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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 73: 1 - 31 May 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. 73

01 - 31 May 2017



FINAL VERSION



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MONTHLY REPORT No 73: 1 - 31 May 2017

### **CARRIED OUT BY:**

1. PhD eng. DEÁK György - CS I - project leader
2. Univ. Prof. PhD eng. Iulian Gabriel BÎRSAN
3. PhD eng. Mihai LESNIC - CS I
4. PhD eng. Dan COCIORVA - CS II
5. PhD eng. George POTERAȘ - CS I
6. PhD eng. Ioan BOSOANCĂ
7. biol. SZABO Jozsef
8. PhD eng. Gina GHIȚĂ - CS II
9. Phd chem. Adriana BORȘ - CS II
10. PhD eng. Victor CRISTEA
11. PhD biol. Florica MARINESCU - CS III
12. Cecilia ȘERBAN
13. Luiza FLOREA
14. FRINK Jozsef Pal
15. Marian TUDOR
16. PhD eng. Mihaela ILIE - CS III
17. prof. univ. eng. dipl. Helmut HABERSACK
18. PhD Falka Istvan
19. PhD ZAHARIA Tania
20. ecologist AMBRUS Laszlo
21. prof. PhD eng. Gh Viorel UNGUREANU
22. Magdalena CHIRIAC - CS I
23. eng. Marius RAISCHI - CS III
24. PhD eng. Lucian LASLO - CS III
25. PhD chem. Petra IONESCU - CS III
26. ecologist MIHOLCSA Tamas
27. PhD eng. Alin Marius BÂDILITĂ - CSIII
28. eng. Bianca PETCULESCU - CS III
29. PhD eng. Ana Maria ANGHEL - CSIII
30. chem. Alexandru IVANOV - CSIII
31. Mădălina Georgiana BOBOC - CS



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32. eng. Georgeta Tudor, CS
33. eng. chim. Ileana MÎȚIU - CS I
34. eng. Monica Niculina RADU - CS I
35. ecologist Iuliana MĂRCUȘ - CS III
36. PhD eng. Carmen TOCIU - CS III
37. chem. Carmen MUNTEANU - CS III
38. ecologist Mariana MINCU - CS III
39. PhD eng. Mihaela MÎȚIU - CS III
40. eng. Marius OLTEANU, CS III
41. geograph Bogdan URITESCU - CS
42. eng. Constantin CÎRSTINOIU - CS
43. geograph Nicu CIOBOTARU - CS
44. ecologist Tiberius DĂNĂLACHE, CS
45. eng. Ștefan ZAMFIR, CS
46. eng. Gabriel BADEA, CS
47. eng. Alexandru CRISTEA, CS
48. eng. Simona RAISCHI - CS
49. biol. Ioana SAVIN - ACS
50. ecologist Ecaterina MARCU - ACS
51. biologist Cristina CIMPOERU - ACS
52. ecologist Cornelia LUNGU - ACS
53. eng. Mădălin SILION, ACS
54. techn. Sergiu SĂNDICĂ
55. techn. Corneliu VASILE
56. techn. Elena BARBU
57. techn. Paula CATANĂ
58. techn. Georgeta MĂNESCU



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județ Prahova (București)



Comisia de Cooperare  
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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 May 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 May 2017 for post-construction period are presented in Table 1.2.

Table 1.2. Objectives monitored during the period of 01.05-31.05.2017

Objectives monitored		Sampling period / ongoing activities	Campaign	Critical Points							
				Main Critical Points			Secondary Critical Points				
				01	02	10	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	04-05, 10-12, 17-19, 24- 25.05.2017	C70	YES	YES	YES	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	11, 17, 18, 19, 24.05.2017	C31	YES	YES	YES	YES	YES	YES	YES	YES
	F.is. BARBELL	-	-	NO	NO	NO	NO	NO	NO	NO	NO
	F.i. OTHER FISH SPECIES	09, 11, 12.05.2017	C11	YES	YES	YES	YES	YES	YES	YES	YES
G.	TERRESTRIAL FLORA	-	-	NO	NO	NO	NO	NO	NO	NO	NO
	TERRESTRIAL FAUNA/ AVIFAUNĂ	08-12, 15-19.05.2017	Avifauna monitoring	NO	YES	YES	YES	YES	NO	NO	YES
H.	NATURA 2000 SITES	15-19.05.2017	Avifauna monitoring	NO	YES	YES	YES	YES	YES	YES	YES
I.	BUILDING SITE	-	-	NO	NO	NO	NO	NO	NO	NO	NO

