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MINISTERUL TRANSPORTURILOR  
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Project: MONITORING THE ENVIRONMENTAL IMPACT OF THE WORKS REGARDING THE IMPROVING OF THE NAVIGATION CONDITIONS ON THE DANUBE RIVER BETWEEN CALARASI AND BRAILA, km 375-175

MONTHLY REPORT No 76: 1 - 31 August 2017

## MONITORING THE ENVIRONMENTAL IMPACT OF THE WORKS REGARDING THE IMPROVING OF THE NAVIGATION CONDITIONS ON THE DANUBE RIVER BETWEEN CALARASI AND BRAILA, KM 375-175

### MONTHLY REPORT NO. 76

01 - 31 August 2017



FINAL VERSION



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Project: MONITORING THE ENVIRONMENTAL IMPACT OF THE WORKS REGARDING THE IMPROVING OF THE NAVIGATION CONDITIONS ON THE DANUBE RIVER BETWEEN CALARASI AND BRAILA, km 375-175

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2007-2013



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## 1. INTRODUCTION

### 1.1. Brief presentation of monitored objectives

I. *This report presents the monitoring objectives for the period 01-31 August 2017.*

For post-construction phase the monitoring frequencies for the environmental components are presented in Table 1.1.

#### II. *3D numerical modeling*

During this period have been conducted activities for bathymetric data acquisition.

In addition to organizing and properly conducting the field campaigns, a permanent cooperation has been ensured between the Coordinator and Partners.

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Table 1.1. Post-construction phase - monitoring objectives - frequencies with differences in the Critical Points

MONITORING OBJECTIVES			Critical points								
			Main Critical Points			Secondary Critical Points					
			01	02	10	03A	03B	04A	04B	07	
A.	AIR		S	S	S	Q	Q	Q	Q	Q	
B.	NOISE		S	S	S	Q	Q	Q	Q	Q	
C.	SOIL		S	S	S	Q	Q	Q	Q	Q	
D.	HYDROMORPHOLOGY	Water level	C	C	C	Q	Q	Q	Q	Q	
		Water velocity	M	M	M	Q	Q	Q	Q	Q	
		Turbidity	C	C	C	Q	Q	Q	Q	Q	
		2D bathymetric elevation	M	M	M	Q	Q	Q	Q	Q	
		3D bathymetric elevation	Q	Q	Q	Not the case					
E.	WATER QUALITY		Q	Q	Q	S	S	S	S	S	
	SEDIMENTS		Q	Q	Q	S	S	S	S	S	
F.	AQUATIC FLORA		August			Q	Q	Q	Q	Q	
	AQUATIC FAUNA		Q	Q	Q	Q	Q	Q	Q	Q	
	F. is STURGEONS AND BARBELL	STURGEONS	Two seasons / year (February - May / August - December)			Two seasons / year (February - May / August - December)					
		BARBELL	One season/year April- May (breeding season)			One season/year April- May (breeding season)					
	F. i OTHER FISH SPECIES		Annually (April- May, July - September)			Annually (April- May, July - September)					
G.	TERRESTRIAL FLORA		Annually in July			Annually in July					
	TERRESTRIAL FAUNA/ AVIFAUNĂ		Annually (April - June, September - October, January)			Annually (April - June, September - October, January)					
H.	NATURA 2000 SITES	SCI	ICHTYOFAUNA	Annually (April- May, July - September)			Annually (April- May, July - September)				
			AQUATIC FLORA	July			Q	Q	Q	Q	Q
			AQUATIC FAUNA	Q	Q	Q	Q	Q	Q	Q	Q
			TERRESTRIAL FLORA	Annually in July			Annually in July				
		TERRESTRIAL FAUNA	Annually (April - June, September - October, January)			Annually (April - June, September - October, January)					
	SPA	AVIFAUNĂ	Annually (April - June, September - October, January)			Annually (April - June, September - October, January)					
J.	3D numerical modeling		M								

NOTĂ: QC - quasi continuous M- monthly Q - quarterly S - semester C - continuous



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## 1.2. Overview

The elements related to the sampling periods for the objectives monitored in August 2017 for post-construction period are presented in Table 1.2.

Table 1.2. Objectives monitored during the period of 01.08-31.08.2017

Objectives monitored		Sampling period / ongoing activities	Campaign	Critical Points							
				Main Critical Points			Secondary Critical Points				
				01	02	10 <sup>*)</sup>	03A	03B	04A	04B	07
A.	AIR	18, 23.08.2017	C67	YES	YES	NO	NO	NO	NO	NO	NO
B.	NOISE	18, 23.08.2017	C70	YES	YES	NO	NO	NO	NO	NO	NO
C.	SOIL	-	-	NO	NO	NO	NO	NO	NO	NO	NO
D.	HYDROMORPHOLOGY	04, 07-10, 18, 23-25.08.2017	C73	YES	YES	NO	NO	NO	NO	NO	NO
E.	WATER QUALITY	-	-	NO	NO	NO	NO	NO	NO	NO	NO
	SEDIMENTS	-	-	NO	NO	NO	NO	NO	NO	NO	NO
F.	AQUATIC FLORA	-	-	NO	NO	NO	NO	NO	NO	NO	NO
	AQUATIC FAUNA	-	-	NO	NO	NO	NO	NO	NO	NO	NO
	F.is. STURGEONS	21, 22, 23, 27.08.2017	C34	YES	YES	NO	YES	YES	YES	YES	YES
	F.is. BARBELL	-	-	NO	NO	NO	NO	NO	NO	NO	NO
	F.i. OTHER FISH SPECIES	-	-	NO	NO	NO	NO	NO	NO	NO	NO
G.	TERRESTRIAL FLORA	-	-	NO	NO	NO	NO	NO	NO	NO	NO
	TERRESTRIAL FAUNA/ AVIFAUNĂ	-	-	NO	NO	NO	NO	NO	NO	NO	NO
H.	NATURA 2000 SITES	-	-	NO	NO	NO	NO	NO	NO	NO	NO
I.	BUILDING SITE	-	-	NO	NO	NO	NO	NO	NO	NO	NO

NOTE:

<sup>\*)</sup> At critical point CP10, post-construction monitoring period was ended in August 1<sup>st</sup> 2017

YES - samples were taken / activities were conducted in the field

NO - no samples taken / no activities conducted in the field



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Means of transportation used for sampling/conducting activities and samples analysis are presented in Table 1.3.

