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Comisia de  
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2007-2013



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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 78: 1 - 31 October 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. 78

01 - 31 October 2017



FINAL VERSION



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județ Prahova/Braila



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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 October 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 single-beam 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		July			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



## 1.2. Overview

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

Table 1.2. Objectives monitored during the period of 01.10-31.10.2017

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	-	-	NO	NO	NO	NO	NO	NO	NO	NO
B.	NOISE	-	-	NO	NO	NO	NO	NO	NO	NO	NO
C.	SOIL	-	-	NO	NO	NO	NO	NO	NO	NO	NO
D.	HYDROMORPHOLOGY	02, 03, 09, 10, 16, 17, 18, 25, 26.10.2017	C78	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	02, 03, 06, 13, 17, 20, 21, 24, 27, 31.10.2017	C36	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	09-13, 16-20, 23-25.10.2017	Autumn migration	YES	YES	NO	YES	YES	YES	YES	YES
H.	NATURA 2000 SITES	09-13.10.2017	Avifauna monitoring	YES	YES	NO	YES	YES	YES	YES	YES
I.	BUILDING SITE	-	-	NO	NO	NO	NO	NO	NO	NO	NO

NOTE:

<sup>\*)</sup> In main critical point CP10 the post-construction monitoring period has 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



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## 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>- KRUSS 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>	



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

### 2.1.1.A. Air quality monitoring

The activities carried out during 01/31.10.2017 related to air quality monitoring for each critical point are summarized in Table 2.1.1.A.1.

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

No.	Activities
1.	Contribution to Monthly Report 78
2.	Contribution to Interim Report 17

According to post-construction monitoring objectives, in October 2017 for air quality monitoring in this main critical point CP 01 is not 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).

### 2.1.1.B. Noise monitoring

The activities carried out during 01/31.10.2017 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.	Contribution to Monthly Report 78
2.	Contribution to Interim Report 17

According to post-construction monitoring objectives, in October 2017 for noise level monitoring in this main critical point CP 01 is not 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).

### 2.1.1.C. Soil quality monitoring

Activities conducted during 01/31 October 2017, regarding soil quality monitoring, in this 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.	Data processing for Interim Report 17

No soil sampling have been made during this period in 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 were carried out, namely:

- Single-beam with high-resolution measurements;
- Flow and velocities measurements on the monitoring sections;
- Further turbidity and level continuous measurements in the 4 automatic hydrometric stations.

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

No.	Activities
1.	Single-beam bathimetric measurements of high-resolution
2.	Measurements for flow and velocities on the monitoring sections
3.	Turbidity and level continuous measurements in the 4 automatic hydrometric stations

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

The activities carried out during 01/31.10.2017, 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.	Performing physical-chemical analysis for water samples collected in September 2017 (C65)
2.	Performing physical-chemical analysis for sediment samples collected in September 2017 (C65)
3.	Data processing for Interim Report 17

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

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

The activities carried out during this reporting period, regarding aquatic fauna and flora (except for ichthyofauna), are summarized in Table 2.1.1.F.1.

Table 2.1.1.F.1 Specific objective: Aquatic flora and fauna monitoring

No.	Activities
1.	Laboratory analysis for aquatic macroinvertebrates samples, collected in 07-08.09.2017 campaign
2.	Processing and preliminary analysis of the obtained results

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

In October were tagged 15 sturgeon specimens, as follows: 4 belugas, 1 diamond sturgeon, 5 starry sturgeons and 5 sterlets. Also, was recaptured one beluga specimen. Sturgeons were monitored with VR 100 and data were downloaded from the systems.

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

In October are not provided any activities for other fish species monitoring.

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

#### 2.1.1.G.1 Terrestrial flora

During this period have not been made monitoring activities for terrestrial flora.

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

The activities carried out during this reporting period, regarding avifauna monitoring, are summarized in Table 2.1.1.G.2.1.

Table 2.1.1.G.2.1 Specific objective: Avifauna monitoring

No.	Activities
1.	Activities in field: <ul style="list-style-type: none"><li>- Aquatic and migratory avifauna observations from the shore</li><li>- Aquatic and migratory avifauna observations from the boat</li></ul>
2.	Analysing and processing the field data (Annex 6.7)

### 2.1.1.H. Natura 2000 sites monitoring

In this reporting period were monitored Natura 2000 sites in critical point area.

