ANNEX II: TERMS OF REFERENCE

1. BACKGROUND INFORMATION

1.1. Partner country

Republic of Serbia

1.2. Contracting authority

Public Enterprise "VOJVODINAŠUME"

Preradovićeva 2, 21131 Petrovaradin, Republic of Serbia

1.3. Country background

The rivers form the longest uninterrupted river corridor in Central Europe with the largest contiguous floodplain forests habitat system in the Danube Basin, often referred to as the "Amazon of Europe". The area hosts Danube´s most intact floodplain areas (Kopački Rit) on the first 2,000 km (source to Iron Gate), which correspond to 50% of the most natural floodplain areas along the entire Danube course. Additionally, the Croatian-Serbian Danube contributes with 50% to the most natural hydro-morphological intact river sections along its first 2000 km (ICPDR 2014/19). This makes the area to a haven for floodplain flagship species such as the white-tailed eagle Haliaeetus albicilla with continental Europe's highest breeding density (more than 150 pairs). The floodplain waters of Kopački Rit are Danube´s most important fish spawning area. With over 5,000 animal species including 70 fish species and more than 1,500 plant species the riverine areas are one of Europe´s biodiversity hotspots (Stumberger et al. 2022).

These unique natural values are protected by 17 Natura 2000 sites and further protected areas which string along the rivers. They represent the ecological backbone (core and buffer zone) of world´s first 5-country Biosphere Reserve, which was designed in 2021 by UNESCO´s Man and the Biosphere (MAB) programme, after decades of continuous work and cooperation of the five countries (Annex A7_001; Köck et. al 2022). The 5-country Biosphere Reserve Mura-Drava-Danube (TBR MDD), with an overall size of 932,000 ha including the 630,000 ha transition zone forms the largest protected river system in Europa.

The project area with a total size of 2071,6 km2 is connecting 17 Natura 2000 Sites (Annex 5) and one major Special Nature Reserve in Serbia (future Natura 2000 site) in two European biogeographical regions – the Continental and the Pannonian regions. The habitat types HT 91E0* and HT 91F0 account for a total of 49,4% (435 km2) (HT 91E0*=40%, HT 91F0=9,4%) of the forest structure in the project area (nat. inventories, Schwarz 2013, Annex 4 – Maps). The Natura 2000 sites and protected area with its contiguous large-scale floodplain forest habitat structure are flagship sites for preserving of both habitat types HT 91E0* and HT 91F0. They represent a natural asset of European importance. The target area in Serbia covers: Special Nature Reserve Gornje Podravlje (future N2K site) - 9,3 %.

Habitat type HT 91E0* as well as HT 91F0 is in an unfavourable-bad conservation status at EU level in the Continental and Pannonian biogeographical regions with declining trend (U2-). Same status applies on country level for Austria, Hungary, Slovenia, except Croatia, where HT 91F0 is in unfavourable-inadequate with future prospect unfavourable-bad. HT 91E0* is listed in Croatia in favourable status (Article 17 reporting period 2012-2018) but is threatened and needs conservation actions (Natura 2000 – SDF report; https://www.bioportal.hr/gis/). In Serbia both habitat types are threatened and conservation actions are urgently needed (Puzović S. et al. 2015). The main threats on these habitats include changes in the state of water bodies, silvicultural activities (e.g. plantations) and invasive species. Therefore, the rivers are struggling with continued habitat degradation and degradation of floodplain forests and endangered species loss, with consequences becoming increasingly evident and

threatening the functionality of the ecosystem (Klösch et al. 2022). To counteract these threats and negative trend in a coordinated international effort is the rationale of the project consortium.

Vojvodinašume Public Forest Enterprise, as the forestry agency of the province of Vojvodina, is the managing authority of all protected areas in this province, including Special Nature Reserve Gornje Podravlje. As a protected area manager, Vojvodinašume has the intention to improve the status of the forest's habitats by improving the hydrological regime. This would have a broader impact on all relevant sectors (especially on nature conservation and forestry). As a protected area manager Vojvodinašume has a clear task to improve the status of the protected area (Gornje Podunavlje SNR). This project will bring great contributions in all aspects, especially ecological ones. Vojvodinašume will have leading role in coordinating and implementation of the project activities.

1.4. Current situation in the sector

The project "LIFE RESTORE for MDD - Preserving and restoring floodplain forest habitats along the Mura-Drava-Danube rivers" focuses on the conservation and restoration of the largest contiguous floodplain forest habitat system in the Danube River Basin for improving its conservation status. During the project period of 5 years, the causes of the degradation of the floodplain forests and the lack of connectivity between the individual habitats along the three transboundary river courses will be tackled in a coordinated and integrated conservation effort by 17 partners of the five involved countries Austria, Croatia, Hungary, Slovenia and Serbia. The focus of the planned measures is on the priority habitat HT 91E0* Alluvial forests and HT 91F0 Riparian mixed forests of the Mura, Drava and Danube floodplains and their connectivity with the natural river dynamics, on which they depend.

Long-term goal N°1 “Ecological Conservation and ecosystem services” in the Common Work Plan (CWP) of the TBR MDD, which was adopted by the 5 Mura-Drava-Danube countries, refers to the restoration and preservation of these habitats: “In the TBR MDD area, the natural processes of a dynamic river and the associated floodplains is preserved and/or restored, as well as the natural hydrological and natural hydro-morphological regime and the corridor function of rivers. The ecological connectivity will be improved and maintained. As a result, there will be a positive influence on the conservation of key species and habitats on a long-term scale.”

For steering the implementation of the CWP of the TBR MDD a Steering Committee (SC) was formed, consisting of representatives of the respective ministries and public institutions of the five TBR countries. On its first meeting in December 2021, after designation of the TBR MDD the SC decided to prepare and submit this joint 5-country LIFE restoration project. The SC is also reflected in the structure of the project as Advisory Board.

The focus of “LIFE RESTORE for MDD” is on the preservation and restoration of the priority habitat type HT 91E0* Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) and HT 91F0 Riparian mixed forests of Quercus robur, Ulmus laevis and Ulmus minor, Fraxinus excelsior or Fraxinus angustifolia along the great rivers (Ulmenion minor). This will be achieved in an integrated and transboundary conservation effort between 17 partners across the five countries including water managers, nature conservationists, foresters, protected area managers, regional managers and NGOs.

1.5. Related programmes and other donor activities

Public Enterprise Vojvodinašume has already implemented the impressive number of projects in relation to preservation and restoration of protected habitats and natural areas:

- LIFE programme: WILDisland - The Danube Wild Island Habitat Corridor (2021-2027)

- Interreg programme: Sava TIES project - Preserving Sava River Basin Habitats through Transnational Management of Invasive Alien Species (2018 - 2021)

- Interreg DTP programme: CoopMDD - Transboundary Management Programme for the planned 5-country Biosphere Reserve “Mura-Drava-Danube” (2017 - 2019)

- SEE programme: DANUBEparksCONNECTED - Bridging the Danube Protected Areas towards a Danube Habitat Corridor (2017 - 2019)

- IPA CBC HU-SRB: WILDCOND - Wildlife health and conservation of selected NATURA 2000 species within the Danube Cross-border region in Serbia and Hungary (2012 - 2014).

