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Instrumente Structurale  
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PROGRAMEL OPERAȚIONALE SECTORIAL TRANSPORT  
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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 61: 1 - 31 May 2016*

## **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. 61**

**01 - 31 May 2016**



**FINAL VERSION**



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## 1. INTRODUCTION

### 1.1. Brief presentation of the objectives monitored in the construction phase

*I. This report presents the monitoring activities for the period of 01-31 May 2016.*

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.

Besides a proper organization and development of the field campaign, 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 May- May (breeding season)			One season/year May- May (breeding season)					
	F. i OTHER FISH SPECIES		Annually (May - May, July - September)			Annually (May - May, July - September)					
G.	TERRESTRIAL FLORA		Annually in July			Annually in July					
	TERRESTRIAL FAUNA/ AVIFAUNĂ		Annually (May - June, September - October, January)			Annually (May - June, September-October, January)					
H.	NATURA 2000 SITES	SCI	ICHTYOFAUNA	Annually (May - May, July - September)			Annually (May - 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 (May - June, September - Octombrie, Ianuarie)			Annually (May - June, September - October, January)				
		SPA	AVIFAUNĂ	Annually (May - June, September - October, January)			Annually (May - June, September - October, January)				
J.	3D numerical modeling		M								

NOTA: OC - quasi continuous M- monthly Q - quarterly S - semester C - continuous

NOTA: 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 May 2016 for post-construction period are presented in Table 1.2.

Table 1.2. Objectives monitored during the period of 01-31.05.2016

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	10, 11, 12, 13, 16, 17, 18, 19.05.2016	C61	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	10, 11, 12, 13, 17, 19, 30.05.2016	C21	YES	YES	YES	YES	YES	YES	YES	YES
	F.is. BARBELL	-	C6	YES	YES	YES	YES	YES	YES	YES	YES
	F.i. OTHER FISH SPECIES	18, 19, 20.05.2016	C8	YES	YES	NO	YES	YES	YES	YES	YES
G.	TERRESTRIAL FLORA	-	-	NO	NO	NO	NO	NO	NO	NO	NO
	TERRESTRIAL FAUNA/ AVIFAUNĂ	11-23.05.2016	Avifauna monitoring	YES	YES	YES	YES	YES	YES	YES	YES
H.	NATURA 2000 SITES	16, 17, 18, 19.05.2016	Avifauna monitoring	YES	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, 70 CP
	Boat ANA 5.5 with trailer, Suzuki engine, 40 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>



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Objectives monitored		Sampling equipment	Laboratory equipments / ongoing activities
	<b>SEDIMENTS</b>	<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, PCF, PCB 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 absorption SOLAAR M5</li> <li>- Mineralization System Speedwave Four with microwave</li> </ul>
<b>F.</b>	<b>AQUATIC FLORA</b>	<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>
	<b>AQUATIC FAUNA</b>	<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>
	<b>F.is. STURGEONS AND BARBELL</b>	<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>
	<b>F.i. OTHER FISH SPECIES</b>	<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>	
<b>G.</b>	<b>TERRESTRIAL FLORA</b>	Binoculars, GPS, notebook, standard forms, camera	
	<b>TERRESTRIAL FAUNA/ AVIFAUNĂ</b>	Binocular, lunette, camera, GPS	
<b>H.</b>	<b>NATURA 2000 SITES</b>	Binocular, lunette, camera, GPS	
<b>I.</b>	<b>BULDING SITE ACTIVITY</b>	<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 01/31.05.2016 regarding 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.	Participation to Monthly Report 61
2.	Participation to Interim Report 13
3.	Participation to Finalization Report, phase I of financing

According to post-construction monitoring objectives, in May 2016 for air quality monitoring in this main critical point CP 01 is not provided a sampling campaign.

#### 2.1.1.B. Noise monitoring

The activities carried out during 01/31.05.2016 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.	Participation to Monthly Report 61
2.	Participation to Interim Report 13
3.	Participation to Finalization Report, phase I of financing

According to post-construction monitoring objectives, in May 2016 for noise level monitoring in this critical point CP 01 is not provided a measurements campaign.