The activities carried out during this reporting period, regarding Natura 2000 sites monitoring, are summarized in Table 2.1.1.H.1.

Table 2.1.1.H.1 Specific objective: Natura 2000 sites monitoring

No.	Activities
1.	Avifauna assessments in Natura 2000 sites in CP01 area: <ul style="list-style-type: none"><li>- ROSPA0039 "Dunăre Ostroave"; ROSCI0022 "Canaralele Dunării"</li></ul> Activities in field: <ul style="list-style-type: none"><li>- Aquatic and migratory avifauna observations from the boat</li><li>- Aquatic and migratory avifauna observations from the shore</li></ul>
2.	Analysis and centralizing the obtained data (Annex 6.8)



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### **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 01/31.10.2017 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 October 2017 for air quality monitoring in this main critical point CP02 is not 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).

#### **2.1.2.B. Noise monitoring**

The activities carried out during 01/31.10.2017, 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 October 2017 for noise level monitoring in this main critical point CP 02 is not 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).

#### **2.1.2.C. Soil quality monitoring**

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

During this period no soil samples have been collected.

#### **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 were carried out, namely:

- Single-beam bathymetric measurements with high-resolution;
- Flow and velocities measurements on the monitoring sections;
- Turbidity and level continuous measurements in the 3 automatic hydrometric stations.





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

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

In October 2017, were made - mainly - ADCP measurements (flow/velocities) according to Specifications. Results will be presented in the Interim Report for this month.

### **2.1.2.E. Water and sediments monitoring**

Activities performed during 1/31 October 2017, regarding water and sediment quality monitoring, reported to this critical point are those presented in Table 2.1.1.E.1.

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

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

The activities carried out during this reporting period, regarding aquatic fauna and flora (except for ichthyofauna), are summarized in Table 2.1.2.F.1.

**Table 2.1.2.F.1. Specific objective: Aquatic flora and fauna monitoring**

No.	Activities
1.	Laboratory analysis for aquatic macroinvertebrates samples collected in campaign 07-08.09.2017
2.	Processing and preliminary analysis for the obtained results

### **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.

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

In October are not provided activities for other fish species monitoring.

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

#### **2.1.2.G.1 Terrestrial flora**

During this period were no activities for terrestrial flora monitoring.

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

Activities performed in this reporting period, regarding avifauna monitoring, are

summarized in Table 2.1.2.G.2.1.

**Table 2.1.2.G.2.1 Specific objective: Avifauna monitoring**

No.	Activities
1.	Field activities: <ul style="list-style-type: none"> <li>- Observation for aquatic and migratory avifauna from the boat</li> <li>- Observation for aquatic and migratory avifauna from the shore</li> </ul>
2.	Analysis and processing of the field data (Annex 6.7)

### 2.1.2.H. Natura 2000 sites monitoring

In this reporting period were monitored Natura 2000 sites, in critical point area and dobrogean lakes, due to islets importance in birds' autumn migration.

Activities performed in this reporting period, regarding Natura 2000 sites monitoring, are summarized in Table 2.1.2.H.1.

**Table 2.1.2.H.1 Specific objective: Monitoring of Natura 2000 sites**

No.	Activities
1.	Avifauna assessments in Natura 2000 sites: <ul style="list-style-type: none"> <li>- ROSPA0039 "Dunăre Ostroave" , ROSCI0022 "Canaralele Dunării" - in CP02 area</li> <li>- In PC02-04:               <ul style="list-style-type: none"> <li>o ROSCI0071 „Dumbrăveni - Valea Urluia - Lacul Vederosa” - in Baciului lake and Balta Vederosa areas</li> <li>o ROSPA0007 „Balta Vederosa” - in Balta Vederosa and Baciului lake areas</li> <li>o ROSCI0172 „Pădurea and Valea Canaraua Fetii - Iortmac” - in Dunăreni, Iortmac and Oltina lakes areas</li> <li>o ROSPA0054 „Lacul Dunăreni” in Dunăreni lake area</li> <li>o ROSPA0056 „Lacul Oltina” - in Oltina and Iortmac lakes areas</li> </ul> </li> </ul> Field activities: <ul style="list-style-type: none"> <li>- Observation for aquatic and migratory avifauna from the boat</li> <li>- Observation for aquatic and migratory avifauna from the shore</li> </ul>
2.	Analysis and processing for the field data (Annex 6.8)

### 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 01/31.10.2017 regarding air quality monitoring, in this critical point CP10 are summarized in Table 2.1.3.A.1.