2. OBJECTIVES & EXPECTED OUTPUTS

2.1. Overall objective

The overall objective (Impact) to which this action contributes is:

Preserving and restoring floodplain forest habitats along the Mura-Drava-Danube rivers - conservation and restoration of the largest contiguous riparian forest system in the Danube River Basin.

2.2. Specific objective(s)

The specific objective (Outcome 1) of this contract is as follows:

- To provide expert services for the Study of hydrotechnical arrangement of Monoštorski rit with hydrologic-hydraulic study and research for project: LIFE RESTORE for MDD.

2.3. Expected outputs to be achieved by the contractor

The expected outputs of this contract correspond to Outcome 1:

- Development of the water regime simulation model,

The expected outputs of this contract correspond to Outcome 2:

- Hydrological monitoring.
- Elaboration of the study on dynamics of underwaters based on sensors monitoring.

3. ASSUMPTIONS & RISKS

3.1. Assumptions underlying the project

- Availability of financial resources for the project needs;
- Involved staff responsible, competent and motivated;
- The persons involved in project management (internal and external staff) maintain regular and continuous communication within the partnership and with the Programme authorities.

3.2. Risks

Restrictions due to Covid-19 pandemic:

The Covid-19 pandemic caused serious impact all over Europe, with dramatical changes in social and business life. The future development is hardly to predict from the today´s point of view, limitations, restrictions and negative can have serious impact on network communication, dissemination, but also for the consultation of stakeholders, the planning and implementation of construction works.

Mitigation:

Basically, for all actions buffer time is planned. Delays in the early phase of the project due to Covid-19 can be compensated in the later phase. Based on the lessons-learnt in 2020/2021 no delays are expected for river and forest restoration measures. For the communication measures, alternatives are planned (see E.1, E.2). The alternatives (online communication, webinars, hybrid conferences) found the way into standard communication as it helps to reduce travel (costs) and the ecological footprint of the project, and further increases the reach of communication measures.

4. SCOPE OF THE WORK

4.1. General

4.1.1. Description of the assignment

The contract should include the professional and timely implementation of the following services:

- Development of the water regime simulation model,

- Perform hydrological monitoring,

- Elaboration of the study on dynamics of underwaters based on sensors monitoring for the Monoštorski rit in Special Nature Reserve “Gornje Podunavlje, Vojvodina, Serbia in the framework of for LIFE RESTORE for MDD project.

4.1.2. Geographical area to be covered

Monoštorski rit, AP Vojvodina, Republic of Serbia

4.1.3. Target groups

The project’s target groups:

- EU-institutions & policy makers,

- National and regional public authorities,

- Infrastructure and (public) service providers,

- International organisations and conventions,

- Universities, scientific institutions,

- Protected Area Networks,

- Interest Groups incl. NGOs,

- Cities and local municipalities,

- General public.

4.2. Specific work

I. INTRODUCTION:

By building the Danube embankment and the Danube-Tisa-Danube Canal (Prigrevica-Bezdan), Monoštorski Rit has not been affected by Danube flooding since 1965. In order to improve the condition of the habitats, adapting the groundwater and surface water regime and the water-air regime of soils to the needs of the plant and animal life common in marshes is required. That is why technical documentation for revitalization activities of the Monoštorski Rit was developed about twenty years ago and the whole area is divided into two segments: ”Šmaguc – Kalandoš” (northern part of Monoštorski Rit) and ”Siga – Kazuk” (southern part of Monoštorski Rit).