#### 2.1.1.C. Soil quality monitoring

The activities carried out during 01/31.05.2016 related to soil 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.	Contribution to Monthly Report 61
2.	Contribution to Interim Report 13
3.	Contribution to Finalization Report, stage I of financing

In this period have not been made soil sampling.

#### 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 for sections profiling;
- 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 for sections profiling
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 01/31.05.2016, 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.	Participation to Monthly Report 61
2.	Participation to Interim Report 13
3.	Participation to Finalization Report, phase I of financing

According to post-construction monitoring objectives, in May 2016 have not been collected any water and sediments samples.

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

No sampling have been made in reporting period.

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

In May 2016 have been made measurements for velocities determination at water surface and near the bottom, in the potential breeding habitats on Borcea branch at km 4, 57 and 61.

The research team conducted filming with Didson camera to determine the sturgeon specimen's behavior in bottom sill area on Bala branch. From recordings watching was not confirmed the presence of any sturgeon during the monitored period.

Also during this month, data were downloaded and been made maintenance actions for the monitoring systems in this critical point.

Given the fact that ANPA has not issued scientific fishing permits, were not conducted

marking with ultrasonic tags for barbell or sturgeon specimens, monitoring being performed at all species with specimens tagged in previous campaigns.

Office activities included the drafting of Finalization Report of the first stage of financing and preparing the Synthetic Report on sturgeons migration on Bala branch, from 2011 until present.

**Table 2.1.1.F.is.1. Specific objective: sturgeon and barbell migration monitoring**

No.	Activities
1.	Velocities measurements in potential breeding habitats on Borcea branch
2.	Filming with Didson camera in order to determine sturgeons behavior in bottom sill area
3.	Data downloading from the monitoring systems and maintenance activities
4.	Report on sturgeons migration on Bala branch
5.	Finalization Report, phase I of financing

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

In May 2016 were made 9 scientific fishing nets in CP01 area, with which were captured 112 adult shad specimens. Have been performed biometrical measurements for each specimen, scales have been sampled for age determination and gender distribution was made.

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

##### **2.1.1.G.1 Terrestrial flora**

No monitoring activities regarding terrestrial flora in May 2016.

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

The activities carried out during this reporting period, related to 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>- Nesting avifauna observation from the shore</li><li>- Nesting avifauna census - assessments on linear trails (transects) and observation points (point count)</li></ul>
2.	Analysis and processing of the field data

##### **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 reporting period, related to 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 assessment in Natura 2000 sites: <ul style="list-style-type: none"><li>- ROSPA0039 “Dunăre Ostroave” - in CP01 area</li><li>- ROSCI0022 “Canaralele Dunării” - in CP01 area</li></ul> Activities in field: <ul style="list-style-type: none"><li>- Nesting avifauna observation from the shore</li><li>- Nesting avifauna census - assessments on linear trails (transects) and observation points (point count)</li></ul>
2.	Analysis and processing of the field data

#### **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 01/31.05.2016 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 2016 for air quality monitoring in this main critical point CP 02 is not provided a sampling campaign. In post-construction period (in this main critical point CP 02 have been made 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 presented in Table 2.1.1.B.1.

According to post-construction monitoring objectives, in May 2016 for noise level monitoring in this main critical point CP 02 is not provided a measurements campaign. In post-construction period (in this main critical point CP 02 have been made reception of the construction work) frequency is biannual (as Table 1.1).

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

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

In this period has not been made soil sampling.

### 2.1.2.D. Hydromorphological monitoring

The activities from this reporting period are presented in table 2.1.2.D.1.

Overall 3 main activities have been carried out:

- Single-beam bathymetric measurements
- Flow and velocities measurements on the monitoring sections
- Turbidity and level continuous measurements in the 2 automatic hydrometric stations

Table 2.1.2.D.1 Specific objective: hydromorphological monitoring

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

### 2.1.2.E. Water and sediments monitoring

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

During this period has not been made water and sediments sampling.