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

No.	Activities
1.	Contribution to Monthly Report 78
2.	Contribution to Interim Report 17
3.	Contribution to Phase Report for post-construction monitoring in CP10

For critical point CP 10, in August 1<sup>st</sup> 2017, the 3-year post-construction monitoring period has ended, as such in October 2017 no air quality monitoring activities have been carried out.

#### 2.1.3.B. Noise monitoring

The activities carried out during reporting period 01/31.10.2017, related to noise level monitoring, reported for this critical point are those presented in Table 2.1.3.B.1.

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 in October 2017 no monitoring activities for noise level have been carried out.

#### 2.1.3.C. Soil quality monitoring

Activities during 01/31 October 2017, regarding soil quality monitoring, in this critical point, are summarized in Table 2.1.3.C.1.

Table 2.1.3.C.1. Specific objective: soil quality monitoring

No.	Activities
1.	Data processing for Interim Report 17
2.	Data processing for Final Report on post-construction phase

In this critical point no longer performed monitoring activities for soil quality, due to post-construction monitoring period ended in August 2017.

#### 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.



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

Activities during 01/31 October 2017, regarding water and sediments quality monitoring, in this critical point, are summarized in Table 2.1.3.E.1.

Table 2.1.3.E.1. Specific objective: water and sediments quality monitoring

No.	Activities
1.	Data processing for Interim Report 17
2.	Data processing for Report on post-construction phase completion

In this critical point are no longer any monitoring activities for water and sediments quality, due to post-construction monitoring period has ended in August 1<sup>st</sup> 2017.

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

During the reporting period, no monitoring activities/analysis for aquatic flora and fauna 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.

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

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

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

#### 2.1.3.G.1 Terrestrial flora

In this period have not been made monitoring activities for terrestrial flora.

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

In this Critical Point no longer been conducted any monitoring activities for avifauna, due to the post-construction monitoring period ended in August 1<sup>st</sup> 2017.

### 2.1.3.H. Natura 2000 sites monitoring

In this Critical Point no longer been conducted any monitoring activities for Natura 2000 sites, due to the post-construction monitoring period ended in August 1<sup>st</sup> 2017.

### 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

The activities carried out during 01/31.10.2017, related to air quality monitoring, reported for this secondary critical points are those presented in Table 2.1.4.1.A.1.

Table 2.1.4.1.A.1. Specific objective: Air quality monitoring

No.	Activities
1.	Contribution to Monthly Report 78
2.	Contribution to Interim Report 17
3.	Processing and assessing the data and measurements related to air quality in secondary critical points CP 03A, CP 03B, CP 04A, CP 04B and CP 07

During 01/31.10.2017 no air quality monitoring activities have been made in this critical points (CP 03A and CP 03B).

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

The activities carried out during 01/31.10.2017, related to noise level monitoring, in this secondary critical points are those presented in Table 2.1.4.1.B.1.

Table 2.1.4.1.B.1. Specific objective: monitorizarea zgomotului

No.	Activities
1.	Contribution to Monthly Report 78
2.	Contribution to Interim Report 17

During 01/31.10.2017 no monitoring activities for noise level have been made in this critical points (CP 03A and CP 03B).

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

The activities carried out during 01/31 October 2017 in the reporting period, related to soil quality monitoring, in this critical point are summarized in Table 2.1.4.1.C.1.

**Table 2.1.4.1.C.1. Specific objective: Soil monitoring**

No.	Activities
1.	Physical-chemical laboratory analysis for soil samples collected in September (C27)
2.	Data processing for Interim Report 17

In this period have not been made any soil sampling in this critical point.

#### **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**

Activities performed during this reporting period, regarding water and sediment quality monitoring, in this Critical Point are those presented in Table nr. 2.1.1.E.1.

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

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

The activities carried out during this reporting period, regarding aquatic fauna and flora (except for ichthyofauna), are summarized in Table 2.1.4.1.F.1.

**Table 2.1.4.1.F.1. Specific objective: Aquatic flora and fauna monitoring**

No.	Activities
1.	Laboratory analysis for aquatic macroinvertebrates, collected in campaign 07-08.09.2017
2.	Processing and preliminary analysis for the obtained results

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

In October, 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 October are not provided monitoring activities for other fish species.