NOTE:

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>- 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 Carageorghe sand strip

### 2.1.1.A. Air quality monitoring

The activities carried out during 01/31.05.2017 related to air quality monitoring for each critical point are presented 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 73
2.	Contribution to Interim Report 16

According to post-construction monitoring objectives, in May 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 have been 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 01/31.05.2017 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 73
2.	Contribution to Interim Report 16

According to post-construction monitoring objectives, in May 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 have been made the reception of the construction work) frequency is biannual (as Table 1.1).

### 2.1.1.C. Soil quality monitoring

Activities performed during 01/31.05.2017, 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 73
2.	Contribution to Interim Report 16

During this period no soil sampling have been made 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 have been carried out:

- Single-beam bathymetric measurements of high resolution;
- Flow and velocity measurements on the monitoring sections;
- Turbidity and level continuous measurements in the 5 automatic hydrometric stations have continued.

Table 2.1.1.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 5 automatic hydrometric stations

### 2.1.1.E. Water and sediments monitoring

The activities carried out during 01/31.05.2017, 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 73
2.	Contribution to Interim Report 16

In this sampling campaign were not been collected water and sediment samples.



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

No sampling have been made during the reporting period.

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

In May, no scientific fishing activities have been carried out on sturgeon species due to the blockage produced by ANPA, in issuing of the authorization allowing this activity.

The research team continued to monitor the migration of the sturgeons tagged in previous campaigns. Data from monitoring systems has been downloaded and active monitoring actions have been taken with the VR 100 device, but no new signals have been found from sturgeons that would have migrate upstream of km 43 on Borcea branch or have arrived on Bala branch or passed the bottom sill area.

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

In May were made 5 nets for scientific fishing in CP01 area, with which were captured 54 adult shad specimens. Biometric measurements were made for each specimen, scales samples were collected for age determination and gender distribution of the captures.

### **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**

In May 2017 no avifauna monitoring activities were conducted at this critical point. Because during the monitoring campaign access roads were impracticable due to heavy rains, the critical point CP01 could not be reached. It will be evaluated on the June expedition.

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

In May 2017 no Natura 2000 sites monitoring activities were conducted at this critical point. Because during the monitoring campaign access roads were impracticable due to heavy rains, the critical point CP01 could not be reached. It will be evaluated on the June expedition.

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

According to post-construction monitoring objectives are not necessary monitoring activities for the construction site.

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

### 2.1.2.A. Air quality monitoring

The activities carried out during 01/31.05.2017 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 May 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 have been made the reception of the construction work) frequency is biannual (as Table 1.1).

### 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 May 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 have been made the reception of the construction work) frequency is biannual (as Table 1.1).

### 2.1.2.C. Soil quality monitoring

Activities performed during 01/31.05.2017, regarding soil quality monitoring, for this critical point, are summarized in Table 2.1.1.C.1.

In this period have not been made any soil sampling.

### 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 of high resolution;
- Flow and velocity measurements on the monitoring sections;
- Turbidity and level continuous measurements in the 2 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 2 automatic hydrometric stations



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In May 2017, were mainly made 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.

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

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

No sampling have been made during the reporting period.

##### 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 CP02 were made 5 nets for scientific fishing, with which were captured 52 adult shad specimens. Biometric measurements were made for each specimen, scales samples were collected for age determination and gender distribution of the captures.

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

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

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

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

Activities conducted during this reporting period, regarding avifauna monitoring, are presented in Table 2.1.2.G.2.1.

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

No.	Activities
1.	Activities in field: <ul style="list-style-type: none"> <li>- avifauna observations from the shore</li> <li>- census of nesting avifauna - assessments on linear trails (transects) and observation points (point count)</li> </ul>
2.	Analysis and processing of the field data



### 2.1.2.H. Natura 2000 sites monitoring

In this reporting period were monitored Natura 2000 sites in critical point and adjacent lakes areas.