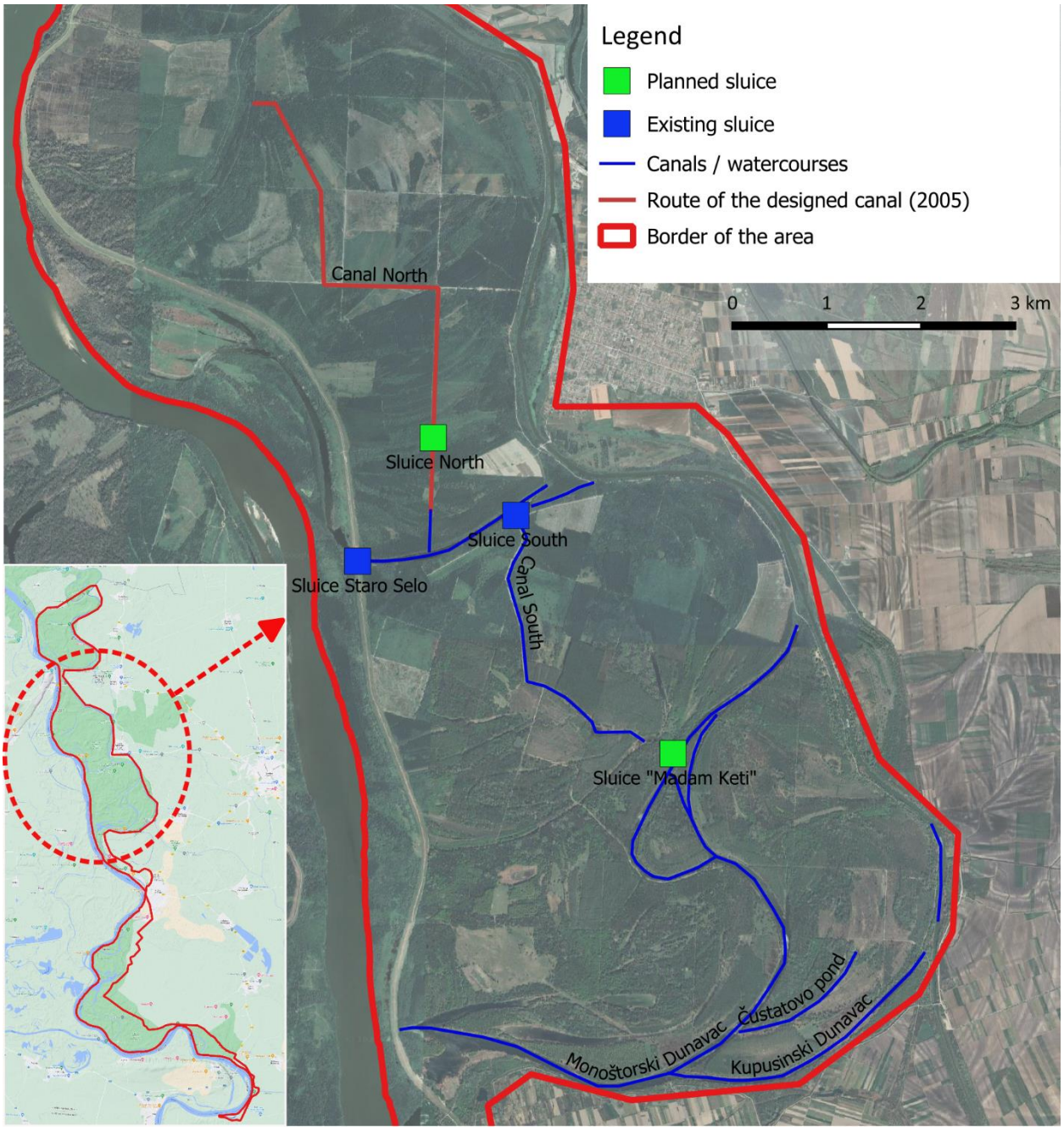

Figure 1. Aerial map of the area

In the current conditions, the Monoštorski Rit is filled with water through the sluice ”Staro Selo” located at the Danube embankment of the first line of defence (km 41+855). When the water level is sufficient (220 cm in the hydrological station Bezdan) water comes through the sluice into the former Danube riverbed, the so called Stari Dunavac. The water transportation system: the water is transported through the Stari Dunavac to the North Canal to supply with water the northern part of the marsh and through the South Canal to supply with water the southern part of the marsh. The North Canal is partially built, while the South Canal is complete, along with the (separating) sluice South at the beginning of the Canal and dual-purpose canals of lower order and supporting water structures. Water distribution is simplified and depends on the sluices. In other words, when the southern part of Monoštorski Rit is filled with water, the sluice-gate South closes, and the water is directed to the northern part. Due to the non-existent northern part of the system and the non-operational sluice-gate, filling the Monoštorski Rit with water has never happened in practice.

The area is part of the Special Nature Reserve (SNR) ”Gornje Podunavlje” which was declared a special nature reserve in 2001 (Protection of the Gornje Podunavlje special nature reserve act (”Official Gazette of the RS”, No. 45/2001, 81/2008 and 107/2009).

Technical documentation on the managing water regime at the area was developed in the past:

1. Hydrotechnical development of the area ”Kalandoš” – the main design of the North Canal (Water management company ”Zapadna Bačka”, Sombor, 2005): The main design of the North Canal represents part of the revitalization project of the total area ”Siga – Kazuk ¬– Kalandoš”, partial restoration of the hydrological conditions before the construction of the embankment for flood protection and the canals DTD Prigrevica – Bezdan. This development would ensure that the water regime is managed according to the demands of the user of the area Public Enterprise ”Vojvodinašume” and in a manner defined by the Declaration of the SNR ”Gornje Podunavlje”. The project activities have started but have never been completed.

2. The concept design of the surface water regime development of the area ”Siga-Kazuk” (DD ”Hidroinvest DTD”, Novi Sad, 1992):

a. Volume 1: Technical solution and structures, and

b. Volume 2: Canal network

Technical documentation refers to the development of the southern part of the area (canals and supporting structures), and all revitalization activities of the system ”Siga-Kazuk” were completed in 2003.

3. The main design of the sluice at the South Canal of the hydrosystem ”Siga-Kazuk” (DD ”Hidroinvest DTD”, Novi Sad, 1994): The main design represents the elaboration/ of the design solution from 1992, which designate setting up the sluice at the beginning of the southern side of the canal for filling and drainage of the area.

4. Geomechanical basic design data and filtration stability analysis of the sluices as a foundation for the main design of bringing water to the territory ”Siga – Kazuk” (Jaroslav Černi Water Institute, 1993): Research was conducted in the locations designated for setting up sluices, i.e. the sluice ”Bački Monoštor” and the sluice ”South”. Within the scope of this document are results of drilling and laboratory testing of the soil.

5. Hydrological study of the Monoštorski Rit Siga-Kazuk (Water Management Institute, Faculty of Agriculture, Novi Sad, 1988): Within the scope of the hydrological study, there is water regime analysis on the territory of ”Siga-Kazuk”, as well as impact on plants and suggested measures for preventing ecosystem degradation in the area.

6. The study of hydrographic, topographic, geotechnical, hydrological and climatic basic design data for the freshwater fishing preliminary design in the area ”Siga-Kazuk” (1960): The document

represents a technical report with climatic and hydrological data (mainly for the period 1920-1960), as well as results of data processing.

Planning documentation which encompasses the area is:

1. Spatial plan of the special purpose area SNR Gornje Podunavlje (”the Official Gazette of the APV”, No. 3/12)

2. Spatial plan of the city of Sombor, PE ”Urbanizam” Sombor, 2013

3. Spatial plan of the municipality of Apatin, PE ”Office for urbanism of Vojvodina”, Novi Sad, 2013 (the amendments to the spatial plan of the municipality of Apatin are currently under public review, PE ”Office for urbanism of Vojvodina”, Novi Sad, 2023)

4. Regional spatial plan of the AP of Vojvodina 2021-2035, PE ”Office for urbanism of Vojvodina”, Novi Sad, 2022.

The project intends to preserve and revitalize the area which is based on adapting the surface water and groundwater regime as well as the water-air regime of soils to the needs of the plant and animal life common in marshes and it would prevent this habitat from disappearing. This objective can be achieved by building a dual-purpose canals system with accompanying structures through which, during high Danube water levels, the controlled release of water will be carried out in the area up to a certain - required level and its flooding and later diverting part of the water released in this way back to the recipients, when the need ceases for high water levels.

The tasks related to the development of design - technical documentation within the scope of the LIFE RESTORE for MDD project for revitalization of the Monoštorski Rit are:

1. Development of technical documentation for hydrotechnical development of the northern part of the Monoštorski Rit:

a. Critical review of the existing technical documentation from 2005 which is related to the North Canal, supporting water structures (sluices, culverts) as well as secondary canals which connect the North Canal to depressions and flood zones;

b. Development of technical documentation, which is related to the North Canal, supporting water structures (sluices, culverts), as well as secondary canals which connect the North Canal to depressions and flood zones, in accordance with governing regulations and current circumstances.

2. Development of technical documentation for restoration of the southern part of the Monoštorski Rit:

a. Establishing the current condition and developing the project report on restoration/dredging of the South Canal,

b. Establishing the current condition and developing the preliminary design for remodelling of the sluice South.

3. Development of technical documentation for building the sluice on the locality of the passage Madam Keti.

4. Revitalization project for the Čustatovo pond, without connecting it to the Monoštorski Dunavac.

5. Hydrological monitoring of the area

a. Setting up piezometric infrastructure on the whole Monoštorski Rit,

b. Monitoring the condition of the surface water and groundwater and observing it in time and space in the southern part of the Monoštorski Rit,

6. Development of a hydrodynamic model of groundwater for the purpose of system management.

All technical solutions of the water regime management should be outlined with critical reference to the existing technical documentation, completely respecting the condition and overall size of the existing water structures and in accordance with valid planning documentation and governing regulations.