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

During reporting period has not been made any sampling.

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

In CP02 have been studied sturgeons and barbell migration with the monitoring station fixed on Old Danube.

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

In CP02 were made 9 nets for scientific fishing, with which were captured 98 specimens of adult shad. The specimens were measured, weighed, scales were sampled for age determination and genders distribution been made.

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

#### 2.1.2.G.1 Terrestrial flora

No activities regarding terrestrial flora monitoring in May 2016.

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

The activities carried out during 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.	Activities in field: <ul style="list-style-type: none"> <li>- Nesting avifauna observation from the shore</li> <li>- Nesting avifauna census - 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

During this reporting period were monitored Natura 2000 sites, in critical points area and on adjacent lakes of this critical point.

The activities carried out during reporting period, related to Natura 2000 sites monitoring, are summarized in Table 2.1.2.H.1.

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

No.	Activities
1.	Avifauna monitoring in Natura 2000 sites: <ul style="list-style-type: none"> <li>- ROSPA0039 "Dunăre Ostroave" - in CP02 area</li> <li>- ROSCI0022 "Canaralele Dunării" - in CP02 area</li> <li>- in PC02-04 area: <ul style="list-style-type: none"> <li>o ROSCI0071 „Dumbrăveni - Valea Urluia - Lacul Vederoasa” - in lake Baciului and Balta Vederoasa areas</li> <li>o ROSPA0007 „Balta Vederoasa” - in Balta Vederoasa and Baciului lakes areas</li> <li>o ROSCI0172 „Pădurea and Valea Canaraua Fetii - Iortmac” - in lakes Dunăreni, Iortmac and Oltina areas</li> <li>o ROSPA0054 „Lacul Dunăreni” in Dunăreni lake area</li> <li>o ROSPA0056 „Lacul Oltina” - in lakes Oltina and Iortmac areas</li> </ul> </li> </ul> Field activities: <ul style="list-style-type: none"> <li>- Observations for nesting avifauna from the shore</li> <li>- Census of nesting avifauna on linear trails (transects) and in 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 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 01/31.05.2016, regarding to air quality monitoring for this

critical point, are those presented in Table 2.1.1.A.1.

For main critical point CP10, in May 2016 have not been performed any monitoring activities for air quality, as a post-construction period (in this main critical point CP10 was done the reception of the construction work), frequency was biannual (as presented in Table 1.1).

### 2.1.3.B. Noise monitoring

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

For critical point CP10, in May 2016 have not been performed any monitoring activities related to noise level, as a post-construction period (in this main critical point CP10 was done the reception of the construction works), frequency was biannual (as Table 1.1).

### 2.1.3.C. Soil quality monitoring

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

During this period, no soil sampling has been made.

### 2.1.3.D. Hydrophological monitoring

Activities performed during this reporting period, are summarized in Table 2.1.3.D.1.

Overall, have been performed 3 main activities:

- Single-beam bathymetric measurements for sections profiling;
- Flow and velocity measurements on the monitoring sections;
- Have continued activities of continuous measurements for turbidity and level in the 3 hydrometrical automatic stations.

**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.	Continuous measurements for turbidity and level in the 3 hydrometrical automatic stations

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

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

During this period no water and sediments sampling have been made

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

No sampling have been made in this reporting period.

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

In CP10 have been studied sturgeons and barbell migration with monitoring systems placed on Caleia, Cravia branches and on navigable Danube. Monitoring process included also filming with Didson camera during this month.

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

In May 2016 have not been conducted any scientific fishing activities for barbell species in CP10.

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

#### 2.1.3.G.1 Terrestrial flora

No terrestrial flora monitoring activities during May 2016.

