**TERMS OF REFERENCE**

**Contract 5.7.2 “Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost”**

**April 2022**

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# General information

## Definitions

|  |  |  |
| --- | --- | --- |
| **No.** | **Term** | **Definition** |
| **1** | **Employer/Client** | State Water Holding Polish Waters Regional Water Management Authority in Kraków (*Państwowe Gospodarstwo Wodne Wody Polskie Regionalny Zarząd Gospodarki Wodnej w Krakowie*) |
| **2** | **Consultant** | An enterprise/legal entity providing to the Employer the services described in these TOR. |
| **3** | **Program/Assignment** | Preparation of a document entitled: “Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost” according to the guidelines contained in these TOR. Development of strategic measures designed to seek potential retention areas and of other necessary flood protection measures in the Vistula River valley in the section between Kraków (Sierosławice gauging station, closing the project area under Contract 5.7.1) and Zawichost (Zawichost gauging station) in order to reduce adverse flood effects. |
| **4** | **Project area** | The project area includes a part of the Upper West Vistula basin from the Sierosławice gauging station and a part of the Upper East Vistula basin downstream of the San River mouth to the Zawichost gauging station. |
| **5** | **Month** | The term “month” is understood as 30 calendar days. |
| **6** | **Project Board** | A team of specialists managing and coordinating the Program which includes specialists from RZGW Kraków, RZGW Rzeszów, and the National Water Management Authority (KZGW) as well as the Consultant’s representatives. |
| **7** | **OVFMP** | Odra-Vistula Flood Management Project |

## List of abbreviations

| **No.** | **Abbreviation** | **Full name** |
| --- | --- | --- |
| **1** | **uFRP** | Updated flood risk map |
| **2** | **uFHP** | Updated flood hazard map |
| **3** | **uRBMP II** | 2nd update of the River Basin Management Plan |
| **4** | **uRBMP** | Updated River Basin Management Plan |
| **5** | **uFRMP** | Reviewed and updated Flood Risk Management Plan |
| **6** | **PCU** | Odra-Vistula Flood Management Project Coordination Unit |
| **7** | **WB** | World Bank |
| **8** | **EIA Directive** | Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment |
| **9** | **RLB** | Register of Land and Buildings |
| **10** | **ESF** | Environmental and Social Framework |
| **11** | **ESS** | Environmental and Social Standard |
| **12** | **LGU** | Local government unit |
| **13** | **KW** | Land Registry Title Deed |
| **14** | **KZGW** | National Water Management Authority |
| **15** | **MI** | Ministry of Infrastructure |
| **16** | **DWSM** | Digital water surface model |
| **17** | **DTM** | Digital terrain model |
| **18** | **EIA** | An environmental impact assessment within the meaning of the Act of October 3, 2008 on Access to Information on the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessments (EIA Law) (Dz. U. (*Journal of Laws*) of 2021 item 1505, as amended) |
| **19** | **TOR** | Terms of reference |
| **20** | **SWHPW/Polish Waters** | State Water Holding Polish Waters |
| **21** | **FRMP** | Flood Risk Management Plan |
| **22** | **WFD** | Water Framework Directive |
| **23** | **RZGW** | Regional Water Management Authority |
| **24** | **SESA** | Strategic environmental and social assessment (consisting of the Strategic Environmental Impact Assessment and the Strategic Social Assessment). |
| **25** | **SEP** | Stakeholder Engagement Plan |

| **26** | **EIA Law** | The Act of October 3, 2008 on Access to Information on the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessments (EIA Law) (Dz. U. (*Journal of Laws*) of 2021 item 1505, as amended) (Dz.U.2021.0.2373) |
| --- | --- | --- |
| **27** | **PFRA** | Preliminary flood risk assessment |
| **28** | **5.7.1** | A program of non-structural and flood storage measures being an element of flood risk management in the Little Vistula and Upper Vistula water regions (the sub-basin upstream of Kraków), including flood protection for the city of Kraków |

## Purpose of the assignment

The purpose of the Program is to enhance flood safety for the area covered by this assignment, with special attention to the Vistula valley in the so-called Sandomierz section, i.e. from the Nida River mouth downstream to the San River mouth, at the same time accommodating aspects associated with water shortage reduction and drought prevention. A measurable and visible effect of proposed measures (related to increased soil, landscape, reservoir and channel retention capacity) should be to safely convey a flood with a probability of p = 1% within the diked area of the Vistula River along the entire section covered by the project area. This objective can be achieved by proposing a set of structural and non-structural measures that incorporate environmental and social issues. Furthermore, information and promotion activities should be undertaken in order to present in a reliable manner proposed measures and gain a local community’s trust, acceptance and ownership (or “social license”) of solutions indicated for implementation.