**Table 1.3 Means of transportation**

Field	Transportation means
WATER	trimaran type boat with 25 CP engine
	Laguna type boat with 25 CP engine
	Lotus type boat with 20 CP engine
	Boat - autolaboratory - with trailer - RANIERI CLF22 model, Suzuki engine, 175 CP
	Boat ANA 5.0 with trailer, Suzuki engine, 40 CP
	Boat ANA 5.5 with trailer, Suzuki engine, 70 CP
LAND	Autolaboratory - Pickup jeep Toyota Hilux Double Cab 4x4
	Autolaboratory - Jeep Toyota LandCruiser
	Autolaboratory for air monitoring
	Autolaboratory for water and soil monitoring

## 2. STATE OF THE PROGRESS ACTIVITIES

### 2.1. State and progress on each activity / critical point on specific monitoring objectives

The equipments used for sampling/ongoing activities and samples analysis are presented in table 2.1.

Table 2.1 Main devices

Objectives monitored		Sampling equipment	Laboratory equipments / ongoing activities
A.	AIR	<ul style="list-style-type: none"> <li>- LECKEL dust sampler</li> <li>- Auto-laboratory</li> <li>- Desaga pump</li> <li>- GPS</li> <li>- Autolaboratory for air monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- Analytical balance KERN 770-14</li> <li>- Atomic absorption spectrometer with graphite furnace AAS - UNICAM 939</li> </ul>
B.	NOISE	<ul style="list-style-type: none"> <li>- Sound Level Meter and Microphone, Brüel &amp; Kjær Denmark</li> <li>- GPS</li> </ul>	
C.	SOIL	<ul style="list-style-type: none"> <li>- Burkle sampler</li> <li>- GPS</li> </ul>	<ul style="list-style-type: none"> <li>- ION-CROMATOGRAPH DIONEX ICS 1500 - anions, cations</li> <li>- Multi N/C Analytic Jena (total carbon analyzer and organic carbon)</li> <li>- Spectrometer ATI UNICAM UV-VIS</li> <li>- Mass Spectrometer with inductively coupled plasma ICPMS Nexlon 350x equipped with hydrides generator system and autosampler system with autodiluter</li> </ul>
D.	HYDROMORPHOLOGY	<ul style="list-style-type: none"> <li>- Portable Turbidimeter type VELP SCIENTIFICA</li> <li>- mini ADP SONTEK</li> <li>- Monitoring systems for turbidity and level</li> <li>- Monitoring systems for flow - velocities</li> <li>- Portable Turbidimeter HANNA Instruments</li> <li>- ADCP SONTEK River Surveyor R9</li> <li>- Multiparameter YSI for turbidity and level measurements</li> <li>- Bathimetric System 3D - Kongsberg GeoSwath Plus Compact, 250 kHz</li> <li>- Acoustic Doppler Current Profiler (ADCP) - Teledyne RD Instruments RiverRay</li> <li>- ROV (Remote Operate Vehicle) - ROVBUILDER Mini 600</li> <li>- GPS</li> </ul>	<ul style="list-style-type: none"> <li>- Turbidimeter HACH RATIO/RX</li> <li>- Device for water quality parameters measurements, type 1, Manta 2-Sub3.5+Amphibian 2</li> <li>- Device for water quality parameters measurements, type 2, Manta 2-Sub4.0+Amphibian 2</li> </ul>
E.	WATER QUALITY	<ul style="list-style-type: none"> <li>- Ruttner sampler</li> <li>- GPS</li> </ul>	<ul style="list-style-type: none"> <li>- Spectrometer with atomic absorbtion VARIAN</li> <li>- Spectrometer CARY BIO 300 U.V.-VIS</li> <li>- Spectrofotometer with atomic absorbtion - with flame, graphite oven, hydrides system with amalgamation and automatic system for solids CONTRAA</li> <li>- Automatic analyzer in continous segmented flux model SAN++</li> <li>- Mineralization system Speedwave Four with microwave</li> </ul>
	SEDIMENTS	<ul style="list-style-type: none"> <li>- Petersen sampler</li> <li>- GPS</li> </ul>	<ul style="list-style-type: none"> <li>- Cryo - drying system ALPHA 2-4 LSCplus</li> <li>- Gas chromatograph coupled with mass spectrometer for dioxine screening, CPF, CPB and pesticides, with autosampler r-GC MS MS 15-02</li> <li>- Drying stove</li> <li>- Sieving system for sediment samples</li> <li>- Ethos - digester with microwave for sediments</li> <li>- GC-MS-VARIAN</li> <li>- Spectrometer with atomic absorbtion SOLAAR M5</li> <li>- Mineralization System Speedwave Four with microwave</li> </ul>



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Objectives monitored		Sampling equipment	Laboratory equipments / ongoing activities
F.	AQUATIC FLORA	<ul style="list-style-type: none"> <li>- planktonic nets</li> <li>- Patalas sampler</li> <li>- dredges 20cmx50 cm</li> <li>- Square wooden frame, with surface of 1m<sup>2</sup></li> <li>- GPS</li> </ul>	<ul style="list-style-type: none"> <li>- reverse microscope ZEISS</li> <li>- OPTIKA B-600T microscope</li> <li>- KRUS microscope</li> <li>- Canon A570 IS camera for microscope</li> </ul>
	AQUATIC FAUNA	<ul style="list-style-type: none"> <li>- zooplanktonic nets</li> <li>- zoobenthic nets</li> <li>- Petersen sampler</li> <li>- benthos grabbing dredges</li> <li>- benthos sampling probe</li> <li>- GPS</li> </ul>	<ul style="list-style-type: none"> <li>- Stereomicroscope Olympus</li> <li>- Binocular Zeiss</li> <li>- Microscope ZEISS</li> <li>- Canon A570 IS camera for microscope</li> <li>- magnifying glass</li> </ul>
	F.is. STURGEONS AND BARBELL	<ul style="list-style-type: none"> <li>- Fixed monitoring system DKTB</li> <li>- Floating monitoring system type DKMR-01T</li> <li>- Complex monitoring, alarming and control system type DK-PRB-01U</li> <li>- Monitoring system with ultrasonic transmitter type 40</li> <li>- Monitoring system with ultrasonic transmitter type 60</li> <li>- Mobile receiver for sturgeons' telemetry Vemco VR 100</li> <li>- GPS</li> </ul>	<ul style="list-style-type: none"> <li>- Reception station of WR2W</li> <li>- VR100 mobile receptor</li> <li>- Multiparameter YSI</li> <li>- Endoscope for sturgeon gender determining WELLD WED 3000V</li> <li>- Radar Lowrance Elite 9 CHIRP - 4 pieces</li> </ul>
	F.i. OTHER FISH SPECIES	<ul style="list-style-type: none"> <li>- High power electrical fishing device Hans Grassl EL 65 II GI</li> <li>- Low power electrical fishing device Hans Grassl EL 60 II HI</li> <li>- Ihtyometer</li> <li>- Electronic scale</li> <li>- GPS</li> <li>- binocular microscope</li> <li>- stereo microscope</li> </ul>	
G.	TERRESTRIAL FLORA	Binoculars, GPS, notebook, standard forms, camera	
	TERRESTRIAL FAUNA/ AVIFAUNĂ	Binocular, lunette, camera, GPS	
H.	NATURA 2000 SITES	Binocular, lunette, camera, GPS	
I.	BULDING SITE ACTIVITY	<ul style="list-style-type: none"> <li>- DESAGA pump</li> <li>- Autolaboratory</li> <li>- Sound Level Meter and Microphone, Brüel &amp; Kjær</li> <li>- dust sampler LECKEL</li> </ul>	