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

The activities carried out in the reporting period related to 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>- Observations for nesting avifauna 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

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

The activities carried out 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: Natura 2000 sites monitoring

No.	Activities
1.	Avifauna assessment in Natura 2000 sites: <ul style="list-style-type: none"><li>- ROSCI0006 „Balta Mică a Brăilei” - in CP10 area</li><li>- ROSPA0005 „Balta Mică a Brăilei” - in CP10 area</li><li>- ROSCI0307 „Lacul Sărat - Brăila” - in Sărat lake area</li></ul> Field activities: <ul style="list-style-type: none"><li>- Observations for nesting avifauna from the shore</li><li>- Census of nesting avifauna - assessments on linear trails (transects) and observation points (point count)</li></ul>



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No.	Activities
2.	Analysis and processing of the field data

### 2.1.3.1. 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 the CP 03 (upstream and downstream Seica)

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

The activities carried out during 01/31.05.2016, related to air quality monitoring, 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.	Preparing the field sampling campaign for air quality, in secondary critical points CP 03A, CP 03B, CP 04A, CP 04B, CP 07

During this period, no air quality monitoring has been made in this critical points.

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

The activities carried out during 01/31.05.2016, regarding noise level monitoring, for 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.	Preparing the field measurements campaign for noise level, in secondary critical points CP 03A, CP 03B, CP 04A, CP 04B, CP 07

During this period, no monitoring for noise level have been made in this critical points.

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

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

During this period no soil sampling have been made.



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

No hydromorphological monitoring activities 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, in this critical point, are those presented in Table 2.1.1.E.1.

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

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

In reporting period no sampling have been made.

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

Monitoring of sturgeons and barbell migration have been conducted on this sector by the monitoring systems placed between km 348 and km 240, on Old Danube.

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

In CP03 were made 3 nets for scientific fishing, with which were captured 24 specimens of adult shad. The specimens were measured, weighed, scales were sampled for age determination and genders distribution been made.

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

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

No activities for terrestrial flora monitoring in May 2016.

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

The activities carried out 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.	Field activities: <ul style="list-style-type: none"> <li>- Observations for nesting avifauna 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 for field data

### 2.1.4.1.H. Natura 2000 sites monitoring

During this reporting period were monitored Natura 2000 sites in critical points area and on lake adjacent to critical point.

The activities carried out during 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.	<p>Avifauna monitoring in Natura 2000 sites:</p> <ul style="list-style-type: none"> <li>- ROSPA0039 "Dunăre Ostroave" - in PC03 area</li> <li>- ROSCI0022 "Canaralele Dunării" - in PC03 area</li> <li>- in PC02-04 area: <ul style="list-style-type: none"> <li>o ROSCI0071 „Dumbrăveni - Valea Urluia - Lacul Vederoasa” - in lake Baciului and Balta Vederoasa areas</li> <li>o ROSPA0007 „Balta Vederoasa” - in Balta Vederoasa and Baciului lakes areas</li> <li>o ROSCI0172 „Pădurea and Valea Canaraua Fetii - Iortmac” - in lakes Dunăreni, Iortmac and Oltina areas</li> <li>o ROSPA0054 „Lacul Dunăreni” in Dunăreni lake area</li> <li>o ROSPA0056 „Lacul Oltina” - in lakes Oltina and Iortmac areas</li> </ul> </li> </ul> <p>Field activities:</p> <ul style="list-style-type: none"> <li>- Observations for nesting avifauna 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 for 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. Critical point 04 monitoring/Ceacâru/Fermecatu

#### 2.1.4.2.A. Air quality monitoring

The activities carried out during 01/31.05.2016, related to air quality monitoring, in this secondary critical points are those presented in Table 2.1.4.1.A.1.

During this period no air monitoring have been made in this critical point.

#### 2.1.4.2.B. Noise level monitoring

The activities carried out during 01/31.05.2016, regarding noise level monitoring, for this secondary critical points are those presented in Table 2.1.4.1.B.1.

During this period, no activities for noise monitoring were made in this critical point.



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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 those presented in Table 2.1.1.C.1.

In this period have not been collected any soil samples.

#### **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, in this critical point, are those presented in Table 2.1.1.E.1.

During this period have not been made any water and sediments sampling.