The outcome of this work will be as follows:

1. selection of optimal flood protection solutions based on public consultation and engagement with key stakeholders;
2. community ownership and support on the selected options;
3. a clear identification and upstream analysis of potential risks and benefits of the proposed flood protection solutions based on a Strategic Environmental and Social Assessment (SESA);

It will be required to maintain technical consistency of the Program with other strategic planning documents in the area of water management in Poland. Therefore, the Contractor will be required to cooperate with the Contractors implementing the following projects:

* 1. Review and update of the flood hazard maps and flood risk maps;
  2. Preparation of flood hazard maps and flood risk maps (flood hazards and risks caused by rivers) to the extent arising from the review and update of the preliminary flood risk assessment (under preparation);
  3. Review and update of the Flood Risk Management Plans (under preparation);
  4. The 2nd update of the River Basin Management Plans (uRBMPs II);
  5. The drought mitigation plan;
  6. Development of the Water Shortage Mitigation Program for 2021-2027 with an outlook until 2030;
  7. Implementation of instruments supporting the implementation of measures included in the FRMPs;
  8. Development of a national surface water renaturation program;
  9. Contract 5.7.1 “A program of non-structural and flood storage measures being an element of flood risk management in the Little Vistula and Upper Vistula water regions (the sub-basin upstream of Kraków), including flood protection for the city of Kraków”;
  10. Contract 4.B Operational Centers – Contract 4.B.1/1 Modernisation and implementation of IT systems supporting the operational work of the Operational Centers in Krakow and Wroclaw together with supplies of necessary hardware and software;
  11. Analysis of the occurrence of drought and its effects in the Vistula River valley section between the Przewóz Barrage and the Raba River mouth, including identification of structural mitigation measures, with special attention to the construction of the Niepołomice Barrage;
  12. Other projects that will be prepared or developed during the period of the performance of this Assignment and which will also relate to the project area.

The rationale for this Program arises, among others, from the findings of the Team for flood safety improvement in the Vistula basin area, specifically in the “Sandomierz Vistula” area, which was established by the Polish Waters President’s Order No. 41/2021 dated July 1, 2021 during work on the “Review and update of the Flood Risk Management Plans”. The Team included representatives of the local government units from the Sandomierz Vistula area and Polish Waters representatives.

The above-mentioned Team identified problems in this area resulting from constraints to the development of construction, agriculture, entrepreneurship, and infrastructure in special flood hazard areas and in areas planned to be designated for polder retention capacity in the respective local government units, but also resulting from the lack of understanding among the local communities and their acceptance of the above-mentioned measures related to polder retention capacity as proposed in the final list of measures contained in the draft updated Flood Risk Management Plans (uFRMPs) for the Vistula basin area. Given the above, one of the Team’s key conclusions and recommendations was the need to develop a Program designed to provide flood protection for the area between Kraków and Zawichost.

The uFRMPs indicate problem areas. Therefore, one of this Program’s objectives is primarily to identify solutions for flood protection measures that will be socially acceptable as well as to seek flood storage locations also on watercourses not included in the uFRMPs. This will provide a more comprehensive approach to flood prone areas in the area covered by the Program.