## 2.1.1 Critical Point 01 monitoring, Bala branch area and Carageorghe sand strip

### 2.1.1.A. Air quality monitoring

The activities carried out during 01-31.08.2017 related to air quality monitoring for critical points CP01 and CP02 are presented in Table 2.1.1.A.1.

Table 2.1.1.A.1 Specific objective: air quality monitoring

No.	Activities
1.	Organizing the measurements campaign (Table 1.2)
2.	Conducting the air sampling campaign (air sampling bulletins - Annex 6.2.1)
3.	Laboratory analysis for collected samples
4.	Preliminary statistical processing for data measured in the field
5.	Contribution to Monthly Report 76
6.	Contribution to Interim Report 17

According to post-construction monitoring objectives, in August 2017 for air quality monitoring in this main critical point CP 01 is provided a sampling campaign according to Table 1.2. In post-construction period (in this main critical point CP01 was made the reception of the construction work) frequency is biannual (as Table 1.1).

In Table 2.1.1.A.2. is presented the number of air samples collected/“in situ” measurements performed during 01-31 August 2017.

Table 2.1.1.A.2. Air samples repartition

Type of Critical Point	Critical Point (PC)	Samples collected for laboratory analysis	Number of “in situ” measurements
Main	01	6	6

For each sampling point, have been determined geographical coordinates. Samples were labeled according to the encoding and labeling instructions. For each sample/measurement, a bulletin has been completed, see Annex 6.2.1.

### 2.1.1.B. Noise monitoring

The activities carried out during 01-31.08.2017 related to noise level monitoring, for each critical point are summarized in Table 2.1.1.B.1.

**Table 2.1.1.B.1. Specific objective: noise monitoring**

No.	Activities
1.	Measurements campaign for noise level in zero naval traffic / naval traffic
2.	Primary processing for the data obtained after measurements
3.	Field bulletins for noise measurement - Annex 6.2.2
4.	Contribution to Monthly Report 76
5.	Contribution to Interim Report 17

According to post-construction monitoring objectives, in August 2017 for noise level monitoring in this main critical point CP 01 is provided a measurements campaign as presented in Table 1.2. In post-construction period (in this main critical point CP01 was made the reception of the construction work) frequency is biannual (as Table 1.1).

In this monitoring campaign for noise level, measurements were made as presented in Table 2.1.1.B.2.

**Table 2.1.1.B.2. Noise level monitoring**

Type of Critical Point	Critical Point (PC)	No. of measurements	
		zero naval traffic	naval traffic
Main	01	6	0

On Ostrovul Turcescu were made 2 of 6 measurements, other 2 measurements were carried out on Danube left bank. Two measurements were made on Danube right bank.

For each sampling point has been established geographic coordinates, then trans-calculated in STEREO'70 projection system. The measurements have been coded according to the encoding instructions. Also, for each measurement a report for noise level has been completed, see Annex 6.2.2.

### 2.1.1.C. Soil quality monitoring

Activities performed during 01/31.08.2017, regarding soil quality monitoring, for each critical point, are summarized in Table 2.1.1.C.1.

**Table 2.1.1.C.1. Specific objective: soil quality monitoring**

No.	Activities
1.	Contribution to Monthly Report 76
2.	Contribution to Interim Report 17

During this period no soil sampling have been made from this critical point.

#### 2.1.1.D. Hydromorphological monitoring

The activities from this reporting period are synthetically presented in Table 2.1.1.D.1:

Overall 3 main activities have been carried out:

- Single-beam bathymetric measurements
- Flow and velocity measurements on the monitoring sections;
- Turbidity and level continuous measurements in the 4 automatic hydrometric stations have continued.

Table 2.1.1.D.1. Specific objective: hydromorphological monitoring

No.	Activities
1.	Single-beam bathymetric measurements
2.	Flow and velocity measurements on the monitoring sections
3.	Turbidity and level continuous measurements in the 4 automatic hydrometric stations

During this reporting period, there have been processed the bathymetric measurements in order to investigate the impact of the sand sacks depleted in the bottom sill area.

#### 2.1.1.E. Water and sediments monitoring

The activities carried out during 01/31.08.2017, related to water and sediments quality monitoring, in this critical point are summarized in Table 2.1.1.E.1.

Table 2.1.1.E.1. Specific objective: water and sediments quality monitoring

No.	Activities
1.	Contribution to Monthly Report 76
2.	Contribution to Interim Report 17

During this period no water and sediment sampling have been made from this critical point.

#### 2.1.1.F. Aquatic flora and fauna monitoring

In reporting period no sampling has been made.



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### 2.1.1.F.is. Sturgeons and barbell migration monitoring

Authorized fishermen have conducted scientific fishing for sturgeon species throughout the month. Since the actual autumn migration is evident only in October-November, a single specimen of stellate sturgeon was captured and tagged for migration monitoring. In order to determine behavior in the first post-tagging period (upstream or downstream migration) and to protect it from possible poaching, the specimen was tracked with VR100 device. Also, monitoring systems at this critical point have been downloaded to see if some sturgeons tagged in previous campaigns have returned.

Regarding office activities, have continued the elaboration of Interim Report 17.

### 2.1.1.F.i. Other fish species monitoring

In August were processed the data from previous months and interpretation have been made regarding distribution, abundance and biomass for captured ichthyofauna species.

### 2.1.1.G. Terrestrial flora and fauna monitoring

#### 2.1.1.G.1 Terrestrial flora

Activities performed during this reporting period, regarding terrestrial flora monitoring are presented in Table 2.1.1.G.1.1.