Activities conducted during 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.	<p>Avifauna assessments in Natura 2000 sites:</p> <ul style="list-style-type: none"><li>- ROSPA0039 "Dunăre Ostroave" - in CP02 area</li><li>- ROSCI0022 "Canaralele Dunării" in CP02 area</li><li>- In zona PC02-04:<ul style="list-style-type: none"><li>o ROSPA0007 „Balta Vederoasa” - in Balta Vederoasa and Baciului lake areas</li><li>o ROSCI0071 „Dumbrăveni - Valea Urluia - Lacul Vederoasa” - in Baciului lake and Balta Vederoasa areas</li><li>o ROSPA0054 „Lacul Dunăreni” in Dunăreni lake area</li><li>o ROSPA0056 „Lacul Oltina” - in Oltina and Iortmac lakes areas</li><li>o ROSCI0172 „Pădurea and Valea Canaraua Fetii - Iortmac” - in Dunăreni, Iortmac and Oltina lakes areas</li></ul></li></ul> <p>Activities in field:</p> <ul style="list-style-type: none"><li>- avifauna observations from the shore</li><li>- census of nesting avifauna - assessments on linear trails (transects) and observation points (point count)</li></ul>
2.	Analysis and processing of the field data

### 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 01/31.05.2017, regarding air quality monitoring, in this critical point are those presented in Table 2.1.1.A.1.

For critical point CP 10, in May 2017 have not been conducted any monitoring activities regarding air quality, being a post-construction period (in this main critical point CP10 have been made the reception of the construction work) frequency is biannual (as Table 1.1).

### 2.1.3.B. Noise monitoring

The activities carried out during reporting period, related to noise level monitoring, reported for this critical point are those presented in Table 2.1.1.B.1.

For critical point CP 10, in May 2017 have not been conducted any activities for noise level monitoring, being a post-construction period (in this main critical point CP10 have been made the reception of the construction work) frequency is biannual (as Table 1.1).

### 2.1.3.C. Soil quality monitoring

Activities performed during 01/31.05.2017, regarding soil quality monitoring, for this critical point, are summarized in Table 2.1.1.C.1.

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

### 2.1.3.D. Hydrophological monitoring

The activities from this reporting period are synthetically presented in Table 2.1.3.D.1:

Overall 3 main activities have been carried out:

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

Table 2.1.3.D.1. Specific objective: hydromorphological monitoring

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

### 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.

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

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

In the reporting period sampling have not been made.

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

In May, sturgeons' migration monitoring has been made with the monitoring systems existent in this area.

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

In May were made 5 nets for scientific fishing in CP10 area, with which were captured 71 adult shad specimens. Biometric measurements were made for each specimen, scales samples were collected for age determination and gender distribution of the captures.

### 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

Activities conducted during this reporting period, regarding avifauna monitoring, are summarized in Table 2.1.3.G.2.1.

Table. 2.1.3.G.2.1 Specific objective: Avifauna monitoring

No.	Activities
1.	Activities in field: <ul style="list-style-type: none"><li>- avifauna observations from the shore</li><li>- census of nesting avifauna - assessments on linear trails (transects) and observation points (point count)</li></ul>
2.	Analysis and processing of the field data

### 2.1.3.H. Natura 2000 sites monitoring

In this reporting period were monitored Natura 2000 sites in critical point and adjacent lakes areas.

Activities conducted during this reporting period, regarding Natura 2000 sites monitoring, are summarized in Table 2.1.3.H.1.

Table. 2.1.3.H.1 Specific objective: Monitoring of Natura 2000 sites

No.	Activities
1.	Avifauna assessments in Natura 2000 sites, CP10 area: <ul style="list-style-type: none"><li>- ROSPA0005 „Balta Mică a Brăilei”; ROSCI0006 „Balta Mică a Brăilei”</li><li>- ROSCI0307 „Lacul Sărat - Brăila” - in Sărat lake area</li></ul> Activities in field: <ul style="list-style-type: none"><li>- avifauna observations from the shore</li><li>- census of nesting avifauna - assessments on linear trails (transects) and observation points (point count)</li></ul>
2.	Analysis and processing of the field data



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### 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 01/31.05.2017, 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 73
2.	Contribution to Interim Report 16

During 01/31.05.2017, have not been made any activities for air quality monitoring, in this secondary critical points (CP 03A and CP 03B).