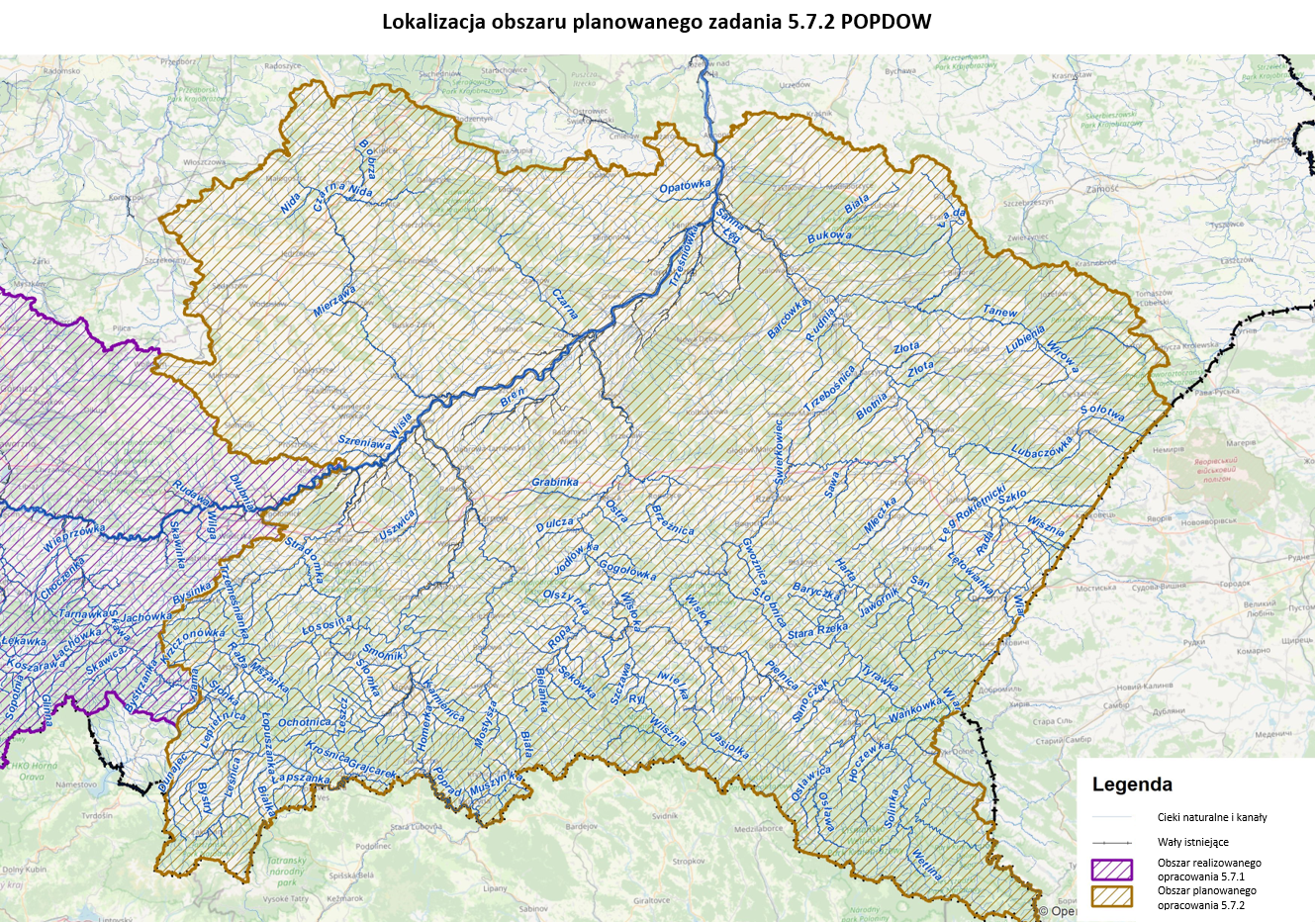
## Institutional framework and contract performance rules

The Employer is the State Water Holding Polish Waters Regional Water Management Authority (RZGW) in Kraków. This contract is part of the Odra-Vistula Flood Management Project (OVFMP), whose implementation is coordinated by the Project Coordination Unit (PCU).

The Consultant will be obliged to cooperate with the Employer in the performance of this assignment. This cooperation will involve submission of the following documents for review and opinion: an Inception Report, Reports Nos. 1, 2, 3, 4, and 5, Stakeholder Engagement Plan (SEP), a Strategic Environmental and Social Assessment, and a Final Report. Following the Employer’s acceptance of each of the above-mentioned documents, the Consultant will be obliged to submit to the Employer, in two language versions: Polish and English, the Inception Report, Reports Nos. 1, 2, 3, 4, and 5, Stakeholder Engagement Plan (SEP), the Strategic Environmental and Social Assessment (SESA), and the Final Report for approval as well as any produced data based on which the reports have been prepared, which should be understood, among others, as hydraulic calculations, rainfall-runoff calculations, surveying measurements, shp layers, etc. The principles of cooperation between the Consultant and the Employer are described in detail in Section VI and they are provided for in the General Conditions of Contract and the Special Conditions of Contract as set out in the Request for Proposals.

# **Detailed description of the Assignment**

## General scope of the Assignment

 The subject of this assignment is to prepare a document entitled “Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost”. The project area includes a part of the water region of the Upper West Vistula basin and the Upper East Vistula upstream of the Zawichost gauging station cross section (Fig. 1). A detailed description of the areas located within the boundaries of the Program, including a list of the relevant local government units and the hydraulic models developed as part of the preparation of the updated flood hazard maps and flood risk maps (uFHMs&FRMs), is contained in Appendix 1 to these TOR.