Table. 2.1.1.G.1.1 Specific objective: Terrestrial flora monitoring

No.	Activities
1.	Identification and verification of polymorphic plant taxa, hard to identify on the field
2.	Introduction of polymorphic vegetal taxa, as well as field recorded parameters in the database

#### 2.1.1.G.2 Terrestrial fauna/ Avifauna

During this period no activities have been made regarding avifauna monitoring.

### 2.1.1.H. Natura 2000 sites monitoring

In August 2017 were not been performed any activities on Natura 2000 sites monitoring.

#### 2.1.1.I. Working site activities monitoring and intervention plan compliance in case of accidental pollution

Due to completion of hydrotechnical construction, has not been necessary the construction

site activity monitoring. Works reception have been made in April 27<sup>th</sup>, 2016.

## 2.1.2. Critical Point 02 monitoring, Epurașu Island area (Lebăda)

### 2.1.2.A. Air quality monitoring

The activities carried out during 01-31.08.2017 related to air quality monitoring in this critical point are those presented in Table 2.1.1.A.1.

According to post-construction monitoring objectives, in August 2017 for air quality monitoring in this main critical point CP02 is provided a sampling campaign according to Table 1.2. In post-construction period (in this main critical point CP02 was made the reception of the construction work) frequency is biannual (as Table 1.1).

In Table 2.1.2.A.1. is presented the number of air samples collected/“in situ” measurements made during 01-31 August 2017.

Table 2.1.2.A.1. Air samples repartition

Type of Critical Point	Critical Point (PC)	Samples collected for laboratory analysis	Number of “in situ” measurements
Main	02	6	6

For each sampling point, have been determined geographical coordinates. Samples were labeled according to the encoding and labeling instructions. For each sample/measurement, a bulletin has been completed, see Annex 6.2.1.

### 2.1.2.B. Noise monitoring

The activities carried out in reporting period, regarding noise level monitoring, in this critical point are those presented in Table 2.1.1.B.1.

According to post-construction monitoring objectives, in August 2017 for noise level monitoring in this main critical point CP 02 is provided a measurements campaign according to Table 1.2. In post-construction period (in this main critical point CP02 was made the reception of the construction work) frequency is biannual (as Table 1.1).

In this campaign for noise level monitoring, measurements were conducted, as presented in Table 2.1.2.B.1.

Table 2.1.2.B.1. Noise level monitoring

Type of Critical Point	Critical Point (PC)	No. of measurements	
		zero naval traffic	naval traffic
Main	02	6	0

On Epurașu Island 2 of the 6 measurements were made. Two other measurements were made on the right bank of the Danube and the same number on the left bank.

For each sampling point has been established geographic coordinates, then trans-calculated in STEREO'70 projection system. The measurements have been coded according to the encoding instructions. Also, for each measurement a report for noise level has been completed, see Annex



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## 6.2.2.

### 2.1.2.C. Soil quality monitoring

The activities carried out during reporting period, regarding soil quality monitoring, in this critical point are summarized in Table 2.1.1.C.1.

During this period no soil sampling have been made.

### 2.1.2.D. Hydromorphological monitoring

The activities from this reporting period are synthetically presented in Table 2.1.2.D.1:

Overall 3 main activities have been carried out:

- Single-beam bathymetric measurements;
- Flow and velocity measurements on the monitoring sections;
- Turbidity and level continuous measurements in the 3 automatic hydrometric stations have continued.

Table 2.1.2.D.1. Specific objective: hydromorphological monitoring

No.	Activities
1.	Single-beam bathymetric measurements of high resolution
2.	Flow and velocity measurements on the monitoring sections
3.	Turbidity and level continuous measurements in the 3 automatic hydrometric stations

In August 2017 , were made mainly ADCP measurements (flow rates/velocities) as presented in Specifications. Results will be presented in Interim Report for this month.

### 2.1.2.E. Water and sediments monitoring

Activities performed during the reporting period, regarding water and sediment quality monitoring, reported to this critical point are those presented in Table 2.1.1.E.1.

During this period no sampling activities have been made for water and sediments.

### 2.1.2.F. Aquatic flora and fauna monitoring

In reporting period no sampling have been made.

#### 2.1.2.F.is. Sturgeons and barbell migration monitoring

In CP 02 have been monitored sturgeons migration with the monitoring systems placed on the Old Danube. Systems were downloaded in order to collect data on sturgeons' migration.



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### 2.1.2.F.i. Other fish species monitoring

In August were processed the data from previous months and were made interpretation regarding distribution, abundance and biomass for ichthyofauna captured species.

### 2.1.2.G. Terrestrial flora and fauna monitoring

#### 2.1.2.G.1 Terrestrial flora

Activities from this reporting period, regarding terrestrial flora monitoring are presented in 2.1.2.G.1.1.

#### 2.1.2.G.2 Terrestrial fauna/ Avifauna

During this period no activities have been made for avifauna monitoring.

### 2.1.2.H. Natura 2000 sites monitoring

During this period no activities regarding Natura 2000 sites monitoring were made.

### 2.1.2.I. Work site activities monitoring and intervention plan compliance in case of accidental pollution

Due to completion of hydrotechnical construction, has not been necessary the construction site activity monitoring. Works reception have been made in November 26<sup>th</sup>, 2015.

### 2.1.3. Critical point 10 monitoring, Caleia Branch (Ostrovu Lupu)

#### 2.1.3.A. Air quality monitoring

The activities carried out during reporting period 01-31.08.2017 regarding air quality monitoring, in this critical point CP10 are summarized in Table 2.1.1.A.1.

Table 2.1.3.A.1. Specific objective: monitorizarea calității aerului

No.	Activities
1.	Contribution to Monthly Report 76
2.	Contribution to Interim Report 17

For critical point CP 10, in August 1<sup>st</sup> 2017, the 3-year post-construction monitoring period has ended, as such from August 2017 no air quality monitoring activities have been carried out (post-construction period being completed at this main critical point PC10).



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### 2.1.3.B. Noise monitoring

The activities carried out during reporting period 01-31.08.2017, related to noise level monitoring, reported for this critical point CP10 are those presented in Table 2.1.3.B.1.

Table 2.1.3.B.1. Specific objective: noise monitoring

No.	Activities
1.	Contribution to Monthly Report 76
2.	Contribution to Interim Report 17

For main critical point CP 10, in August 1<sup>st</sup> 2017 has ended the 3 years period for post-construction monitoring, and as such since August 2017 no monitoring activities for noise level have been carried out (post-construction period is completed at this main critical point PC 10).