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

No sampling during reporting period.

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

Monitoring of sturgeons migration was performed on this sector by the monitoring systems placed between km 347 and km 240 on Old Danube.

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

In CP 04 been made 3 nets for scientific fishing, after which were captured 35 specimens of adult shad. The specimens were measured, weighed, scales were sampled for age determination and genders distribution been made.

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

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

No monitoring activities regarding terrestrial flora in May 2016.

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

The activities carried out 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.	Field activities: <ul style="list-style-type: none"> <li>- Observations for nesting avifauna from the shore</li> <li>- Census of nesting avifauna - assessments on linear trails (transecte) and observation points (point count)</li> </ul>
2.	Analysis and processing for field data

### 2.1.4.2.H. Natura 2000 monitoring sites

During this reporting period were monitored Natura 2000 sites, in critical points area and on adjacent lakes.

The activities carried out during 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.	Avifauna monitoring in Natura 2000 sites: <ul style="list-style-type: none"> <li>- ROSPA0039 "Dunăre Ostroave" - in PC04 area</li> <li>- ROSCI0022 "Canaralele Dunării" - in PC04 area</li> <li>- in PC02-04 area: <ul style="list-style-type: none"> <li>o ROSCI0071 „Dumbrăveni - Valea Urluia - Lacul Vederoasa” - in lake Baciului and Balta Vederoasa areas</li> <li>o ROSPA0007 „Balta Vederoasa” - in Balta Vederoasa and Baciului lakes areas</li> <li>o ROSCI0172 „Pădurea and Valea Canaraua Fetii - Iortmac” - in lakes Dunăreni, Iortmac and Oltina areas</li> <li>o ROSPA0054 „Lacul Dunăreni” in Dunăreni lake area</li> <li>o ROSPA0056 „Lacul Oltina” - in lakes Oltina and Iortmac areas</li> </ul> </li> </ul> Field activities: <ul style="list-style-type: none"> <li>- Observations for nesting avifauna from the shore</li> <li>- Census of nesting avifauna - assessments on linear trails (transecte) and observation points (point count)</li> </ul>
2.	Analysis and processing for 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 for this period of time because the hydrotechnical works have not been started.

### 2.1.4.3. Critical Point CP 07 / Fasolele monitoring

#### 2.1.4.3.A. Air quality monitoring

The activities carried out during 01/31.05.2016, regarding air quality monitoring, for this secondary critical point are those presented in Table 2.1.4.1.A.1.

During this period not been made air monitoring in this critical point.





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

The activities carried out during 01/31.05.2016, regarding noise level monitoring, related to these secondary critical points, are those presented in Table 2.1.4.1.B.1.

During this period has not been made the noise monitoring in this critical point.

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

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

During this period has not been made soil sampling.

#### **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**

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

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

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

In this reporting period, sampling have not been made.

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

Sturgeons migration monitoring were performed on this sector by the monitoring systems placed between km 348 and km 240 on Old Danube.

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

In CP 07 were made 3 scientific fishing nets, with which were captured 31 specimens of adult shad. The specimens were measured, weighed, scales were sampled for age determination and genders distribution been made.

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

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

No activities regarding terrestrial flora monitoring during May 2016.

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

The activities carried out during 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.	Field activities: <ul style="list-style-type: none"><li>- Observations for nesting avifauna 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 for field data

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

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

Activities performed 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: Natura 2000 sites monitoring

No.	Activities
1.	Avifauna assessment in Natura 2000 sites: <ul style="list-style-type: none"><li>- ROSPA0039 "Dunăre Ostroave" - in CP07 area</li><li>- ROSCI0022 "Canaralele Dunării" - in CP07 area</li></ul> Field activities: <ul style="list-style-type: none"><li>- Observations for nesting avifauna 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 for field data

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

Because there have not been conducted any hydrotechnical works during this period, the monitoring of the construction site activity was not necessary.