Taking into account the position and technical and technological entirety of the listed tasks, the current terms of reference is only related to implementation of activities which **precede** the preparation of technical documentation and which are listed in detail in the following chapters:

II. SCOPE AND CONTENTS OF DELIVERY:

Contents of the delivery of this contract represent activities which should be carried out in order to understand the existing condition of water management in the wider area and carrying out sufficient survey activities will determine the foundation for further implementation of the technical documentation in the next phase. The special aspect of the delivery is setting up a monitoring system for surface water and groundwater which will provide continual measurement results, that is, necessary information in the process of forming hydrological-hydraulic models for surface water management as well as hydrodynamic models for groundwater management which will be mentioned in some of the following phases of the project.

The detailed description of every item in the delivery is as follows:

II.1. Delivery 1 – Project report on geodetic works

Adequate geodetic basic design data should be provided for developing technical documentation. Geodetic works should be carried out in accordance with the State survey and land registry act and the Regulation of topographic surveys and Real Estate Cadastre.

The survey is to be performed in relation to the permanent network of stations ”Agros”. Appropriate terrestrial survey methods are used during the geodetic works depending on the environment. Before starting the works, a control surveying of should be performed, leaning on the points of the existing state trigonometric network.

Geodetic works should encompass the following localities in the area Monoštorski Rit:

- Existing water structures: built section of the North Canal, old riverbed – Dunavac, locality of the existing sluice South, South Canal and Čustatovo pond;

- Future water structures: the North Canal route, locality of the future sluice North and locality of the future sluice at the passage Madam Keti;

- Locality of the existing sluice Staro Selo with a part of inundation of the Danube in the canal zone.

The geodetic works program foresees the survey of existing structures and canals, as well as the localities (routes) of future canals and structures for the purpose of forming adequate basic design data (Chapter 4.1.1). The project report on geodetic works will encompass the results of the geodetic activities. All activities carried out while collecting geospatial data will be listed within the *Project report on geodetic works*.

The following graphic additions should be developed based on the conducted geodetic works:

1. Built section of the North Canal – Topographic map of the canal with a scale of 1:500, cross sections with designated water level at a scale of 1:100/100 or 1:250/250;

2. Stari Dunavac – Layout of the positions of the surveyed cross sections and cross sections with designated water level at a scale of 1:100/100 or 1:250/250;

3. Sluice South – Topographic map at a scale of 1:100;

4. South Canal - Layout of the positions of the surveyed cross sections and cross sections with designated water level at a scale of 1:100/100 or 1:250/250;

5. Čustatovo Pond – Layout of the positions of the surveyed cross sections and cross sections with designated water level at a scale of 1:100/100 or 1:250/250;

6. Route of the future North Canal – Cadastral topographic plan at a scale of 1: 1000 or 1:500;

7. Future locality of the sluice North – Cadastral topographic plan at a scale of 1: 100;

8. Future locality of the sluice Madam Keti – Cadastral topographic plan at a scale of 1: 250;

9. The zone of the sluice Staro Selo with inundation of the Danube River – Topographic plan at a scale of 1:500, cross sections with designated water level at a scale of 1:100/100 or 1:250/250 and longitudinal section from the Danube riverbed to the sluice Staro Selo.

10. Layout with the digital terrain model in the software application ACAD CIVIL 3D which combines all the surveyed data and is delivered to the Contracting Authority digitally along with the Project report on geodetic works.

II.2. Delivery 2 – Hydrological-hydraulic study of the Danube River (from km 1367 to km 1425)

For the purpose of analysing the impact of the Danube River on the condition of the surface water in the Monoštorski Rit, as well as establishing structures and measures for improving the current conditions, carrying out a hydrological-hydraulic study of the Danube River is required. The hydraulic analysis should encompass part of the Monoštorski Rit, which is important for analysis, and all the existing hydrotechnical structures (canals, sluices, culverts) and depressions. The hydraulic study will deal with the water distribution and impact of water flooding to desired elevations, on the terrain and depressions of the Monoštorski Rit, for potential revitalization of the Monoštorski Rit and future hydrotechnical structures (canals, sluices, culverts, etc.)

The hydrological-hydraulic study should encompass the stretch of the Danube from km 1367 to km 1425, where the sluice Staro Selo is located (~km 1415). The Hydrological-hydraulic study should define the basic parameters of the Danube water regime, discharge and water levels for a cross section of the sluice.

The flow regime of the Danube will be analysed for the period up to 2022 and presented for average, low and high water flows.

It is required to present within the study:

- Data availability and calculation methodology,

- Regime of low flows of continual duration of 3, 7, 10, 20 and 30 days a year and during the vegetation period based on the Danube flow at the HS Bezdan,

- Regime of average flows based on the Danube flow at the HS Bezdan,

- Flow duration curve (annually, for the vegetation period and monthly),

- Flow frequency curve (annually, for the vegetation period and monthly).

• Regime of high flows based on the Danube flow at the HS Bezdan (estimated values of the water flow for common occurrences).

Forming a digital terrain model (DTM) is required for a hydraulic model and the cross sections necessary for the geometric part of the hydraulic model will be extracted from DTM. The base DTM represents the LiDAR footage of the Danube riverbed with the left and right riverside (Serbian and Croatian riverside). Procuring the LiDAR footage is the Contracting Authority's responsibility. The coverage of the LiDAR image should be sufficient so that the boundaries of inundation at high flows are within it. The cross sections of the Danube from km 1367 to km 1425, will be provided by the Contracting Authority from the Directorate for Inland Waterways (Plovput). By interpolating the cross sections of the Danube along the waterway, at a maximum distance of 200 m, using GIS and other available tools, forming a raster surface of the Danube riverbed which will be integrated into the LiDAR footage, the integral DTM will be formed. The integral DTM will be the basis for hydraulic modelling.

For the purpose of analysing the Danube water level regime on the section located on the sluice, by using appropriate software, it is necessary to form a 1D/2D hydraulic model of the Danube from Bogojevo (km 1367,250) to Bezdan (km 1425,590).

Preparing the model involves establishing the calculated cross sections of the watercourse within defined flow borders and setting appropriate boundary conditions. Model calibration (defining the flow resistance coefficient) will be carried out for the determined time series, and analysing the matching of the observed and calculated levels will be carried out at the profile of the HS Apatin.

Model verification should be carried out with the hydraulic estimate for the time series which is different than the series used for calibration. The analysis of the matching of observed and calculated levels should be carried out at the profile of the HS Apatin.

Regarding the hydraulic model, the following should be presented:

• Basic data description (available bathymetric data, topography, water structures etc.);

• Description of the model geometry (borders of the model, structures);

• Boundary conditions (input and output, internal boundary conditions);

• Model parameters with areas that have acceptable values (hydraulic bed roughness);

• Calibration process (algorithm, model calibration data) and calibration results with adopted model parameters;

• Verification process (algorithm, model verification data) and verification results;

• Hydraulic analysis for the capacity of the existing canals in the Monoštorski Rit at flows of different duration;

• Hydraulic analysis for the capacity of future canals and structures which will improve the surface water regime in the Monoštorski Rit for the flows of different duration.