### 2.1.3.C. Soil quality monitoring

Activities performed during reporting period, regarding soil quality monitoring, for this critical point, are summarized in Table 2.1.1.C.1.

During this period no soil sampling have been made from this critical point.

### 2.1.3.D. Hydrophological monitoring

For main critical point CP10, in August 1<sup>st</sup> 2017 the post-construction monitoring period has ended.

### 2.1.3.E. Water and sediments quality monitoring

The activities carried out during reporting period related to water and sediments quality in this critical point are those presented in Table 2.1.1.E.1.

During this period no water and sediment sampling were made.

### 2.1.3.F. Aquatic flora and fauna monitoring

During the reporting period no sampling have been made.

### 2.1.3.F.is. Sturgeons and barbell migration monitoring

For main critical point CP10, in August 1<sup>st</sup> 2017 the post-construction monitoring period has ended.



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### **2.1.3.F.i. Other fish species monitoring**

In July was conducted scientifically electric fishing in banks areas, in order to assess local ichthyofauna. The captured specimens were identified at species level and biometric measurements (length and weight) were made. Data were processed to obtain the distribution, abundance and biomass of the species.

In August were processed data obtained in previous month and interpretation were made regarding distribution, abundance and biomass of ichthyofauna species captured.

### **2.1.3.G. Terrestrial flora and fauna monitoring**

#### **2.1.3.G.1 Terrestrial flora**

Activities conducted during this reporting period, regarding terrestrial flora monitoring are presented in Table 2.1.1.G.1.1.

#### **2.1.3.G.2 Terrestrial fauna/ Avifauna**

In this period have not been made monitoring activities for avifauna.

### **2.1.3.H. Natura 2000 sites monitoring**

In August 2017 were not been made any monitoring activities for Natura 2000 sites.

### **2.1.3.I. Work site activities monitoring and intervention plan compliance in case of accidental pollution**

Due to completion of hydrotechnical works has not been necessary the building site activity monitoring. Works reception was carried out on August 1<sup>st</sup>, 2014.

## **2.1.4. Monitoring in the critical points 03÷07**

### **2.1.4.1. Monitoring in CP 03 (upstream and downstream Seica)**

#### **2.1.4.1.A. Air quality monitoring**

During 01-31.08.2017, no activities related to air quality monitoring were made in these secondary critical point. (CP 03A and CP 03B).

În această perioadă nu s-a efectuat monitorizarea aerului în acest punct critic Secondary.



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#### **2.1.4.1.B. Noise level monitoring**

During 01-31.08.2017, no activities related to noise level monitoring were made in these secondary critical points.

#### **2.1.4.1.C. Soil quality monitoring**

The activities carried out during reporting period, related to soil quality monitoring, in this critical point are summarized in Table 2.1.1.C.1.

During this period no soil sampling have been made.

#### **2.1.4.1.D. Hydromorphological monitoring**

No activities regarding hydromorphological monitoring during this period.

#### **2.1.4.1.E. Water and sediments quality monitoring**

The activities carried out during reporting period, related to water and sediments quality monitoring, in this critical point are summarized in Table 2.1.1.E.1.

During this period no water and sediments sampling have been made.

#### **2.1.4.1.F. Aquatic flora and fauna monitoring**

In reporting period no sampling have been made.

##### **2.1.4.1.F.is. Sturgeons and barbell migration monitoring**

In August, the monitoring of sturgeons' migration was carried out with the monitoring systems existent on Danube sector between km 248 and km 348.

##### **2.1.4.1.F.i. Other fish species monitoring**

In August were processed the data from previous month and interpretation were made regarding distribution, abundance and biomass for captured ichthyofauna species.

#### **2.1.4.1.G. Terrestrial flora and fauna monitoring**

##### **2.1.4.1.G.1 Terrestrial flora**

Activities conducted during this reporting period, regarding terrestrial flora monitoring are presented in Table 2.1.1.G.1.1.



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#### **2.1.4.1.G.2 Terrestrial fauna / Avifauna**

During this period no avifauna monitoring activities have been made.

#### **2.1.4.1.H. Natura 2000 sites monitoring**

In August 2017 no monitoring activities for Natura 2000 sites have been made.

#### **2.1.4.1.I. Work site activities monitoring and intervention plan compliance in case of accidental pollution**

The monitoring of the construction site was not necessary because the hydrotechnical works have not been started.

#### **2.1.4.2. Monitoring in CP 04 /Ceacâru/Fermecatu**

##### **2.1.4.2.A. Air quality monitoring**

During 01-31.08.2017, have not been conducted any air monitoring activities, in this secondary critical points (PC 04A and PC 04B).

In this period, have not been made air monitoring in this critical point.

##### **2.1.4.2.B. Noise level monitoring**

During 01-31.08.2017, have not been conducted any noise level monitoring activities, in this secondary critical points (PC 04A and PC 04B).

In this period, have not been made noise monitoring in this critical point.

##### **2.1.4.2.C. Soil quality monitoring**

The activities carried out during reporting period regarding soil quality monitoring in this critical point are summarized in Table 2.1.1.C.1.

In this period have not been made sampling activities for soil.

##### **2.1.4.2.D. Hydromorphological monitoring**

No activities regarding hydromorphological monitoring during this period.

##### **2.1.4.2.E. Water and sediments quality monitoring**

The activities carried out during reporting period, related to water and sediments quality monitoring, in this critical point are summarized in Table 2.1.1.E.1.

In this period have not been made sampling activities for water and sediments.



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#### **2.1.4.2.F. Aquatic flora and fauna monitoring**

During reporting period no sampling have been made.

##### **2.1.4.2.F.is. Sturgeons and barbell migration monitoring**

In August sturgeons' migration monitoring has been done with the monitoring systems existent on Danube sector between km 248 and km 348.

##### **2.1.4.2.F.i. Other fish species monitoring**

In August were processed data from previous month and interpretation were made regarding distribution, abundance and biomass of the captured ichthyofauna species.

#### **2.1.4.2.G. Terrestrial flora and fauna monitoring**

##### **2.1.4.2.G.1 Terrestrial flora**

Activities conducted during this reporting period, regarding terrestrial flora monitoring are presented in Table 2.1.1.G.1.1.

Activitățile derulate în această perioadă de raportare, privitoare la monitorizarea florei terestre sunt prezentate în Table 2.1.1.G.1.1.