## 2.1.4.1.G. Terrestrial flora and fauna monitoring

### 2.1.4.1.G.1 Terrestrial flora

No monitoring activities for terrestrial flora were made in this period.

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

Activities performed during this reporting period, regarding avifauna monitoring, are summarized in Table 2.1.4.1.G.2.1.

Table 2.1.4.1.G.2.1 Specific objective: Avifauna monitoring

No.	Activities
1.	Activities in field: <ul style="list-style-type: none"> <li>- Aquatic and migratory avifauna observations from the boat</li> <li>- Aquatic and migratory avifauna observations from the shore</li> </ul>
2.	Analysis and processing the field data (Annex 6.7)

### 2.1.4.1.H. Natura 2000 sites monitoring

In this reporting period were monitored Natura 2000 sites in critical points and dobrogean lakes areas, due to the importance of islets in birds' autumn migration.

Activities performed during this reporting period, regarding Natura 2000 sites monitoring, are summarized in Table 2.1.4.1.H.1.

Table 2.1.4.1.H.1 Specific objective: Natura 2000 sites monitoring

No.	Activities
1.	Avifauna assessments in Natura 2000 sites: <ul style="list-style-type: none"> <li>- ROSPA0039 "Dunăre Ostroave", ROSCI0022 "Canaralele Dunării" - in CP03 area</li> <li>- in PC02-04 area:               <ul style="list-style-type: none"> <li>o ROSCI0071 „Dumbrăveni - Valea Urluia - Lacul Vederoasa” - in Baciului lake and Balta Vederoasa areas</li> <li>o ROSPA0007 „Balta Vederoasa” - in Balta Vederoasa and Baciului lake areas</li> <li>o ROSCI0172 „Pădurea and Valea Canaraua Fetii - Iortmac” - in Dunăreni, Iortmac and Oltina lakes areas</li> <li>o ROSPA0054 „Lacul Dunăreni” in Dunăreni lake area</li> <li>o ROSPA0056 „Lacul Oltina” - in Oltina and Iortmac lakes areas</li> </ul> </li> </ul> Field activities: <ul style="list-style-type: none"> <li>- Observation for aquatic and migratory avifauna from the boat</li> <li>- Observation for aquatic and migratory avifauna from the shore</li> </ul>
2.	Analysis and centralizing of the obtained data (Annex 6.8)

### 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





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works have not been started.

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

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

Activities conducted during 01/31.10.2017 regarding air quality monitoring, related to this secondary critical points are those presented in Table 2.1.4.1.A.1.

During this period have not been performed any monitoring activities for air quality, in this secondary critical points (CP 04A and CP 04B).

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

Activities conducted during 01/31.10.2017 regarding noise level monitoring, in this secondary critical points are those presented in Table 2.1.4.1.B.1.

During this period have not been performed any monitoring activities for noise level, in this secondary critical points (CP 04A and CP 04B).

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

Activities performed during this reporting period, regarding soil quality monitoring, in this critical point are summarized in Table 2.1.4.1.C.1.

In this period have not been soil sampling in this critical point.

### **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**

Activities performed during this reporting period, regarding water and sediments quality, in this critical point, are identical with those presented in Table nr. 2.1.1.E.1.

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

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

Activities performed during this reporting period, regarding aquatic flora and fauna (except for ichthyofauna) are summarized in Table 2.1.4.2.F.1.

Table 2.1.4.2.F.1. Specific objective: aquatic flora and fauna monitoring

No.	Activities
1.	Laboratory analysis for aquatic macroinvertebrates, collected in campaign 07-08.09.2017
2.	Processing and preliminary analysis for the obtained results

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

In October 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 October were not provided monitoring activities for other fish species.

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

#### 2.1.4.2.G.1 Terrestrial flora

In this period, no activities for terrestrial flora monitoring have been made.

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

Activities performed during this reporting period, regarding avifauna monitoring, are summarized in Table 2.1.4.2.G.2.1.