The Danube water levels necessary for further analysis should be given at the profile of the existing sluice Staro Selo for:

• calculated values of the low flows of continual duration 3, 7, 10, 20 and 30 days a year and during the vegetation period,

- flows with common durations, determined from duration curves of mean daily flows,
- high flows of different occurrences.

Within the scope of the study, providing results of the hydraulic analysis of the capacity of the future canals and structures which will improve the surface water regime in the Monoštorski Rit is required.

The study should include a conclusion, which will encompass summary of important results of hydraulic estimates, a description of existing and future water conditions and the proposed structures and measures for improving the surface water regime.

II.3. Delivery 3 – Project report on geotechnical conditions for construction

Within the scope of Delivery 3, the following activities should be realized:

- Developing an engineering-geological investigation design,
- Carrying out engineering-geological investigation in the planned scope,
- Developing a project report on geotechnical conditions for construction.

The listed activities are carried out in order to determine the geotechnical conditions for construction of future structures: the North Canal, the sluice North and the sluice Madam Keti.

The engineering-geological investigation design will be developed in accordance with the Mining and geological research act, the valid Regulation on conditions, criteria and contents of the project for all types of geological research, and the contents and scope of the surveys are listed below.

The engineering and geological research project determines:

- the general data on the area,
- the concept and methodology of investigation works,
- the type, scope and schedule of investigation works,
- the technical conditions for carrying out investigation works,
- the dynamics of carrying out investigation works,
- the bill of quantities and preliminary estimate of investigation works,
- the safety measures at work, and
- environmental protection measures.

The engineering-geological investigation design is subject to Technical control in accordance with the Mining and geological research act. The Consultant is obligated to provide Technical control for the Engineering-geological investigation design.

The scope and contents of the engineering geological investigations are listed in chapter "*III.1.2. Engineering-geological surveys*".

The project report on geotechnical conditions for construction is supposed to list all results of the engineering-geological investigation works and should include the following contents:

- General data on the area,

- Description of the type, scope and schedule of investigation works,

- Research results which encompass results of engineering geological mapping of the terrain, drilling surveys, mapping of the core, geophysical surveys, terrain and laboratory testing,

- Geotechnical conditions for construction which involve analysing the investigation results, defining geotechnical models of the terrain, with values of parameters of physical mechanical properties of the separated geotechnical formations,

- Recommendations for designing and construction.

II.4. Delivery 4 – Monitoring groundwater, surface water and precipitation

In order to observe the current condition of groundwater, surface water and precipitation in the Monoštorski Rit, outlining and building a system for monitoring surface water, groundwater and precipitation and establishing automatic monitoring of surface water and groundwater is required. The purpose of these activities is using the collected research data to establish correlative dependency of surface water, groundwater and precipitation in the area. The correlative dependency will be used in the next phase to develop a mathematical hydrodynamic model which will be used to analyse the water regime under different hydrological conditions.

What should be done first is the Surface water, groundwater and precipitation monitoring design which will require construction of piezometers, installing appropriate equipment for acquisition and monitoring groundwater levels, setting up monitoring profile with appropriate equipment for acquisition and monitoring surface water levels and setting up stations for monitoring precipitation. The design shall foresee automatic data acquisition and monitoring.

As for the monitoring equipment, what should be taken into account is using appropriate sensors (probes, divers etc.) for measuring, with supporting equipment for data acquisition, remote data transfer, a battery and/or a solar panel. Since the Monoštorski Rit is in a cross-border area and the stability and accessibility of the GPRS network are unreliable, the possibility of telemetric data transmission to the centre designated by the Contracting Authority should be investigated, and the monitoring equipment should be adjusted accordingly. Measuring mobile phone signals is also required.

For the purpose of determining the number and layout of the structures for monitoring surface water and groundwater, observing the current condition of the monitoring network, monitoring methods and dynamics, as well as hydrogeological, engineering - geological conditions on the terrain is required.

The design should include technical descriptions with the number and layout of structures for monitoring surface water, groundwater and precipitation, a textual description of monitoring methods and dynamics, a report on periodic monitoring, technical conditions for performing works, a bill of quantities and cost estimate of the works with equipment specifications and drawings with the layout and number of monitoring structures, as well as attachments with dimensions of the monitoring structures.

The scope and contents of activities for setting up the monitoring system are listed in chapter "*III.1.3. Monitoring network*".

When The surface water, groundwater and precipitation monitoring design is adopted by the Contracting Authority, it is necessary to build, provide equipment for the monitoring structures, conduct equipment calibration on the measuring profiles and start monitoring. When everything is operational, geodetic survey of the monitoring structures is required.

The Contracting Authority's professional staff are responsible for collecting data from the monitoring network.

II.5. Delivery 5 – Study of hydrotechnical arrangement of Monoštorski Rit

Based on the collected basic design data, available planned and technical documentation, field trip, results of geodetic survey, geological investigations and conducted analyses (within the scope of the Hydrological hydraulic study of the Danube River), results and conclusions of conducted activities are required in the form of texts, drawings, maps and tables.

A short description of the analysed area and problems should be listed in the Study. What should be noted are guidelines for establishing structures, implementing measures for landscape development, as well as guidelines for developing planning and technical documentation for water structures and implementing measures for the revitalization of the Monoštorski Rit.

The guidelines for establishing structures and implementing measures for land management and building water structures should include a technical description of the water structures and measures for land management, the estimated investment value, layouts of the water structures and drawings with dimensions of the water structures.

The guidelines for developing the planning and technical documentation for water structures and implementing measures should include technical and planning documentation which needs to be completed in the following period for the purpose of construction and implementing measures for land management.

III. BASIC DESIGN DATA

III.1 Basic design data provided by the Consultant

III.1.1 Geodetic surveys

For the purpose of developing study and technical documentation, carrying out geodetic surveys in the area is required. The geodetic works are supposed to provide a spatial basic design data, which is created based on data collected by remote sensing with Lidar technology from the air (provided by the Contracting Authority) and geodetic survey of the existing canals, terrain, depressions and supporting water structures, horizontally and vertically, and they should be done by applying precise and appropriate geodetic methods. The size of surveyed area should be sufficient to provide the adequate basic design data for all the water structures.

All geodetic basic data for developing technical documentation should be created based on the data collected by remote sensing with Lidar technology from the air and data collected on the terrain by using geodetic methods to develop appropriate topographic maps, with a digital terrain model, adjusted for printing at appropriate scales. By integrating the topographic data and official digital cadastral plans, the cadastral topographic plans (CTP) will be created as the final product.

The cadastral topographic plans should be authenticated by a person responsible for geodetic surveys and a licensed geodetic organization.