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

The activities carried out during 01/31.05.2017, 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: noise monitoring

No.	Activities
1.	Contribution to Monthly Report 73
2.	Contribution to Interim Report 16

During 01/31.05.2017 have not been made any monitoring activities for noise level in this secondary critical points (CP 03A and CP 03B).

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

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

In this period have not been made soil sampling.

#### 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, regarding water and sediments quality, related to 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.

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

No sampling have been made during the reporting period.

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

In May sturgeons' migration monitoring 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 CP 03 were made three scientific fishing nets with which have captured 25 of adult shad specimens. The specimens were measured, weighed, scales samples for age determination, and gender distribution.

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

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

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

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

The activities carried out during 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>- avifauna observations from the shore</li><li>- census of nesting avifauna - assessments on linear trails (transects) and observation points (point count)</li></ul>
2.	Analysis and processing of the field data

### 2.1.4.1.H. Natura 2000 sites monitoring

In this reporting period were monitored Natura 2000 sites, in critical points and adjacent lakes areas.

The activities carried out during reporting period, regarding Natura 2000 sites monitoring, monitoring, are summarized in Table 2.1.4.1.H.1.

Table. 2.1.4.1.H.1 Specific objective: Monitoring of Natura 2000 sites

No.	Activities
1.	<p>Avifauna assessments in Natura 2000 sites:</p> <ul style="list-style-type: none"> <li>- ROSPA0039 "Dunăre Ostroave" - in CP03 area</li> <li>- ROSCI0022 "Canaralele Dunării" in CP03 area</li> <li>- In zona PC02-04: <ul style="list-style-type: none"> <li>o ROSPA0007 „Balta Vederoasa” - in Balta Vederoasa and Baciului lake areas</li> <li>o ROSCI0071 „Dumbrăveni - Valea Urluia - Lacul Vederoasa” - in Baciului lake and Balta Vederoasa areas</li> <li>o ROSPA0054 „Lacul Dunăreni” in Dunăreni lake area</li> <li>o ROSPA0056 „Lacul Oltina” - in Oltina and Iortmac lakes areas</li> <li>o ROSCI0172 „Pădurea and Valea Canaraua Fetii - Iortmac” - in Dunăreni, Iortmac and Oltina lakes areas</li> </ul> </li> </ul> <p>Activities in field:</p> <ul style="list-style-type: none"> <li>- avifauna observations from the shore</li> <li>- census of nesting avifauna - assessments on linear trails (transects) and observation points (point count)</li> </ul>
2.	Analysis and processing of the field data

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

Because the hydrotechnical works have not started, was not necessary the monitoring of construction site activity.

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

#### 2.1.4.2.A. Air quality monitoring

The activities carried out during 01/31.05.2017, regarding air quality monitoring, in this secondary critical points are those presented in Table 2.1.4.1.A.1.

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

#### 2.1.4.2.B. Noise level monitoring

The activities carried out during 01/31.05.2017, regarding noise level monitoring, in this secondary critical points are those presented in Table 2.1.4.1.B.1.

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



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#### **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, regarding water and sediments quality, related to 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.

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

No sampling have been made during the reporting period.

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

In May 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 CP 04 were made three scientific fishing nets with which have captured 17 of adult shad specimens. The specimens were measured, weighed, scales samples for age determination, and gender distribution.

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

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

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

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

In May 2017 no avifauna monitoring activities were conducted at this critical point. Because during the monitoring campaign access roads were impracticable due to heavy rains, the critical point CP04 could not be reached. It will be evaluated on the June expedition.



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

In this reporting period were monitored Natura 2000 sites in critical point and adjacent lakes areas.