Table 2.1.4.2.G.2.1 Specific objective: Avifauna monitoring

No.	Activities
1.	Activities in field: <ul style="list-style-type: none"><li>- Aquatic and migratory avifauna observations from the boat</li><li>- Aquatic and migratory avifauna observations from the shore</li></ul>
2.	Analysis and centralizing the obtained data (Annex 6.7)

### 2.1.4.2.H. Natura 2000 monitoring sites

In this reporting period were monitored Natura 2000 sites in critical points and dobrogean lakes areas, due to the importance of islets in birds' autumn migration.

Activities performed during this reporting period, regarding Natura 2000 sites monitoring, are summarized in Table 2.1.4.2.H.1.

Table 2.1.4.2.H.1 Specific objective: Natura 2000 sites monitoring

No.	Activities
1.	<p>Avifauna assessments in Natura 2000 sites:</p> <ul style="list-style-type: none"><li>- ROSPA0039 “Dunăre Ostroave”, ROSCI0022 “Canaralele Dunării” - in CP04 area</li><li>- In PC02-04 area:<ul style="list-style-type: none"><li>o ROSCI0071 „Dumbrăveni - Valea Urluia - Lacul Vederosa” - in Baciului lake and Balta Vederosa areas</li><li>o ROSPA0007 „Balta Vederosa” - in Balta Vederosa and Baciului lake areas</li><li>o ROSCI0172 „Pădurea and Valea Canaraua Fetii - Iortmac” - in Dunăreni, Iortmac and Oltina lakes areas</li><li>o ROSPA0054 „Lacul Dunăreni” in Dunăreni lake area</li><li>o ROSPA0056 „Lacul Oltina” - in Oltina and Iortmac lakes areas</li></ul></li></ul> <p>Field activities:</p> <ul style="list-style-type: none"><li>- Observation for aquatic and migratory avifauna from the boat</li><li>- Observation for aquatic and migratory avifauna from the shore</li></ul>
2.	Analysis and processing for the field data (Annex 6.8)

#### 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

Activities conducted during 01/31.10.2017, regarding air quality monitoring, in this secondary critical point are those presented in Table 2.1.4.1.A.1.

No activities regarding air quality monitoring have been made during this period in this secondary critical point.

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

Activities conducted during 01/31.10.2017, regarding noise level monitoring, in this secondary critical point are those presented in Table 2.1.4.1.B.1.

No activities regarding noise level monitoring have been made during this period in this secondary critical point.

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

Activities performed during this reporting period, regarding soil quality monitoring, in this critical point were presented in Table 2.1.4.1.C.1.

No activities regarding soil sampling have been made during this period.

#### 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 performed during this reporting period, regarding water and sediments quality, in this critical point, are identical with those presented in Table 2.1.1.E.1.

No activities regarding sediments and water sampling have been made during this period.

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

Activities performed during this reporting period, regarding aquatic fauna and flora (except for ichthyofauna) are summarized in Table 2.1.4.3.F.1.

Tabel. 2.1.4.3.F.1. Specific objectivea: Aquatic flora and fauna monitoring

No.	Activities
1.	Laboratory analysis for aquatic macroinvertebrates, collected in campaign 07-08.09.2017
2.	Processing and preliminary analysis for the obtained results

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

In October 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 October are not provided monitoring activities for other fish species.

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

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

During this period, no activities for terrestrial flora monitoring were made.

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

Activities performed during this reporting period, regarding avifauna monitoring, are summarized in Table 2.1.4.3.G.2.1.

Table 2.1.4.3.G.2.1 Specific objective: Avifauna monitoring

No.	Activities
1.	Activities in field: - Aquatic and migratory avifauna observations from the shore
2.	Analysis and processing the field data (Annex 6.7)



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

During this reporting period were monitored Natura 2000 sites in this critical point area.

Activities conducted during this reporting period, related to Natura 2000 sites monitoring, are summarized in Table 2.1.4.3.H.1.