General design requirements:

- The data obtained from the land registry must be official and obtained from the authorized service of the land registry;

- Details should be scanned by using GNSS and the tacheometric method, instruments with measuring uncertainty lower than 5 cm;

- The ultrasonic depth meter – echosounder should be used for underwater measurements of larger surfaces and depths of over 1 m;

- Measuring should be conducted by positioning in the permanent reference station network ”AGROS”;

- Transformation of the coordinates and elevations should be conducted in the official Internet portal RGZ – GRIDER 3.1;

- Control should be done in the points of the state trigonometric network.

III.1.1.1 Built section of the North Canal

The built section of the North Canal (Figure 2) will be geodetically surveyed so that cross sections at a distance of around 50 m perpendicular to the flow are obtained. The section that will be surveyed is around 500 m long, and the bed is around 30 m wide. The minor bed of the canal up to the high bank will be surveyed. The terrain points will be surveyed along the transverse profile at the common shape changes of the bed inclined towards the bank, and the points under the water will be surveyed with sufficient density so as to represent the shape of the bed of the canal (points at a minimal distance of 1.0 m). The north end of the canal in contact with the terrain will be surveyed in detail with a sufficient number of points in order to accurately design the extension of the North Canal on the locality.

Figure 2. Disposition of the developed section of the North Canal

III.1.1.2 Stari Dunavac

For the purpose of determining the condition of the Stari Dunavac riverbed, the riverbed will be surveyed along the cross sections (survey lines) at a distance of around 100 m (from the high riverbank to the high riverbank of the minor riverbed). The section that will be scanned, from the sluice Staro Selo to the sluice South , is around 1.700 m long. The riverbed is 80 m wide.

Figure 3. Disposition of the section - Stari Dunavac

III.1.1.3 The locality of the existing sluice South

Geodetic survey of complete water structure and surrounding terrain is required on the locality of the sluice South. The existing structure will be surveyed with a sufficient number of points which will represent the position of the sluice and its dimensions, as well as elevations of the bottom of the concrete structure. The surrounding terrain on the north side will be surveyed up to the minor riverbed of the Stari Dunavac. The sluice and surrounding terrain will be surveyed on the south side along with defining the shape of the bed in the zone of the structure. The surveying results will be represented on a layout plan at 1:100 scale.

Figure 4. Disposition of the locality of the sluice South

III.1.1.4 The South Canal

In order to analyse the sedimentation of the canal, surveying the minor bed of the South Canal up to the high bank is required. The canal will be surveyed along the cross sections (survey lines), perpendicularly positioned to the flow. The terrain points will be surveyed along the transverse profile at the common shape changes of the bed inclined towards the bank, and the points under the water will be surveyed with sufficient density so as to represent the shape of the bed (points at a minimal distance of 1.0 m). The distance between the cross section profiles should be around 50 m, and at the positions where the bed geometry changes, surveying will be conducted with a denser survey lines. The section that will be scanned is 3.300 m long.

Figure 5. Disposition of the section of the South Canal

Within the scope of the Project report on geodetic surveys, all the results will be represented on drawings, i.e. layout plans and cross section profiles at appropriate scales with indicated water level at the time of survey.

III.1.1.5 The Čustatovo pond

The Čustatovo pond is positioned on the south part of the Monoštorski Rit. The aquatoria of the pond along with the banks will be surveyed so that cross sections at a distance of around 50 m is obtained in order to analyse the sedimentation of the pond and the condition of the bottom. The section that will be surveyed is 1.300 m long, and the bed is around 40 m wide.

Within the scope of the Project report, all the results will be represented on drawings, i.e. layout plans and cross section profiles at appropriate scales with indicated water level at the time of survey.

Figure 6. Disposition of the Čustatovo pond

III.1.1.6 The route of the future section of the North Canal and the locality of the future sluice North

The Contracting Authority has the detailed basic design data - the digital terrain model, created from data obtained by Lidar technology. The terrain data should be used and amended with new data, in order to create updated basic design data along the designed route of the canal.

In accordance with what was previously stated, the following is required:

- Controlling the existing digital terrain model by surveying along the axis of the future canal, with the points at a distance of around 50 m, at the total length of the section of about 5.500 m;

- Surveying the details on the positions of the intersection of the canal route and visible depressions of the terrain (based on the existing terrain model and route with a maximum of 5 localities), with the width of 50 m;

- Detailed terrain surveying on the locality of the future sluice North, coverage 100 x 100 m.

Based on the existing and new surveyed data, an appropriate topographic map along the section at 1:1.000 scale will be created. A topographic map suitable for printing to 1:100 scale will be developed for the space of the future sluice.

For the purpose of creating a cadastral topographic plan, integrating the official digital cadastral plan issued by the authorized service of the land registry is required. The Contracting Authority is responsible for procuring the required documentation.

III.1.1.7 The locality of the future sluice Madam Keti

For the purpose of creating appropriate geodetic basic design data, geodetic surveying of the surrounding terrain and bed at the passage Madam Keti (Figure 7) is required, that is, the future locality of the sluice with the same name. The surveying will include the whole bed of the passage, which is around 100 m

long, and it will be conducted along the cross sections (survey lines) at a maximum distance of 25 m. The surrounding terrain and banks will be surveyed in a range of around 60 m, with a point density which is suitable for printing to 1:250 scale.

Figure 7. Disposition of the locality of the future sluice Madam Keti

For the purpose of creating a cadastral topographic plan, integrating the official digital cadastral plan issued by the authorized service of the land registry is required. The Contracting Authority is responsible for procuring the required documentation.

III.1.1.8 The locality of the sluice Staro Selo with the part of the inundation of the Danube in the zone of the supplying canal

For the purpose of revitalizing the sluice, reconstructing the supplying canal and providing water inflow from the Danube, the following geodetic surveying is required:

1. The whole water structure and surrounding terrain of the existing sluice Staro Selo will be surveyed. The existing structure will be surveyed with a sufficient number of points which will represent the position of the sluice and its dimensions, as well as the elevations of the bottom of the concrete structure. The surrounding terrain will be surveyed from the west side up to the end of the concrete structure in the inundation area of the Danube. The sluice and the surrounding terrain will be surveyed from the east side along with defining the shape of the Stari Dunavac riverbed in the zone of water structure.

2. Part of the supplying canal Kopani Fok from the sluice to the canal which is around 550 m long will be surveyed. The surveying will include the whole geometry of the bed with expansion and the banks.

3. The existing canal from the Danube to the Kopani Fok which is around 450 m long with part of the Danube riverbed will be surveyed. Depending on the situation on the terrain surveying will be conducted along the cross sections (survey lines) at a distance of around 25 m. The surveying will include the existing bed and the bank zone which is around 10 m wide. Part of the Danube riverbed in the connection zone with the canal will be surveyed with dispersed points that have sufficient density in order to clearly determine the elevation of the bed of the canal in relation to the Danube riverbed.

Figure 8. Disposition of the locality of the sluice Staro Selo with the supplying canal in the Danube inundation

The results of the geodetic surveys will be represented on layout plans suitable for printing to 1:500 scale and as cross section profiles of the surveyed bed at appropriate scales with indicated water level at the time of survey.