##### **2.1.4.2.G.2 Terrestrial fauna/Avifauna**

During this period no activities have been made for avifauna monitoring.

#### **2.1.4.2.H. Natura 2000 monitoring sites**

In August 2017 were not conducted any monitoring activities for Natura 2000 sites.

#### **2.1.4.2.I. Monitoring the building site activities and the compliance with the intervention plan in case of accidental pollution**

The monitoring of the construction site was not necessary because the hydrotechnical works have not been started.

#### **2.1.4.3. Monitoring in CP 07 / Fasolele**

##### **2.1.4.3.A. Air quality monitoring**

During 01-31.08.2017, were not been conducted any air quality monitoring, related for this secondary critical point.



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#### **2.1.4.3.B. Noise level monitoring**

During 01-31.08.2017, were not been conducted any noise level monitoring activities in this secondary critical point.

#### **2.1.4.3.C. Soil quality monitoring**

Activities performed during reporting period, regarding soil quality monitoring, in this critical point, were summarized in Table 2.1.1.C.1.

During this period no soil sampling have been made.

#### **2.1.4.3.D. Hydromorphological monitoring**

No activities regarding hydromorphological monitoring during this period.

#### **2.1.4.3.E. Water and sediments quality monitoring**

Activities conducted during reporting priod, regarding water and sediments quality, in this critical point are those presented in Table 2.1.1.E.1.

In this period have not been made sampling activities for water and sediments.

#### **2.1.4.3.F. Aquatic flora and fauna monitoring**

During reporting period no sampling have been made.

#### **2.1.4.3.F.is. Sturgeons and barbell migration monitoring**

In August sturgeons' migration monitoring has been done with the monitoring systems existent on Danube sector between km 248 and km 348.

#### **2.1.4.3.F.i. Other fish species monitoring**

In August were processed the data from previous month and have been made interpretation regarding the distribution, abundance and biomass for captured ichthyofauna species.

#### **2.1.4.3.G. Terrestrial flora and fauna monitoring**

##### **2.1.4.3.G.1 Terrestrial flora**

Activities conducted during this reporting period, regarding terrestrial flora monitoring are presented in Table 2.1.1.G.1.1.



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#### **2.1.4.3.G.2 Terrestrial fauna / Avifauna**

During this period have not been made activities for avifauna monitoring.

#### **2.1.4.3.H. Natura 2000 sites monitoring**

In August 2017 have not been made activities for Natura 2000 sites monitoring.

#### **2.1.4.3.I. Work site activities monitoring and intervention compliance plan in case of accidental pollution**

The monitoring of the construction site was not necessary because the hydrotechnical works have not been started.

### **2.2. Stage of 3D numerical modeling**

In August 2017, INCDPM specialists have conducted, according to Specifications, bathymetric data acquisition in main critical points CP01 and CP02. Thus, for this activity have been performed:

- bathymetric measurements processing for morphology and for sections profiling;
- bathymetric measurements processing for velocity and flow rates;
- longitudinal bathymetric measurements processing for bottom sill geometry determination.



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### 3. MEMBERS OF THE EXPERTS TEAM

#### 3.1. Members of the experts' team

Team's members who carried out activities in the reporting period and the number of days worked by each expert are schematically presented in Table 3.1.

Table 3.1. Members of the experts' team

No.	Experts	Names of experts	Number of working days post-construction
1.	Project manager	Deák György	8
2.	Chemist 1	Ghiță Gina	3
3.	Chemist 2	Borș Adriana	5
4.	Ichthyologist 1	Cristea Victor	7
5.	Ichthyologist 2	Falka Istvan	6
6.	Hydrology	Poteraș George	8
7.	Hydraulic sedimentology	Ungureanu Gh Viorel	12
8.	Phytoplankton and aquatic macrophytes	Marinescu Florica	0
9.	Zooplankton	Adina Popescu	0
10.	Terrestrial invertebrates	Șerban Cecilia	0
11.	Aquatic macroinvertebrates	Florea Luiza	0
12.	Terrestrial flora and vegetation	Frink Jozsef Pal	5
13.	Ornithologist 1	Jozsef Szabo	0
14.	Ecologist 1	Ambrus Laszlo	2
15.	Ecologist 2	Holban Elena	3
16.	Assessor	Tudor Marian	5

#### 3.2. Experts' tasks during the project

The tasks accomplished by experts on each phase/activity/critical point are presented in Experts' Activity Reports (Annex 6.3).



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### 3.3. Planning the activities for the next month on each phase/activity/critical point

The monitoring activities for the period 01-30 September 2017 are synthetically presented in the table 3.4.

Table 3.4. Activities for the period of 01.09-30.09.2017

No.	ACTIVITIES	Critical points							
		Main critical points			Secondary critical points				
		01	02	10	03A	03B	04A	04B	07
1.	Further campaign of measurements, field observations (where is necessary)	YES	YES	NO	YES	YES	YES	YES	YES
2.	Processing and interpretation of field and laboratory data (where is necessary)	YES	YES	NO	YES	YES	YES	YES	YES
3.	Monthly report preparation	YES	YES	NO	YES	YES	YES	YES	YES



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## 4. TIME SCHEDULE AND BUDGET PROJECT