Table 2.1.4.3.H.1 Specific objective: Natura 2000 sites monitoring

No.	Activities
1.	Avifauna assessment in Natura 2000 sites in CP07 area: - ROSPA0039 "Dunăre Ostroave"; ROSCI0022 "Canaralele Dunării" Activities in field: - Aquatic and migratory avifauna observations from the shore
2.	Analysis and centralization of the obtained data (Annex 6.8)

#### 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 October 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 for morphology and sections profiling;
- bathymetric measurements for velocity and flow rates;
- longitudinal bathymetric measurements 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	5
2.	Chemist 1	Ghiță Gina	0
3.	Chemist 2	Borș Adriana	3
4.	Ichthyologist 1	Cristea Victor	11
5.	Ichthyologist 2	Falka Istvan	0
6.	Hydrology	Poteraș George	8
7.	Hydraulic sedimentology	Ungureanu Gh Viorel	10
8.	Phytoplankton and aquatic macrophytes	Marinescu Florica	0
9.	Zooplankton	Adina Popescu	0
10.	Terrestrial invertebrates	Șerban Cecilia	0
11.	Aquatic macroinvertebrates	Florea Luiza	5
12.	Terrestrial flora and vegetation	Frink Jozsef Pal	0
13.	Ornithologist 1	Jozsef Szabo	17
14.	Ecologist 1	Ambrus Laszlo	2
15.	Ecologist 2	Holban Elena	6
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 November 2017 are synthetically presented in the table 3.4.

Table 3.4. Activities for the period of 01.11-30.11.2017

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	B														B	C						
				ep '17				09 Oct '17				23 Oct '17				06 Nov '17				20 Nov '17					
				F	T	S	W	S	T	M	F	T	S	W	S	T	M			F	T	S			
1	Air monitoring: Contribution to Interim Report 17	Mon 02.10.17	Wed 29.11.17																						
2	78th Month	Mon 02.10.17	Tue 31.10.17																						
3	79th Month	Wed 01.11.17	Wed 29.11.17																						
4	Air monitoring: Processing and assessing the data and measurements for air quality, in secondary critical points CP 03A, CP 03B, CP 04A,	Mon 02.10.17	Tue 31.10.17																						
5	78th Month	Mon 02.10.17	Tue 31.10.17																						
6	Air monitoring: Contribution to Phase Report on post-construction in main critical point CP 10, regarding air quality monitoring, for August 2014 - July 2017 period	Mon 02.10.17	Tue 31.10.17																						
7	78th Month	Mon 02.10.17	Tue 31.10.17																						
8	Noise monitoring: Contribution to Interim Report RI17	Mon 02.10.17	Wed 29.11.17																						
9	78th Month	Mon 02.10.17	Tue 31.10.17																						
10	79th Month	Wed 01.11.17	Wed 29.11.17																						
11	Noise monitoring: Contribution to Phase Report on post-construction in main critical point CP 10, regarding noise level monitoring, for August 2014 - July 2017 period	Mon 02.10.17	Tue 31.10.17																						
12	78th Month	Mon 02.10.17	Tue 31.10.17																						
13	Water quality monitoring - Water ( physical-chemical analysis) - Physical-chemical analysis C65 (CP 01, CP 02, CP03, CP04, CP07)	Mon 02.10.17	Tue 31.10.17																						
14	78th Month	Mon 02.10.17	Tue 31.10.17																						
15	Water quality monitoring - Water (physical-chemical analysis) - Data processing for Interim Report 17 (CP 01, CP 02, CP10, CP03, CP04, CP07) and Report on post-construction phase completion - CP10	Mon 02.10.17	Wed 29.11.17																						
16	78th Month	Mon 02.10.17	Tue 31.10.17																						
17	79th Month	Wed 01.11.17	Wed 29.11.17																						
18	Water quality monitoring - Sediments (heavy metals, organic micropollutants) - Physical-chemical analysis C65 (CP 01, CP 02, CP03, CP04, CP07)	Mon 02.10.17	Tue 31.10.17																						
19	78th Month	Mon 02.10.17	Tue 31.10.17																						
20	Water quality monitoring - Sediments (heavy metals, organic micropollutants) - Data processing for Interim Report 17 (CP 01, CP 02, CP 10, CP03, CP04, CP07) and Report on post-construction phase completion - CP10	Mon 02.10.17	Wed 29.11.17																						
21	78th Month	Mon 02.10.17	Tue 31.10.17																						
22	79th Month	Wed 01.11.17	Wed 29.11.17																						
23	Soil monitoring - Physical-chemical analysis C27 (CP03, CP04, CP07)	Mon 02.10.17	Tue 31.10.17																						
24	78th Month	Mon 02.10.17	Tue 31.10.17																						

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TRANSEUROPEAN TRANSPORT INFRASTRUCTURE

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ON THE DANUBE RIVER BETWEEN CALARASI AND BRAILA, km 375-175