### 2.2. Stage of 3D numerical modeling

In May, INCDPM specialists have achieved, 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 team experts**

No.	Experts	Names of experts	Number of working days post-construction
1.	Project manager	Deák György	5
2.	Chemist 1	Ghiță Gina	5
3.	Chemist 2	Borș Adriana	5
4.	Ichthyologist 1	Cristea Victor	8
5.	Ichthyologist 2	Falka Istvan	6
6.	Hydrology	Poteraș George	8
7.	Hydraulic sedimentology	Ungureanu Gh Viorel	12
8.	Phytoplankton and aquatic macrophytes	Marinescu Florica	0
9.	Zooplankton	Adina Popescu	0
10.	Terrestrial invertebrates	Șerban Cecilia	0
11.	Aquatic macroinvertebrates	Florea Luiza	0
12.	Terrestrial flora and vegetation	Frink Jozsef Pal	0
13.	Ornithologist 1	Jozsef Szabo	13
14.	Ecologist 1	Ambrus Laszlo	2
15.	Ecologist 2	Zaharia Tania	5
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 of 01-30 June 2016 are synthetically presented in the table 3.4.

**Table 3.4. Activities for the period of 01-30.06.2016**

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	B																		
			Apr '16			09 May '16			23 May '16			06 Jun '16			20 Jun '16			04 Jul '16			
			W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M	
1	Hydromorphological monitoring in CP 01/CP 02/CP10 - Single-beam measurements - sections profiling	Sun 01.05.16																			
2	Month 61	Sun 01.05.16																			
3	Hydromorphological monitoring in CP 01/CP 02/CP10 - Flow rate monitoring (volume, velocity, level)	Sun 01.05.16																			
4	Month 61	Sun 01.05.16																			
5	Hydromorphological monitoring in CP 01/CP 02/CP 10 - level and turbidity measurements in automatic hydrometric stations of INCDPM	Sun 01.05.16																			
6	Month 61	Sun 01.05.16																			
7	Soil monitoring - data processing for Interim Report 13 (CP 01/02/03/04/07/10) - and Final Report for phase I of financing	Sun 01.05.16																			
8	Month 61	Sun 01.05.16																			
9	Water quality monitoring - Sediments (heavy metals, organic micropollutants) - data processing for Interim Report 13 (CP 01/02/03/04/07/10) - and Final Report for phase I of financing	Sun 01.05.16																			
10	Month 61	Sun 01.05.16																			
11	Water quality monitoring CP 01/02/03/04/07/10 - Water (physical-chemical analysis) - data processing for Interim Report 13 (CP 01/02/03/04/07/10) - and Final Report for phase I of financing	Sun 01.05.16																			
12	Month 61	Sun 01.05.16																			
13	Monitoring of avifauna covered by Birds Directive in CP 01/02/3A/3B/4A/4B/07/10 - birds monitoring in Natura 2000 sites	Sun 01.05.16																			
14	Month 61	Sun 01.05.16																			
15	Month 62	Mon 30.05.16																			
16	Ichthyofauna Biodiversity Monitoring in CP 01/02/10/03/04/07 - Monitoring the migration trails and seasons for ultrasonic tagged sturgeons and barbell specimens	Sun 01.05.16																			
17	Month 61	Sun 01.05.16																			
18	Month 62	Mon 30.05.16																			
19	Ichthyofauna Biodiversity Monitoring in CP 01 - velocity measurements in breeding habitats on Borcea branch	Sun 01.05.16																			
20	Month 61	Sun 01.05.16																			
21	Ichthyofauna Biodiversity Monitoring in CP 01/10 - Filming with Didson camera in bottom sill area, to determine sturgeons behavior	Sun 01.05.16																			
22	Month 61	Sun 01.05.16																			
23	Ichthyofauna Biodiversity Monitoring in CP 01/02 - Data downloading from the monitoring systems and maintenance activities	Sun 01.05.16																			