Activities conducted during this reporting period, regarding Natura 2000 sites monitoring, 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.	Avifauna assessments in Natura 2000 sites: <ul style="list-style-type: none"><li>- In CP02-04 area:<ul style="list-style-type: none"><li>o ROSPA0007 „Balta Vederoasa” - in Balta Vederoasa and Baciului lake areas</li><li>o ROSCI0071 „Dumbrăveni - Valea Urluia - Lacul Vederoasa” - in Baciului lake and Balta Vederoasa areas</li><li>o ROSPA0054 „Lacul Dunăreni” in Dunăreni lake area</li><li>o ROSPA0056 „Lacul Oltina” - in Oltina and Iortmac lakes areas</li><li>o ROSCI0172 „Pădurea and Valea Canaraua Fetii - Iortmac” - in Dunăreni, Iortmac and Oltina lakes areas</li></ul></li></ul> Activities in field: <ul style="list-style-type: none"><li>- avifauna observations from the shore</li></ul>
2.	Analysis and processing of the field data

#### 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

The activities carried out during 01/31.05.2017, regarding air quality monitoring, for this secondary critical point are those presented in Table 2.1.4.1.A.1.

In this period, have not been made any activities for air quality monitoring, in this secondary critical point.

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

The activities carried out during 01/31.05.2017, regarding noise level monitoring, in this secondary critical point are those presented in Table 2.1.4.1.B.1.

In this period, have not been made any activities for noise monitoring, in this secondary critical point.





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#### **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.

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

#### **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 reporting period, regarding water and sediments quality, related to 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**

No sampling have been made during the reporting period.

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

In May 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 May were made three scientific fishing nets in CP 07 area, with which have captured 20 of adult shad specimens. The specimens were measured, weighed, scales samples for age determination, and gender distribution.

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

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

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

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

Activities conducted 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: <ul style="list-style-type: none"><li>- avifauna observations from the shore</li><li>- census of nesting avifauna - assessments on linear trails (transects) and observation points (point count)</li></ul>
2.	Analysis and processing of the field data

### 2.1.4.3.H. Natura 2000 sites monitoring

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

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

Table. 2.1.4.3.H.1 Specific objective: Monitoring of Natura 2000 sites

No.	Activities
1.	Avifauna assessment in Natura 2000 sites in CP07 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>- avifauna observations from the shore</li><li>- census of nesting avifauna - assessments on linear trails (transects) and observation points (point count)</li></ul>
2.	Analysis and processing of the field data

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

Because the hydrotechnical works not started, was not necessary the construction site monitoring.

## 2.2. Stage of 3D numerical modeling

In May 2017, INCDDPM specialists have performed, according to Specifications, bathymetric data acquisition in main critical points CP01, CP02 and CP10 areas. Thus, for this activity have been performed:

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

Table 3.4. Activities for the period of 01.06-30.06.2017

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	YES	YES	YES	YES	YES	YES
2.	Processing and interpretation of field and laboratory data (where is necessary)	YES	YES	YES	YES	YES	YES	YES	YES
3.	Monthly report preparation	YES	YES	YES	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	<div> <div>B</div> <div>08 May '17</div> <div>05 Jun '17</div> <div>B</div> <div>03 Jul</div> </div>											
				M	F	T	S	W	S	T					
1	Air monitoring: Contribution to Interim Report 16	Tue 02.05.17	Fri 30.06.17												
2	73th Month	Tue 02.05.17	Wed 31.05.17												
3	74th Month	Fri 02.06.17	Fri 30.06.17												
4	Air monitoring: Measurements and sampling campaigns for air quality, in secondary critical points CP 03A, CP 03B, CP 04A, CP 04B, CP 07.	Fri 02.06.17	Fri 30.06.17												
5	74th Month	Fri 02.06.17	Fri 30.06.17												
6	Noise monitoring: Contribution to Interim Report RI16	Tue 02.05.17	Fri 30.06.17												
7	73th Month	Tue 02.05.17	Wed 31.05.17												
8	74th Month	Fri 02.06.17	Fri 30.06.17												
9	Performing the measuring and sampling campaign for noise monitoring in secondary critical points CP 03A, CP 03B, CP 04A, CP 04B, CP 07.	Fri 02.06.17	Fri 30.06.17												
10	74th Month	Fri 02.06.17	Fri 30.06.17												
11	Water quality monitoring - Water (physical-chemical analysis) - Data processing for Interim Report 16 (CP 01, CP 02, CP 10, CP03, CP04,	Tue 02.05.17	Wed 31.05.17												
12	73th Month	Tue 02.05.17	Wed 31.05.17												
13	Water quality monitoring CP01, CP02 - Water ( physical-chemical analysis)	Fri 02.06.17	Fri 30.06.17												
14	74th Month	Fri 02.06.17	Fri 30.06.17												
15	Water quality monitoring - Sediments (heavy metals, organic micropollutants) - Data processing for Interim Report 16 (CP 01, CP 02, CP 10, CP03, CP04, CP07)	Tue 02.05.17	Wed 31.05.17												
16	73th Month	Tue 02.05.17	Wed 31.05.17												
17	Water quality monitoring CP01, CP02 - Sediments (heavy metals, organic micropollutants)	Fri 02.06.17	Fri 30.06.17												
18	74th Month	Fri 02.06.17	Fri 30.06.17												
19	Soil monitoring - Data processing for Interim Report 16 drafting (CP 01, CP 02, CP 10, CP03, CP04, CP07)	Tue 02.05.17	Wed 31.05.17												
20	73th Month	Tue 02.05.17	Wed 31.05.17												
21	Soil monitoring CP01, CP 02 - Lumbricides presence, abundance	Fri 02.06.17	Fri 30.06.17												
22	74th Month	Fri 02.06.17	Fri 30.06.17												
23	Soil monitoring CP01, CP02 - mineral salts, humic acids, organic matter, physico-chemical characteristics	Fri 02.06.17	Fri 30.06.17												
24	74th Month	Fri 02.06.17	Fri 30.06.17												
25	Aquatic fauna monitoring CP 01/02/10/03A/03B/04A/04B/07 - aquatic macroinvertebrates - sampling, composition, abundance, biomass, saprobic index	Fri 02.06.17	Fri 30.06.17												
26	74th Month	Fri 02.06.17	Fri 30.06.17												



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MINISTERUL TRANSPORTURILOR

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 73: 1 - 31 May 2017

ID	Task Name	Start	Finish	B							B	
				08 May '17				05 Jun '17				03 Jul
				M	F	T	S	W	S	T		
27	Hydromorphological monitoring in CP 01/CP 02/CP 10 - Single-beam measurements - sections profiling	Tue 02.05.17	Fri 30.06.17									
28	73th Month	Tue 02.05.17	Wed 31.05.17									
29	74th Month	Fri 02.06.17	Fri 30.06.17									
30	Hydromorphological monitoring in CP 01/CP 02/CP 10 - Flow rate monitoring (volume, velocity, level)	Tue 02.05.17	Fri 30.06.17									
31	73th Month	Tue 02.05.17	Wed 31.05.17									
32	74th Month	Fri 02.06.17	Fri 30.06.17									
33	Hydromorphological monitoring in CP 01/CP 02/CP 10 - level and turbidity measurements in hydrometric automatic station of INCDPM	Tue 02.05.17	Fri 30.06.17									
34	73th Month	Tue 02.05.17	Wed 31.05.17									
35	74th Month	Fri 02.06.17	Fri 30.06.17									
36	Hydromorphological monitoring in CP 01/CP 02 - Bathymetric measurements of high resolution	Fri 02.06.17	Fri 30.06.17									
37	74th Month	Fri 02.06.17	Fri 30.06.17									
38	Ichtyofauna biodiversity monitoring CP 01/02/10/03/04/07 - trails and migration periods monitoring for sturgeon specimens with	Tue 02.05.17	Fri 30.06.17									
39	73th Month	Tue 02.05.17	Wed 31.05.17									
40	74th Month	Fri 02.06.17	Fri 30.06.17									
41	Ichtyofauna biodiversity monitoring CP 01/02 - Data downloading from the monitoring systems	Tue 02.05.17	Fri 30.06.17									
42	73th Month	Tue 02.05.17	Wed 31.05.17									
43	74th Month	Fri 02.06.17	Fri 30.06.17									
44	Ichtyofauna biodiversity monitoring CP 01 - Active tracking with VR100 device for sturgeons specimens in Bala - Borcea area	Tue 02.05.17	Wed 31.05.17									
45	73th Month	Tue 02.05.17	Wed 31.05.17									
46	Ichtyofauna biodiversity monitoring CP 01/02/03/04/07/10 - Scientific fishing with nets for Alosa species	Tue 02.05.17	Wed 31.05.17									
47	73th Month	Tue 02.05.17	Wed 31.05.17									
48	Ichtyofauna biodiversity monitoring CP 01/02/03/04/07/10 - Drafting the Interim Report 16	Tue 02.05.17	Wed 31.05.17									
49	73th Month	Tue 02.05.17	Wed 31.05.17									
50	Monitoring of avifauna targeted by Birds Directive in CP 02/03/07/10	Tue 02.05.17	Fri 30.06.17									
51	73th Month	Tue 02.05.17	Wed 31.05.17									
52	74th Month	Fri 02.06.17	Fri 30.06.17									
53	Avifauna monitoring in Natura 2000 sites in CP 02/03/04/07/10	Tue 02.05.17	Fri 30.06.17									