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ID	Task Name	Start	Finish	B														B	C																					
				ep '17							09 Oct '17									23 Oct '17							06 Nov '17							20 Nov '17						
				F	T	S	W	S	T	M	F	T	S	W	S	T	M			F	T	S	W	S	T	M	F	T	S											
25	Soil monitoring - data processing for Interim Report 17 (CP 01, CP 02, CP 10, CP03, CP04, CP07) and Report on post-construction phase completion - CP10	Mon 02.10.17	Wed 29.11.17																																					
26	78th Month	Mon 02.10.17	Tue 31.10.17																																					
27	79th Month	Wed 01.11.17	Wed 29.11.17																																					
28	Aquatic fauna monitoring CP 03A/03B/04A/04B/07 - aquatic macroinvertebrates - laboratory analysis, composition, abundance, biomass, saprobic index	Mon 02.10.17	Tue 31.10.17																																					
29	78th Month	Mon 02.10.17	Tue 31.10.17																																					
30	Aquatic flora monitoring CP 03A/03B/04A/04B/07 - aquatic macrophytes - sampling, composition, abundance, biomass	Wed 01.11.17	Wed 29.11.17																																					
31	79th Month	Wed 01.11.17	Wed 29.11.17																																					
32	Aquatic fauna monitoring CP 01/02/03A/03B/04A/04B/07 - aquatic macroinvertebrates - sampling, composition, abundance, biomass, saprobic index	Wed 01.11.17	Wed 29.11.17																																					
33	79th Month	Wed 01.11.17	Wed 29.11.17																																					
34	Hydromorphological monitoring in CP 01/CP 02 - Single-beam measurements - sections profiling	Mon 02.10.17	Wed 29.11.17																																					
35	78th Month	Mon 02.10.17	Tue 31.10.17																																					
36	79th Month	Wed 01.11.17	Wed 29.11.17																																					
37	Hydromorphological monitoring in CP 01/CP 02 - Flow rate monitoring (volume, velocity, level)	Mon 02.10.17	Wed 29.11.17																																					
38	78th Month	Mon 02.10.17	Tue 31.10.17																																					
39	79th Month	Wed 01.11.17	Wed 29.11.17																																					
40	Hydromorphological monitoring in CP 01/CP 02 - level and turbidity measurements in hydrometric automatic station of INCDDPM	Mon 02.10.17	Wed 29.11.17																																					
41	78th Month	Mon 02.10.17	Tue 31.10.17																																					
42	79th Month	Wed 01.11.17	Wed 29.11.17																																					
43	Ichtyofauna biodiversity monitoring CP 01/02/03/04/07 - trails and migration periods monitoring for sturgeon specimens with ultrasonic	Mon 02.10.17	Wed 29.11.17																																					
44	78th Month	Mon 02.10.17	Tue 31.10.17																																					
45	79th Month	Wed 01.11.17	Wed 29.11.17																																					
46	Ichtyofauna biodiversity monitoring CP 01 - Data downloading from the monitoring systems for sturgeons migration	Mon 02.10.17	Wed 29.11.17																																					
47	78th Month	Mon 02.10.17	Tue 31.10.17																																					
48	79th Month	Wed 01.11.17	Wed 29.11.17																																					

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ID	Task Name	Start	Finish														
				B							B						
				09 Oct '17							23 Oct '17						
				F	T	S	W	S	T	M	F	T	S	W	S	T	M
49	Ichtyofauna biodiversity monitoring CP 01 - Scientific fishing and marking with ultrasonic tags for sturgeons specimens	Mon 02.10.17	Tue 31.10.17														
50	78th Month	Mon 02.10.17	Tue 31.10.17														
51	Ichtyofauna biodiversity monitoring CP 01 - Sturgeons active monitoring with VR100	Mon 02.10.17	Tue 31.10.17														
52	78th Month	Mon 02.10.17	Tue 31.10.17														
53	Monitoring the avifauna covered by the Birds Directive at CP 01, 02, 03, 04, 07	Mon 02.10.17	Tue 31.10.17														
54	78th Month	Mon 02.10.17	Tue 31.10.17														
55	Avifauna monitoring in Natura 2000 sites in CP 01/02/03/04/07 areas	Mon 02.10.17	Tue 31.10.17														
56	78th Month	Mon 02.10.17	Tue 31.10.17														
57	Monthly reports	Mon 02.10.17	Wed 29.11.17														
58	78th Month	Mon 02.10.17	Tue 31.10.17														
59	79th Month	Thu 02.11.17	Wed 29.11.17														