### 4.1. Time schedule for project implementation

ID	Task Name	Start	Finish														Qtr
				27	August 2017						September 2017						Oct
					01	06	11	16	21	26	31	05	10	15	20	25	30
1	Air monitoring: Contribution to Interim Report 17	Tue 01.08.17	Fri 29.09.17														
2	76th Month	Tue 01.08.17	Thu 31.08.17														
3	77th Month	Fri 01.09.17	Fri 29.09.17														
4	Air monitoring: Measurements and sampling campaigns for air quality, in main critical points CP01, CP02	Tue 01.08.17	Thu 31.08.17														
5	76th Month	Tue 01.08.17	Thu 31.08.17														
6	Air monitoring: Measurements and sampling campaigns for air quality, in secondary critical points CP 03A, CP 03B, CP 04A, CP 04B, CP 07.	Fri 01.09.17	Fri 29.09.17														
7	77th Month	Fri 01.09.17	Fri 29.09.17														
8	Data and measurements processing and assessing related with air quality in critical points CP 01 and 02	Fri 01.09.17	Fri 29.09.17														
9	77th Month	Fri 01.09.17	Fri 29.09.17														
10	Noise monitoring: Contribution to Interim Report RI17	Tue 01.08.17	Fri 29.09.17														
11	76th Month	Tue 01.08.17	Thu 31.08.17														
12	77th Month	Fri 01.09.17	Fri 29.09.17														
13	Noise monitoring: Performing the measuring and sampling campaign for noise monitoring in main critical points CP 01 and 02.	Tue 01.08.17	Thu 31.08.17														
14	76th Month	Tue 01.08.17	Thu 31.08.17														
15	Noise monitoring: Performing the measuring and sampling campaign for noise monitoring in secondary critical points CP 03A, CP 03B, CP 04A, CP 04B, CP 07.	Fri 01.09.17	Fri 29.09.17														
16	77th Month	Fri 01.09.17	Fri 29.09.17														
17	Water quality monitoring - Water ( physical-chemical analysis) - Data processing for Interim Report 17 (CP 01, CP 02, CP 10, CP03, CP04,	Tue 01.08.17	Thu 31.08.17														
18	76th Month	Tue 01.08.17	Thu 31.08.17														
19	Water quality monitoring - CP 01, CP 02, CP03, CP04, CP07 - Water (physical-chemical analysis)	Fri 01.09.17	Fri 29.09.17														
20	77th Month	Fri 01.09.17	Fri 29.09.17														
21	Water quality monitoring - Sediments (heavy metals, organic micropollutants) - Data processing for Interim Report 17 (CP 01, CP 02, CP 10, CP03, CP04, CP07)	Tue 01.08.17	Thu 31.08.17														
22	76th Month	Tue 01.08.17	Thu 31.08.17														
23	Water quality monitoring - CP 01, CP 02, CP03, CP04, CP07 - Sediments (heavy metals, organic micropollutants)	Fri 01.09.17	Fri 29.09.17														
24	77th Month	Fri 01.09.17	Fri 29.09.17														
25	Soil monitoring - data processing for Interim Report 17 (CP 01, CP 02, CP 10, CP03, CP04, CP07)	Tue 01.08.17	Thu 31.08.17														



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ID	Task Name	Start	Finish															Qtr
				27	August 2017						September 2017						Oct	
				01	06	11	16	21	26	31	05	10	15	20	25	30		
26	76th Month	Tue 01.08.17	Thu 31.08.17															
27	Soil monitoring - CP03, CP04, CP07 - lumbricides presence, abundance	Fri 01.09.17	Fri 29.09.17															
28	77th Month	Fri 01.09.17	Fri 29.09.17															
29	Soil monitoring - CP03, CP04, CP07) - mineral salts, humic acids, organic matter, physical-chemical characteristics	Fri 01.09.17	Fri 29.09.17															
30	77th Month	Fri 01.09.17	Fri 29.09.17															
31	Aquatic flora monitoring CP 03A/03B/04A/04B/07 - phytoplankton - sampling, composition, abundance, biomass	Fri 01.09.17	Fri 29.09.17															
32	77th Month	Fri 01.09.17	Fri 29.09.17															
33	Aquatic flora monitoring CP 03A/03B/04A/04B/07 - aquatic macrophytes - sampling, composition, abundance, biomass	Fri 01.09.17	Fri 29.09.17															
34	77th Month	Fri 01.09.17	Fri 29.09.17															
35	Aquatic fauna monitoring CP 01/02/03A/03B/04A/04B/07 - aquatic macroinvertebrates - laboratory analysis - sampling, composition, abundance, biomass, saprobic index	Fri 01.09.17	Fri 29.09.17															
36	77th Month	Fri 01.09.17	Fri 29.09.17															
37	Hydromorphological monitoring in CP 01/CP 02 - Single-beam measurements - sections profiling	Tue 01.08.17	Fri 29.09.17															
38	76th Month	Tue 01.08.17	Thu 31.08.17															
39	77th Month	Fri 01.09.17	Fri 29.09.17															
40	Hydromorphological monitoring in CP 01/CP 02 - Flow rate monitoring (volume, velocity, level)	Tue 01.08.17	Fri 29.09.17															
41	76th Month	Tue 01.08.17	Thu 31.08.17															
42	77th Month	Fri 01.09.17	Fri 29.09.17															
43	Hydromorphological monitoring in CP 01/CP 02 - level and turbidity measurements in hydrometric automatic station of INCDPM	Tue 01.08.17	Fri 29.09.17															
44	76th Month	Tue 01.08.17	Thu 31.08.17															
45	77th Month	Fri 01.09.17	Fri 29.09.17															
46	Ichtyofauna biodiversity monitoring CP 01/02/03/04/07 - trails and migration periods monitoring for sturgeon specimens with ultrasonic	Tue 01.08.17	Fri 29.09.17															
47	76th Month	Tue 01.08.17	Thu 31.08.17															
48	77th Month	Fri 01.09.17	Fri 29.09.17															
49	Ichtyofauna biodiversity monitoring CP 01/02 - Data downloading from the monitoring systems for sturgeons migration	Tue 01.08.17	Fri 29.09.17															
50	76th Month	Tue 01.08.17	Thu 31.08.17															
51	77th Month	Fri 01.09.17	Fri 29.09.17															



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Ministerul Mediului și Climei  
și Apelor



Ministerul Agriculturii și Dezvoltării Rurale



Ministerul Infrastructurii



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**Project: MONITORING THE ENVIRONMENTAL IMPACT OF THE WORKS REGARDING THE IMPROVING OF THE NAVIGATION CONDITIONS  
ON THE DANUBE RIVER BETWEEN CALARASI AND BRAILA, km 375-175**

MONTHLY REPORT No 76: 1 - 31 August 2017

ID	Task Name	Start	Finish															Qtr
				27	August 2017						September 2017						Oct	
52	Ichtyofauna biodiversity monitoring CP 01 - Scientific fishing and marking with ultrasonic tags for sturgeons specimens	Tue 01.08.17	Fri 29.09.17															
53	76th Month	Tue 01.08.17	Thu 31.08.17															
54	77th Month	Fri 01.09.17	Fri 29.09.17															
55	Ichtyofauna biodiversity monitoring CP 01 - Sturgeons active monitoring with VR100	Tue 01.08.17	Fri 29.09.17															
56	76th Month	Tue 01.08.17	Thu 31.08.17															
57	77th Month	Fri 01.09.17	Fri 29.09.17															
58	Monitoring of terrestrial flora and vegetation in critical points - identification and verification of plant taxa from July 2017 campaign	Tue 01.08.17	Thu 31.08.17															
59	76th Month	Tue 01.08.17	Thu 31.08.17															
60	Monitoring of terrestrial flora and vegetation in critical points - introducing vegetal taxa and field parameters into the computerized database	Tue 01.08.17	Thu 31.08.17															
61	76th Month	Tue 01.08.17	Thu 31.08.17															
62	Avifauna monitoring in Natura 2000 sites existent in critical points areas - autumn campaign	Fri 01.09.17	Fri 29.09.17															
63	77th Month	Fri 01.09.17	Fri 29.09.17															
64	Monthly reports	Tue 01.08.17	Fri 29.09.17															
65	76th Month	Tue 01.08.17	Thu 31.08.17															
66	77th Month	Fri 01.09.17	Fri 29.09.17															

