597
	<b>Σ</b>	<b>490</b>	<b>316</b>	<b>426</b>	<b>1232</b>
<b>KUPA RIVER</b>	rkm 5,0 – rkm 0,0				
<b>Type of signs</b>	<b>Description</b>				<b>Sum</b>
Main signs for waterway marking	Prohibitory, mandatory, restrictive, recommendatory, informative signs	6			6
Buoyage of the waterway	Buoys with light, Buoy without light, Floats and spars	4			4
Marks on land indicating the position of the fairway in relation to the banks	On the water, banks, with lights and without lights	0			0
Signs for marking danger points and obstacles	Unlighted bank mark	0			0
Additional marking for navigation by radar	Radar reflectors on the bridge piers				
Signs on the water for marking broad waterways and lakes					
Extraordinary signs	Kilometer mark	40			40
	<b>Σ</b>	<b>50</b>			<b>50</b>
<b>Σ (Sava and Kupa)</b>		<b>540</b>	<b>317</b>	<b>422</b>	<b>1282</b>

## **2.5. EXPLANATORY NOTES**

### **Note form Croatia:**

Marking plan on the Sava River from rkm 594.0 to rkm 343.0 for the year 2022 was prepared on grounds of the actual state of the waterways and navigation safety objects on the Sava River, as well as the perceived morphological changes of the riverbed.

While preparing the Marking Plan, all valid regulations and rulebooks related to navigation on inland waterways of the Republic of Croatia, Bosnia and Herzegovina and Republic of Serbia, as well as the decisions of the Sava Commission, were taken into account.

All changes of the Marking Plan to be realized during the year, as well as the data on state of the waterways, will be timely addressed through the official state institutions to the authorized bodies for navigation safety – Port Masters Offices – which will further inform all other navigation actors by the Notices to Skippers (NtS) about the arisen changes.

All changes in the Marking Plan will be timely presented in the appropriate application on the Sava Commission web site too.

### **Note form Serbia:**

Marking Plan and Program of maintenance of the marking system of the inland waterways on the Sava River from rkm 210.8 to rkm 0.0 (through Republic of Serbia) for the year 2022 were prepared on grounds of the actual state of the waterways and navigation safety objects on the Sava River, as well as the perceived morphological changes of the riverbed.

In preparation of the Marking Plan, all valid regulations and rulebooks related to navigation on inland waterways of the Republic of Serbia, as well as the decisions of the Sava Commission, were taken into account.

All changes of the Marking Plan to be realized during the year, as well as the data on state of the waterways, will be timely addressed through the official state institutions to the authorized bodies for navigation safety – Port Masters Offices – which will further inform all other navigation actors by the Notices to Skippers (NtS) about the arisen changes.

All changes in the Marking Plan will be timely presented in the appropriate application on the Sava Commission web site too.

### 3. REGULATION MEASURES PLAN FOR THE MAINTENANCE OF REQUIRED DIMENSIONS OF THE SAVA RIVER FAIRWAY

#### 3.1. MAINTENANCE OF DEFINED PARAMETERS OF THE FAIRWAY

##### 3.1.1 Dredging works planned in Croatia

Name of the sector	Section	Dredging quantities (m3)	Bank side	Comment
<b>Migalovci – ušće Ukrine</b>	380,7 - 382,0	12.000	LB/RB	Dredged material to be disposed of along the LB on the Croatian side
<b>Grić</b>	394,0 – 395,0	1.000	RB	Dredged material to be disposed of along the LB on the Croatian side
<b>Dolina</b>	445,5 - 449,5	39.000	LB/RB	Dredged material to be disposed of along the LB on Croatian side
<b>Višnjica</b>	523,0 - 525,0	12.000	LB/RB	Dredged material to be disposed along the LB/RB
<b>Lonja - Strmen</b>	552,0 - 556,0	62.000	LB/RB	Dredged material to be disposed of along the LB
<b>Gušće</b>	573,7 - 576,0	25.000	LB/RB	Dredged material to be disposed along the LB/RB

##### 3.1.2. Dredging works planned in Bosnia and Herzegovina

No information on dredging works on B&H side have been provided.

##### 3.1.3. Dredging works planned in Serbia

In accordance with long-term determination of MCTI and Directorate for inland waterways to assure required fairway parameters on critical sectors by intensive dredging works, during the period from October 2020 to June 2021 as part of the regular fairway technical maintenance, the dredging works of the waterway on the Sava River, on sector "Klenak" (km 104+000 - km 107+500) were performed. The final hydrographic measurement was made by the Directorate for Waterways, after which it was concluded that of the total transported and disposed amount from the fairway on sector "Klenak" was 102,500 m<sup>3</sup>.

Commercial dredging will be regularly performed on Sava River in accordance with new relevant procedures ("Rulebook on the establishment of the river sediment extraction plan" - "Official gazette RS", No. 107 - 12. Nov, 2021). Those procedures include conditions prescribed, among others, by MCTI-Directorate for inland waterways and are created having in mind morphological changes in riverbed and fairway position and its required class. Therefore, additional dredging quantities with dual purpose (for works of public importance and fairway maintenance) will be performed in 2022.



## **3.2. MAINTENANCE OF EXISTING AND CONSTRUCTION OF NEW RIVER ENGINEERING STRUCTURES**

### **3.2.1. Construction works planned in Croatia**

Agency for Inland Waterways, i.e. the Ministry of the Sea, Transport and Infrastructure does not plan to build and maintain navigation security facilities in 2022. Certain works on the bank regulation - restoration and construction of the embankment - are planned by Croatian Waters in the framework of the program for protection against the harmful effects of waters.

### **3.2.2. Construction works planned in Bosnia and Herzegovina**

No information on construction of new or maintenance of existing river engineering structures on BIH side have been provided.

### **3.2.3. Construction works planned in Serbia**

No maintenance of existing or construction of new river engineering works are planned for the year 2022 for the maintenance of required dimensions of the Sava river fairway.