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MONTHLY REPORT No 73: 1 - 31 May 2017

ID	Task Name	Start	Finish	B							B
				08 May '17				05 Jun '17			
				M	F	T	S	W	S	T	
54	73th Month	Tue 02.05.17	Wed 31.05.17	<div></div>							
55	74th Month	Fri 02.06.17	Fri 30.06.17	<div></div>							
56	Monthly reports	Tue 02.05.17	Fri 30.06.17	<div></div>							
57	73th Month	Tue 02.05.17	Wed 31.05.17	<div></div>							
58	74th Month	Fri 02.06.17	Fri 30.06.17	<div></div>							

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

*Justifying calculation for 01 - 31 May 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	2	200	400,00 EUR
3	Chemist 2	2	200	400,00 EUR
4	Ichthyologist 1	8	330	2.640,00 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	0	125	0,00 EUR
13	Ornithologist 1	13	200	2.600,00 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				14.370,00 EUR
II EXPENSES with JUSTIFICATION				
1	Ichthyology- telemetry (sturgeons and barbel transmitters, batteries, expensis on stugeons' 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. MATHEMATICAL MODELING				
1	Software acquisiton+hardware+ necessary licenses			0,00 EUR
2	Acquisition of bathymetric data, necessary for the mathematical modeling			45.896,42 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				45.896,42 EUR
TOTAL without V.A.T.				60.266,42 EUR



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

*Estimated calculation for 01 - 30 June 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	5	240	1.200,00 EUR
2	Chemist 1	5	200	1.000,00 EUR
3	Chemist 2	5	200	1.000,00 EUR
4	Ichthyologist 1	8	330	2.640,00 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	5	130	650,00 EUR
9	Zooplankton	0	130	0,00 EUR
10	Terrestrial invertebrates	3	125	375,00 EUR
11	Aquatic macroinvertebrates	5	125	625,00 EUR
12	Terrestrial flora and fauna	0	125	0,00 EUR
13	Ornithologist 1	13	200	2.600,00 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				17.220,00 EUR
II EXPENSES with JUSTIFICATION				
1	Ichthyology- telemetry (sturgeons and barbel transmitters, batteries, expensis on stugeons' 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. MATHEMETICAL MODELING				
1	Software acquisiton+hardware+ necessary licenses			0,00 EUR
2	Acquisition of bathymetric data, necessary for the mathematical modeling			80.000,00 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			50.000,00 EUR
SUBTOTAL NUMERICAL MODELING				130.000,00 EUR
TOTAL without V.A.T.				147.220,00 EUR

## 5. CONCLUSIONS, RECOMMENDATIONS, WARNINGS

- 5.1 This Monthly Report reflects monitoring activities from May 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 May 2017, hydromorphological monitoring activity was mainly based on ADCP measurements (flow rates and velocities) in main critical points area: CP01, CP02 and CP10, as well as single-beam measurements for sections profiling in the main 3 critical points, with low flow rates compared to historical data for this period of the year.
- 5.5 In May 2017 have not been performed scientific fishing for sturgeons species, due to the obstruction caused by the National Agency for Fisheries and Aquaculture.

## 6. ANNEXES

6.1 Relevant correspondence

6.2 Images of activities

6.3 Experts' activity reports

6.4 Hydromorphology monitoring

6.5 Avifauna monitoring

6.6 Natura 2000 sites monitoring