III.1.2 Engineering-geological surveys

The Consultant will conduct the terrain prospection and the detailed engineering-geological terrain reconnaissance, with elements of engineering-geological mapping on selected locations along the canal and on locations of the future sluices. The terrain reconnaissance results will be provided by the Consultant in the form of a report which includes texts with figures, drawings and photographs.

Implementing the following contents and scope of the engineering-geological investigations is required:

- Field works
  - Engineering-geological reconnaissance and terrain mapping;
  - Drilling – mechanical rotary drilling with obtaining core continually, with a minimal diameter of 100 mm: 7 boreholes on the route of the North Canal, at an approximate distance of around 500 m, 6-10 m deep, and 2 boreholes on each location of the sluices (sluice North and the sluice on the passage Madam Keti) up to 10-12 m deep measured from the surface of the terrain;
  - Engineering-geological mapping of the core of the drilling;
  - Standard penetration testing (SPT) on the bores (in incoherent soil) – evaluating around 25 tests;
- Laboratory testing on around 26 soil samples:

- Identification and classification testing:
  - granulometric composition – 26 tests;
  - bulk unit weight – 26 tests;
  - plasticity/consistency – 15 tests;
  - moisture – 15 tests;
- Determining resistance and deformation properties:
  - compressibility – 9 tests;
  - shear strength – 12 tests.

III.1.3 Monitoring network

For the purpose of monitoring the groundwater, the Consultant will conduct the following:

- Engineering-geological terrain reconnaissance and mapping, for microlocation of the positions of the piezometric bores,
- Drilling 18 structural piezometric bores, laid out along the filtering part within the scope of the sand and gravel deposits. In order to verify the elevations of the bottom of water-bearing layer, 2 bores will be drilled up to the bottom of water-bearing layer (estimated up to 55 m), and the other 16 bores up to 15 m deep,
- Drilling 3 structural piezometric bores, up to 5 m deep, with the filtering part within the top low permeable layer (dust-clay-sand deposits of the roof of the water-bearing layer),
- Equipping the piezometers with DIVER data loggers (with supporting equipment, if required),
- Laboratory testing of the granulometric composition of the soil samples: 120 tests,
- Determining the plasticity index for coherent sediments: 50 tests,
- Geodetic survey of the coordinates and elevations of the new structures of the monitoring network,
- 4-year monitoring of the groundwater level (by using the DIVER data loggers).

For the purpose of monitoring surface water, the Consultant will conduct the following:

- Building structures at selected measuring profiles in at least three locations,
- Equipping the measuring profiles with devices for continual measuring of hydrostatic pressure, a datalogger, a telecommunications system for remote data transfer, solar panels and other supporting equipment.
- Setting up staff gauges.
- Calibration of the measuring equipment and measuring profile.

For the purpose of setting up precipitation monitoring, the Consultant will set up a precipitation station with a data logger for observing the precipitation regime (daily amount of precipitation

III.1.4 Sediment quality

For the purpose of dredging the South Canal and the Čustatovo pond, sampling and analysis of the sediments is required.

The Regulation on emission limit values for pollutants in surface and ground waters and sediments and the deadlines for their reaching ("Official Gazette of the RS", No. 50/12) determines what to do with the dredged sediments and in order to decide, it is necessary to take 4 composite samples from representative locations from the South Canal and the Čustatovo pond and analyse the parameters determined by the by-law.

Table 1. Parameters required for assessing the sediment quality during dredging of sediments from the watercourse

Parameter	**Note**
Organic material content (%)	
Clay content (%)	Mineral fraction <0,002 mm
Arsenic (As)	
Cadmium (Cd)	
Chromium (Cr)	
Copper (Cu)	
Mercury (Hg)	
Lead (Pb)	
Nickel (Ni)	
Zinc (Zn)	
Mineral oils	
Polycyclic aromatic hydrocarbons (PAH)	the parameter refers to the amount of the following compounds: naphthalene, anthracene, phenanthrene, fluoranthene, benzo(a)anthracene, chrysene, benzo(k)fluoranthene, benzo(a)pyrene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene
Polychlorinated bifenyls (PCB)	the parameter refers to the amount of the following individual compounds: PCB 28, 52, 101, 118, 138, 153 and 180.
DDT total	the parameter refers to the amount of DDT, DDD and DDE
Cyclodiene pesticides	the parameter refers to the amount of aldrin, dieldrin and endrin
HCH total	the parameter refers to the amount of the four isomers of hexachlorocyclohexane: α-HCH, β/HCH, γ-HCH, δ-HCH
Alpha – Endosulfan	

Parameter	Note
Heptachlor	
Heptachlor – Epoxide	

III.2 Basic design data provided by the Contracting Authority

III.2.1 Data

The data that will be provided by the Contracting Authority during the realization of the project:

- Data from the Republic Hydrometeorological Institute of Serbia from the relevant hydrological and meteorological stations.

  - Meteorological data for:

    - GMS Sombor: precipitation: rain and snow, wind, air temperature, very hot days and frost days, water evaporation and air humidity,

    - Precipitation stations in the area,

  - Hydrological data for the HS Bezdan, Apatin and Bogojevo at the Danube and data on the medium daily flows of the Drava,

- Lidar of the area converted to a raster format (grid 1x1 m) which encompasses the left and right riverbanks of the Danube (the Serbian and Croatian side),

- Bathymetry of the Danube – Cross section profiles of the Danube, on a stretch from km 1367 to km 1425 (Directorate for Inland Waterways). The distance between the cross section profiles should be a maximum of 200 m. Points of the cross section profiles will be submitted in the ASCII format (X,Y,Z form), arranged in a sequence from the left to the right riverbank. The coordinate system corresponds to the coordinate network. The first point should correspond to the location of the landmark on the left riverbank, and the last point should correspond to the location of the landmark on the right riverbank.

- Digital cadastral plan from the authorized institution (Republic Geodetic Authority of Republic of Serbia) – land registry.

III.2.2 Technical documentation

Existing technical documentation:

- Hydrotechnical development of the area Kalandoš – the main design of the North Canal (Water management company ”Zapadna Bačka”, Sombor, 2005),

- The concept design of the surface water regime development of the area ”Siga-Kazuk” (DD ”Hidroinvest DTD”, Novi Sad, 1992): Volume 1: Technical solution and structures, and Volume 2: Canal network,

- The main design of the sluice at the South Canal of the hydrosystem ”Siga-Kazuk” (DD „Hidroinvest DTD“, Novi Sad, 1994),

- Geomechanical basic design data and filtration stability analysis of the sluices as a foundation for the main design of bringing water to the territory ”Siga – Kazuk” (Jaroslav Černi Water Institute, 1993),

• Hydrological study of the Monoštorski Rit Siga-Kazuk (Water Management Institute, Faculty of Agriculture, Novi Sad, 1988),

• The study of hydrographic, topographic, geotechnical, hydrological and climatic basic design data for the freshwater fishing preliminary design in the area ”Siga-Kazuk” (1960).