Natural watercourses

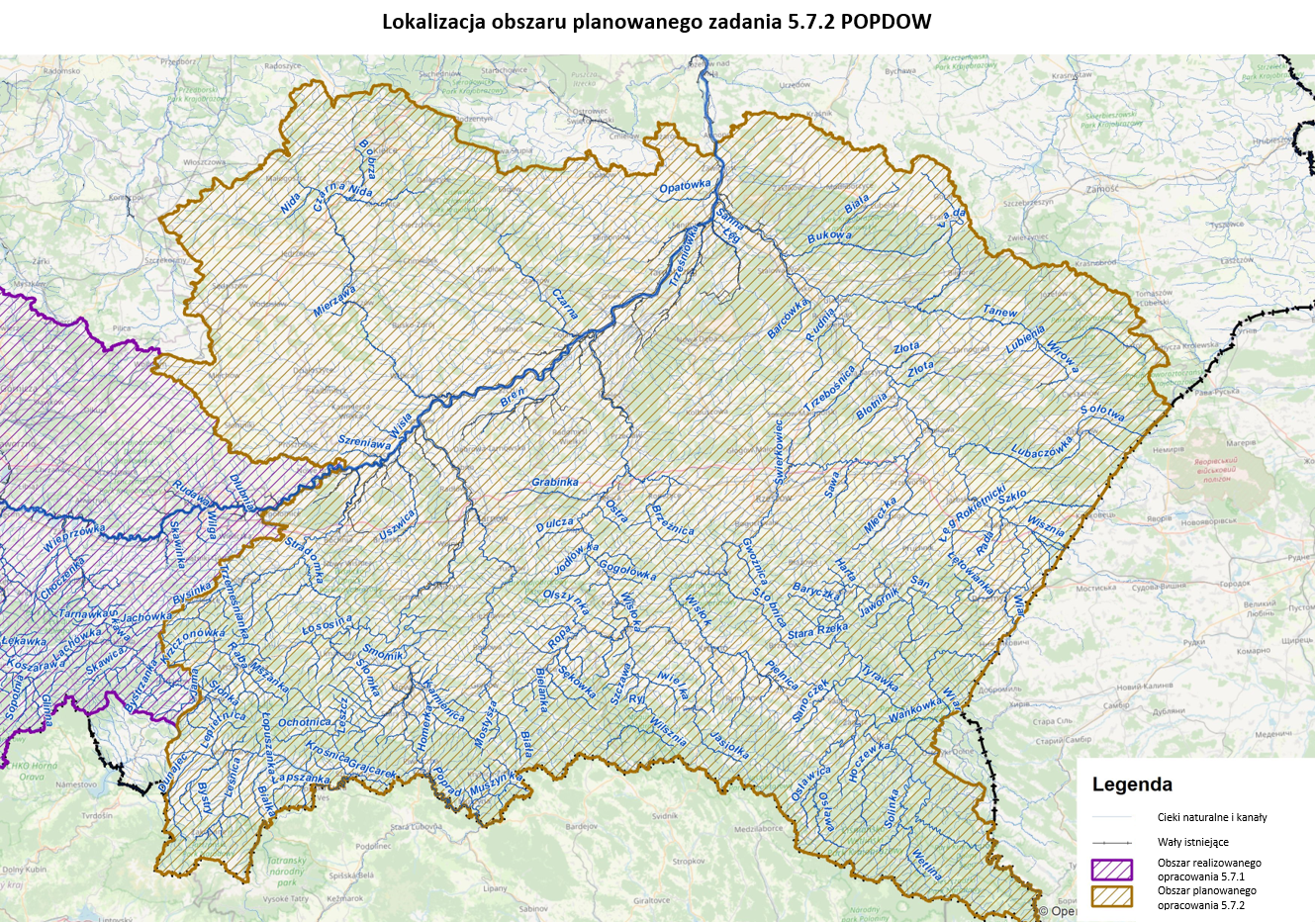
Existing embankments

Area covered under 5.7.1

Area covered under the planned sub-project 5.7.2

Fig. 1. Area covered by the document entitled “Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost”

Fig. 1 Obszar realizacji zamówienia pt. „Program działań retencyjnych stanowiący element zarządzania ryzykiem powodziowym w regionie wodnym Górnej Zachodniej Wisły i Górnej Wschodniej Wisły między Krakowem a Zawichostem