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ID	Task Name	Start																	
			B							B							B		
			Apr '16			09 May '16			23 May '16			06 Jun '16			20 Jun '16			04 Jul	
W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T	M		
24	Month 61	Sun 01.05.16																	
25	Month 62	Mon 30.05.16																	
26	Ichthyofauna Biodiversity Monitoring in CP 01/02/03/04/07 - Scientifical fishing with drifting nets for shad	Sun 01.05.16																	
27	Month 61	Sun 01.05.16																	
28	Ichthyofauna Biodiversity Monitoring in CP 01 - drafting the Report regarding sturgeons migration on Bala branch	Sun 01.05.16																	
29	Month 61	Sun 01.05.16																	
30	Processing the obtained data regarding noise monitoring in critical points, for Final Report in phase I of financing	Sun 01.05.16																	
31	Month 61	Sun 01.05.16																	
32	Processing the obtained data regarding air monitoring in critical points, for Final Report in phase I of financing	Sun 01.05.16																	
33	Month 61	Sun 01.05.16																	
34	Noise monitoring (zero and intense traffic) in secondary critical points CP 03A/03B/04A/04B/07	Mon 30.05.16																	
35	Month 62	Mon 30.05.16																	
36	Air monitoring: Performing the sampling and measurements campaigns in secondary critical points CP 03A/03B/04A/04B/07	Mon 30.05.16																	
37	Month 62	Mon 30.05.16																	
38	Monthly reports	Sun 01.05.16																	
39	Month 61	Sun 01.05.16																	
40	Month 62	Mon 30.05.16																	

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

*Justifying calculation for 01 - 31 May 2016*

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	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	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	5	140	700,00 EUR
16	Evaluator	5	330	1.650,00 EUR
SUBTOTAL EXPERTS' FEES				16.270,00 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			17.472,50 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				17.472,50 EUR
TOTAL without V.A.T.				33.742,50 EUR



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

*Estimated calculation for 01 - 30 June 2016*

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	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- sedimentology	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	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	13	200	2.600,00 EUR
14	Ecologist 1	2	140	280,00 EUR
15	Ecologist 2	5	140	700,00 EUR
16	Evaluator	5	330	1.650,00 EUR
SUBTOTAL EXPERTS' FEES				17.545,00 EUR
II. EXPENSES with JUSTIFICATION				
1	Ichthyology- telemetry (sturgeons and barbel transmitters, batteries, expensis on stugeons' capturing)			5.000,00 EUR
2	Abiotic and biotic data for the establishment of the framework			
3	Analysis			0,00 EUR
SUBTOTAL EXPENSES with JUSTIFICATION				5.000,00 EUR
III. MATHEMETICAL MODELING				
1	Software acquisiton+hardware+ necessary licenses			0,00 EUR
2	Acquisition of bathymetric data, necessary for the mathematical modeling			18.200,00 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				18.200,00 EUR
TOTAL without V.A.T.				40.745,00 EUR



## 5. CONCLUSIONS, RECOMMENDATIONS, WARNINGS

- 5.1 This Monthly Report reflects monitoring activities from May 2016 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, with the frequency related with the post-construction stage, up to end 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 2016, hydromorphological monitoring activity mainly based on ADCP measurements (flow rates and velocities) in main critical points area: CP01, CP02 and CP10, as well as from single-beam measurements for sections profiling in the 3 main critical points, in conditions with normal flow rates for this period of the year.
- 5.5 In May 2016 have been performed scientific fishing for shad with drifting nets, in critical points 01, 02, 03, 04, 07. In total the research team carried out 27 fishing nets, were captured 300 specimens of shad, from which were taken biometric data and sampled scales for age determination. The actions undertaken have not indicated a negative influence of hydrotechnical works on shad migration.



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## **6. ANNEXES**

### **6.1 Relevant correspondence**

### **6.2 Ichtyofauna monitoring**

#### **6.2.1: Velocities in analyzed profiles**

### **6.3 Experts' activity reports**

### **6.4 Images taken during activities**

### **6.5 Hydromorphology monitoring**

### **6.6 Avifauna monitoring**

### **6.7 Monitorizare situri Natura 2000**