IV. OTHER TERMS

The surveys, study and technical documentation should be completed in a professional manner in accordance with modern achievements and state regulations.

The technical documentation should be developed in accordance with the Planning and construction act of the Republic of Serbia, that is, its by-laws (Regulation on the contents, manner, development and manner of handling the technical documentation), in accordance with the legal framework which is in effect during the delivery of the contracting products and is related to the project (Waters act, Mining and geological surveys act, Environmental protection act, Forests act etc.).

The Contracting Authority will deliver the digital documents and contact the authorized state and municipal bodies.

The Contracting Authority is responsible for providing access to locations where the engineering-geological investigations will be carried out, as well as locations for building structures for monitoring network, setting up equipment, calibration of equipment and measuring profiles and making the measuring profiles operational.

The location for collecting monitoring data will be determined by the Contracting Authority.

All the required terms, licenses and compliance will be obtained in accordance with the legal framework from the public authority holder, which is the obligation of the Contracting Authority. The Contracting Authority will bear the costs.

All the listed parts of the delivery (studies, projects, project reports, reports) will be delivered. The deliveries will be sent digitally, as PDF files.

The Consultant must also comply with the latest Communication and Visibility Requirements for EU-funded external action, laid down and published by the European Commission.

4.3. Project management

4.3.1. Responsible body

Contracting Authority: Public Enterprise “Vojvodinašume" PETROVARADIN, Preradovićeva 2, 21131 Petrovaradin. The responsible person for implementation of the tasks related to this contract on behalf of the Contracting Authority is Ms. Ivana Vasić as project manager.

4.3.2. Management structure

Contracting Authority: Public Enterprise “Vojvodinašume" PETROVARADIN, Preradovićeva 2, 21131 Petrovaradin. The responsible person for implementation of the tasks related to this contract on behalf of the Contracting Authority is Ms. Ivana Vasić as project manager.

4.3.3. Facilities to be provided by the contracting authority and/or other parties

Not applicable.

5. LOGISTICS AND TIMING

5.1. Location

Petrovaradin, Autonomous Province of Vojvodina, Republic of Serbia.

5.2. Start date & period of implementation of tasks

The intended start date is the date of signature of the contract by both parties and the period of implementation of the contract will be about 6 months from this date (from the contract signature). Please see Articles 19.1 and 19.2 of the special conditions for the actual start date and period of implementation.

6. REQUIREMENTS

6.1. Staff

Note that civil servants and other staff of the public administration of the partner country, or of international/regional organisations based in the country, shall only be approved to work as experts if well justified. The justification should be submitted with the tender and shall include information on the added value the expert will bring as well as proof that the expert is seconded or on personal leave.

6.1.1. Key experts

Key experts are defined and they must submit CVs and signed statements of exclusivity and availability.

All experts who have a crucial role in implementing the contract are referred to as key experts. The profiles of the key experts for this contract are as follows:

Key expert 1: Team leader

Qualifications and skills

• University degree in Engineering or a relevant, directly related discipline (higher degree will be an advantage);

• Serbian and English language fluency.

General professional experience

• At least 8 years of general professional experience.

Specific professional experience

• Min. 3 years of professional experience in management of professional teams (more will be an advantage).

All experts must be independent and free from conflicts of interest in the responsibilities they take on.

6.1.2. Other experts, support staff & backstopping

CVs for experts other than the key experts should not be submitted in the tender but the tenderer will have to demonstrate in their offer that they have access to experts with the required profiles. The contractor shall select and hire other experts as required according to the needs. The selection procedures

used by the contractor to select these other experts shall be transparent, and shall be based on pre-defined criteria, including professional qualifications, language skills and work experience.

Other experts (full-time or engaged) to be employed shall include as minimum the following:

- At least 2 persons as experts with a valid license no. 313 or 314, issued by the Serbian Chamber of Engineers or an adequate license, issued by the competent Ministry,

- At least 1 person as expert with a valid license no. 372, issued by the Serbian Chamber of Engineers or an adequate license, issued by the competent Ministry,

- At least 1 person as expert with a valid license no. 471, issued by the Serbian Chamber of Engineers or an adequate license, issued by the competent Ministry,

- At least 1 person as expert with a valid license no. 391, issued by the Serbian Chamber of Engineers or an adequate license, issued by the competent Ministry,

- At least 1 person as expert with a valid license no. 392, issued by the Serbian Chamber of Engineers or an adequate license, issued by the competent Ministry,

- At least 1 person as expert with a University degree in Chemistry or equivalent (higher degree will be an advantage).

The Consultant shall provide adequate backstopping services during the project implementation.

The Consultant must meet all equipment and facility requirements necessary for the timely and professional completion of the above-described contract tasks:

- Necessary licensed software,

- Geodetic equipment for recording the coastal strip above the water mirror (total station, GNSS receiver) and an ultrasonic instrument for determining depths, i.e. points of detail under the water mirror;

- A laboratory accredited for physical and chemical tests of sediment, and water and sediment sampling, as required by this ToR.

In addition, the Consultant shall provide necessary support staff to cover the needs for office management and administration, secretarial services, interpretation and translation, drivers, and any other administrative needs during the performance period.

The costs for backstopping and support staff, as needed, are considered to be included in the tenderer's financial offer.

6.2. Office accommodation

Office accommodation for each expert working on the contract is to be provided by the Consultant.

6.3. Facilities to be provided by the contractor

The contractor shall ensure that experts are adequately supported and equipped. In particular it must ensure that there is sufficient administrative, secretarial and interpreting provision to enable experts to concentrate on their primary responsibilities. It must also transfer funds as necessary to support their work under the contract and to ensure that its employees are paid regularly and in a timely fashion.

6.4. Equipment

No equipment is to be purchased on behalf of the contracting authority / partner country as part of this service contract or transferred to the contracting authority / partner country at the end of this contract. Any equipment related to this contract which is to be acquired by the partner country must be purchased by means of a separate supply tender procedure.

7. REPORTS

7.1. Reporting requirements

The Consultant will submit the following reports in English and Serbian in one original and one copy:

- The Consultant will prepare interim report on the implementation of the tasks, at the end of the interim period: May-June 2024.

The approval of the interim report by the Contracting Authority will be the basis for issuing interim payment as indicated in the Special Conditions. Interim report must be provided along with the corresponding invoice.

The Consultant should also submit a Final report at the end of the contract, upon all contract results have been achieved, the latest by September 2024. The approval of the final report by the Contracting Authority will be the basis for issuing final payment as indicated in the Special Conditions. The final report must be provided along with the corresponding invoice.

7.2. Submission and approval of reports

The report referred to above must be submitted to the project manager identified in the contract. The project manager is responsible for approving the reports.

8. MONITORING AND EVALUATION

8.1. Definition of indicators

“Services provided in timely, quality and quantity manor, as required in these Terms of Reference”.

8.2. Special requirements

Not applicable.