**Location of the planned OVFMP sub-project 5.7.2**

In keeping with the updated Flood Risk Management Plans (uFRMPs), the further part of this document shows the problem areas of strategic importance which are essential from the point of view of these TOR (Appendix 1). The Consultant will also pay attention to watercourses for which flood hazard maps and flood risk maps have not been prepared (among others, the Drwinka River and the canal Kanał Strumień) and will take into account flood hazard that occurs there. At the proposal submission stage, the Consultant will propose watercourses that will be modeled during the performance of the assignment (an assumption should be made that watercourses with a total length of at least 120 km will be taken into account). Selected watercourses will be approved by the Employer, in agreement with the respective local government units.

### Available data

At the current stage, the Employer has the following input materials:

* Existing local and large-scale studies relating to the concept in question, in particular:
  + Review and update of the flood hazard maps and flood risk maps;
  + Flood hazard maps and flood risk maps (flood hazards and risks caused by rivers) to the extent arising from the review and update of the preliminary flood risk assessment (under preparation);
  + Review and update of the Flood Risk Management Plans (under preparation);
  + The 2nd update of the River Basin Management Plans (uRBMPs II) (under preparation);
  + The drought mitigation plan;
  + The Water Shortage Mitigation Program for 2021-2027 with an outlook until 2030);
  + Implementation of instruments supporting the implementation of measures included in the FRMPs;
  + The national surface water renaturation program;
  + Contract 5.7.1 “A program of non-structural and flood storage measures being an element of flood risk management in the Little Vistula and Upper Vistula water regions (the sub-basin upstream of Kraków), including flood protection for the city of Kraków”;
  + Analysis of the occurrence of drought and its effects in the Vistula River valley section between the Przewóz Barrage and the Raba River mouth, including identification of structural mitigation measures, with special attention to the construction of the Niepołomice Barrage;
  + Analyses of the investment plans covering the project area:
    - The analysis of the investment program for the Raba catchment;
    - The analysis of the investment program for the Dunajec catchment;
    - The analysis of the investment program for the Łęg and Trześniówka catchments;
    - The analysis of the investment program for the Nida catchment;
    - The analysis of the investment program for the Czarna Staszowska catchment;
    - The analysis of the investment program for the Wisłoka catchment;
    - The analysis of the investment program for the San and Wisłok catchments;
    - The program to improve flood safety in the Drwinka stream valley;
    - The analysis of the investment program for the Wielopolka catchment;
    - Flood protection in the Wątok stream valley in the Municipality of Tarnów City as well as in Skrzyszów and Ryglice, Tarnów County;
    - The multi-option investment program for the Paleśnianka stream, including its tributaries, in the Municipality of Zakliczyn, Tarnów County, Małopolskie Voivodeship;
    - The multi-option investment program, including the preparation of a strategic environmental impact assessment for the Uszwica River, including its tributaries, in the Municipalities of Szczurowa, Borzęcin, Brzesko, Gnojnik, and Lipnica Murowana;
    - The multi-option investment program, including the preparation of a strategic environmental impact assessment, for the Szreniawa River catchment;
    - The analysis of flood hazard and of the investment program for the Nidzica River catchment;
    - The multi-option investment program to improve flood safety in the Żabnica-Breń River valley, including its tributaries, in Tarnów and Dąbrowa Tarnowska Counties, including the preparation of a strategic environmental impact assessment;
    - The update of the flood protection concept for the valley of the canal Kanał Strumień, including its tributaries;
    - The analysis of flood hazard and of the investment program for the Koprzywianka River catchment, including the Gorzyczanka River catchment;
    - The flood protection concept for the Opatówka River, with a length of 52.1 km, including its tributaries.
  + A hydrological and hydraulic analysis regarding the Łęg River catchment, including an analysis of the location of multi-purpose reservoirs;
  + A concept for a change in flood flow conditions in the section between the LHS Zaduszniki railway bridge on the Vistula River near Mielec and the road bridge on the Vistula River along the national road DK no. 9;
  + Polish Waters’ Program of Planned Water Management Investments;
  + Polish Waters’ Investment Plan for 2022-2025.
* The hydraulic models (DHI MIKE standard) prepared as part of:
  + The update of the flood hazard maps and flood risk maps;
  + Flood hazard maps and flood risk maps (flood hazards and risks caused by rivers) to the extent arising from the review and update of the preliminary flood risk assessment (under preparation);
  + Update of the Flood Risk Management Plans (under preparation);
  + Contract 5.7.1 “A program of non-structural and flood storage measures being an element of flood risk management in the Little Vistula and Upper Vistula water regions (the sub-basin upstream of Kraków), including flood protection for the city of Kraków”;
  + Analysis of the occurrence of drought and its effects in the Vistula River valley section between the Przewóz Barrage and the Raba River mouth, including identification of structural mitigation measures, with special attention to the construction of the Niepołomice Barrage;
  + The analysis of the investment plans covering the project area:
    - The analysis of the investment program for the Raba catchment;
    - The analysis of the investment program for the Dunajec catchment;
    - The analysis of the investment program for the Łęg and Trześniówka catchments;
    - The analysis of the investment program for the Nida catchment;
    - The analysis of the investment program for the Czarna Staszowska catchment;
    - The analysis of the investment program for the Wisłoka catchment;
    - The analysis of the investment program for the San and Wisłok catchments;
    - The program to improve flood safety in the Drwinka Stream valley;
    - The analysis of the investment program for the Wielopolka catchment;
    - Flood protection in the Wątok stream valley in the Municipality of Tarnów City as well as in Skrzyszów and Ryglice, Tarnów County;
    - The multi-option investment program, including the preparation of a strategic environmental impact assessment, for the Uszwica River, including its tributaries, in the Municipalities of Szczurowa, Borzęcin, Brzesko, Gnojnik, and Lipnica Murowana;
    - The multi-option investment program, including the preparation of a strategic environmental impact assessment, for the Szreniawa River catchment;
    - The analysis of flood hazard and of the investment program for the Nidzica River catchment;
    - The multi-option investment program to improve flood safety in the Żabnica-Breń River valley, including its tributaries, in Tarnów and Dąbrowa Tarnowska Counties, including the preparation of a strategic environmental impact assessment;
    - The update of the flood protection concept for the valley of the canal Kanał Strumień, including its tributaries;
    - The analysis of flood hazard and of the investment program for the Koprzywianka River catchment, including the Gorzyczanka River catchment;
    - The flood protection concept for the Opatówka River, with a length of 52.1 km, including its tributaries.