## 4.2. Budget and expenses incurred during the reporting period

*Justifying calculation for 01 - 31 August 2017*

I. EXPERTS EXPENSES				
No.	Experts	No. of working days	Fee (Euro on working day)	Maximum total value of the fees
		Post - Construction (36 monts)		
1	Project leader	8	240	1.920,00 EUR
2	Chemist 1	3	200	600,00 EUR
3	Chemist 2	5	200	1.000,00 EUR
4	Ichthyologist 1	7	330	2.310,00 EUR
5	Ichthyologist 2	6	200	1.200,00 EUR
6	Hydrology	8	200	1.600,00 EUR
7	Hydraulic- sedimentlogy	12	200	2.400,00 EUR
8	Aquatic phytoplankton and macropytes	0	130	0,00 EUR
9	Zooplankton	0	130	0,00 EUR
10	Terrestrial invertebrates	0	125	0,00 EUR
11	Aquatic macroinvertebrates	0	125	0,00 EUR
12	Terrestrial flora and fauna	5	125	625,00 EUR
13	Ornithologist 1	0	200	0,00 EUR
14	Ecologist 1	2	140	280,00 EUR
15	Ecologist 2	3	140	420,00 EUR
16	Evaluator	5	330	1.650,00 EUR
SUBTOTAL EXPERTS' FEES				14.005,00 EUR
II EXPENSES with JUSTIFICATION				
1	Ichthyology- telemetry (sturgeons and barbel transmitters, batteries, expensis on stugeons' capturing)			73,51 EUR
2	Abiotic and biotic data for the establishment of the framework			
3	Analysis			0,00 EUR
SUBTOTAL EXPENSES with JUSTIFICATION				73,51 EUR
III. MATHEMETICAL MODELING				
1	Software acquisiton+hardware+ necessary licenses			0,00 EUR
2	Acquisition of bathymetric data, necessary for the mathematical modeling			10.552,10 EUR
3	Training of 2 specialists in numerical modeling			0,00 EUR
4	Fee for the numerical modeling expert			0,00 EUR
5	3D numerical model and implementation in 3D monitoring			0,00 EUR
SUBTOTAL NUMERICAL MODELING				10.552,10 EUR
TOTAL without V.A.T.				24.630,61 EUR

### 4.3. Budget and expenses for the next period

*Estimated calculation for 01 - 30 September 2017*

I. EXPERTS EXPENSES				
No.	Experts	No. of working days	Fee (Euro on working day)	Maximum total value of the fees
		Post - Construction (36 months)		
1	Project leader	8	240	1.920,00 EUR
2	Chemist 1	3	200	600,00 EUR
3	Chemist 2	5	200	1.000,00 EUR
4	Ichthyologist 1	7	330	2.310,00 EUR
5	Ichthyologist 2	6	200	1.200,00 EUR
6	Hydrology	8	200	1.600,00 EUR
7	Hydraulic- sedimentology	12	200	2.400,00 EUR
8	Aquatic phytoplankton and macropytes	0	130	0,00 EUR
9	Zooplankton	0	130	0,00 EUR
10	Terrestrial invertebrates	0	125	0,00 EUR
11	Aquatic macroinvertebrates	0	125	0,00 EUR
12	Terrestrial flora and fauna	5	125	625,00 EUR
13	Ornithologist 1	13	200	2.600,00 EUR
14	Ecologist 1	2	140	280,00 EUR
15	Ecologist 2	6	140	840,00 EUR
16	Evaluator	5	330	1.650,00 EUR
SUBTOTAL EXPERTS' FEES				17.025,00 EUR
II EXPENSES with JUSTIFICATION				
1	Ichthyology- telemetry (sturgeons and barbel transmitters, batteries, expensis on stugeons' capturing)			5.000,00 EUR
2	Abiotic and biotic data for the establishment of the framework			
3	Analysis			19.410,00 EUR
SUBTOTAL EXPENSES with JUSTIFICATION				24.410,00 EUR
III. MATHEMTICAL MODELING				
1	Software acquisiton+hardware+ necessary licenses			0,00 EUR
2	Acquisition of bathymetric data, necessary for the mathematical modeling			45.000,00 EUR
3	Training of 2 specialists in numerical modeling			0,00 EUR
4	Fee for the numerical modeling expert			0,00 EUR
5	3D numerical model and implementation in 3D monitoring			0,00 EUR
SUBTOTAL NUMERICAL MODELING				45.000,00 EUR
TOTAL without V.A.T.				86.435,00 EUR

## 5. CONCLUSIONS, RECOMMENDATIONS, WARNINGS

- 5.1 This Monthly Report reflects monitoring activities from August 2017 related to post-construction period.
- 5.2 For the specific monitoring objectives within this phase, the Provider considered that the field and laboratory activities, logistics and infrastructure be sized so as to be according to the graphs and stipulations mentioned in the Specifications.
- 5.3 Taking into consideration the importance of the construction works that take place on Danube on the section between Calarasi and Braila, the Consortium recommends further actions on biodiversity monitoring, at least with the frequency similar to post-construction phase, up to completion of the project, in order to ensure an informational volume, with a high confidence level, to allow if necessary, the development of preventive solutions.
- 5.4 In August 2017, hydromorphological monitoring activity was mainly based on ADCP measurements (flow rates and velocities) in main critical points area: CP01 and CP02, as well as single-beam bathimetric measurements for sections profiling in the main two critical points, in conditions with low flow rates compared to historical data for this period of the year.

## 6. ANNEXES

### 6.1 Relevant correspondence

### 6.2 Recording bulletins for sampling/measurements

6.2.1: AIR sampling sheets

6.2.2: NOISE sampling sheets

### 6.3 Experts' activity reports

### 6.4 Images of activities

### 6.5 Hydromorphology monitoring

### 6.6 Ichtyofauna monitoring

6.6.1: Centralizer for captured sturgeons

6.6.2: Sheets for captured sturgeons