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

*Justifying calculation for 01 - 31 October 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	5	240	1.200,00 EUR
2	Chemist 1	0	200	0,00 EUR
3	Chemist 2	3	200	600,00 EUR
4	Ichthyologist 1	11	330	3.630,00 EUR
5	Ichthyologist 2	0	200	0,00 EUR
6	Hydrology	8	200	1.600,00 EUR
7	Hydraulic- sedimentology	10	200	2.000,00 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	5	125	625,00 EUR
12	Terrestrial flora and fauna	0	125	0,00 EUR
13	Ornithologist 1	17	200	3.400,00 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				15.825,00 EUR
II EXPENSES with JUSTIFICATION				
1	Ichthyology- telemetry (sturgeons and barbel transmitters, batteries, expensis on stugeons' capturing)			6.597,64 EUR
2	Abiotic and biotic data for the establishment of the framework			
3	Analysis			0,00 EUR
SUBTOTAL EXPENSES with JUSTIFICATION				6.597,64 EUR
III. MATHEMTICAL MODELING				
1	Software acquisiton+hardware+ necessary licenses			0,00 EUR
2	Acquisition of bathymetric data, necessary for the mathematical modeling			14.608,60 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				14.608,60 EUR
TOTAL without V.A.T.				37.031,24 EUR



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

*Estimated calculation for 01 - 30 November 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	5	240	1.200,00 EUR
2	Chemist 1	0	200	0,00 EUR
3	Chemist 2	5	200	1.000,00 EUR
4	Ichthyologist 1	7	330	2.310,00 EUR
5	Ichthyologist 2	0	200	0,00 EUR
6	Hydrology	8	200	1.600,00 EUR
7	Hydraulic- sedimentology	10	200	2.000,00 EUR
8	Aquatic phytoplankton and macropytes	7	130	910,00 EUR
9	Zooplankton	0	130	0,00 EUR
10	Terrestrial invertebrates	0	125	0,00 EUR
11	Aquatic macroinvertebrates	5	125	625,00 EUR
12	Terrestrial flora and fauna	0	125	0,00 EUR
13	Ornithologist 1	0	200	0,00 EUR
14	Ecologist 1	2	140	280,00 EUR
15	Ecologist 2	0	140	0,00 EUR
16	Evaluator	5	330	1.650,00 EUR
SUBTOTAL EXPERTS' FEES				11.575,00 EUR
II EXPENSES with JUSTIFICATION				
1	Ichthyology- telemetry (sturgeons and barbel transmitters, batteries, expensis on sturgeons' capturing)			0,00 EUR
2	Abiotic and biotic data for the establishment of the framework			
3	Analysis			0,00 EUR
SUBTOTAL EXPENSES with JUSTIFICATION				0,00 EUR
III. MATHEMTICAL MODELING				
1	Software aquisiton+hardware+ necessary licenses			0,00 EUR
2	Acquisition of bathymetric data, necessary for the mathematical modeling			0,00 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				0,00 EUR
TOTAL without V.A.T.				11.575,00 EUR

## 5. CONCLUSIONS, RECOMMENDATIONS, WARNINGS

- 5.1 This Monthly Report reflects monitoring activities from October 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 October 2017, hydromorphological monitoring activity was mainly based on ADCP measurements (flow rates and velocities) in main critical points area CP01 and CP02 and single-beam bathymetric measurements for sections profiling in the 2 main critical points, in conditions with average flow rates, compared to hystorical data for this period of the year.

## 6. ANNEXES

### 6.1 Relevant correspondence

### 6.2 Ichthyofauna monitoring

6.2.1: Centralizer for sturgeons' captures

6.2.2: Sturgeons' captures sheets

### 6.3 Experts' activity reports

### 6.4 Images of activities

### 6.5 Hydromorphology monitoring

### 6.6 Reports for analitical results 1 - 30 September 2017

6.6.1: Reports for analitical results AIR

6.6.2: Reports for analitical results SOIL

6.6.3: Reports for analitical results WATER

6.6.4: Reports for analitical results SEDIMENTS

### 6.7 Avifauna monitoring

### 6.8 Natura 2000 sites monitoring