### Consultant’s scope of tasks

The Consultant will be selected from the shortlisted companies using the QCBS (Quality-and Cost-Based Selection) method, in accordance with the World Bank’s “Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers", January 2011, Revised July 2014.

The assignment to be performed under this contract should be carried out in compliance with Polish law and international standards for this type of work, in particular by taking into account the World Bank’s relevant policies (and any amendments to them introduced during the performance of this assignment) as well as its most recent Environmental and Social Standards, i.e., Environmental and Social Framework (ESF[[1]](#footnote-1)). Whereas the potential future financing sources for investment process are not determined the Client has opted to introduce the ES planning process with the latest ES standards.

The Consultant's activities will include the following:

1. Collect and analyze existing documents related to flood protection in the Upper West Vistula and Upper East Vistula water region.
2. Perform an analysis of flood hazard in the project area (as identified in the updated flood hazard maps (uFHMs) and other documents) and identify watercourses essential for the Program in question for which maps have not been prepared according to the methodology used to prepare the uFHMs and which have been selected and approved by the Employer, in consultation with the respective local government units (LGUs) (a minimum total length of about 120 km);
3. Analyze the technical condition of infrastructure and land use, with special attention to identification of socially and environmentally important sites (e.g. protected areas, cultural heritage sites, spaces requiring extensive land acquisition, displacement of economic activities or people, i.e., involuntary resettlement) and watercourse sections sensitive to morphological changes (erosion, sedimentation).
4. Organize the 1st conference for the LGUs located in the project area in order to introduce into the objectives and scope of the Program.
5. Conduct site visits to the local government units (a list of the LGUs is included in Appendix 1) located in the project area to discuss flood protection problems and possibilities of solving them.
6. Carry out supplementary field surveying measurements for sections of watercourses selected by the Employer which were analyzed as part of the preparation of the uFHMs in order to define them more specifically and develop necessary hydraulic models for additional watercourses selected to be included in the Program (measurements will be performed according to the methodology used to prepare the uFHMs).
7. Analyze the possibility of increasing retention capacity of selected urban areas in coincidence with flood events on rivers, including an analysis of the impact caused by stormwater drainage systems in the following three cities: Kielce, Nowy Sącz, and Rzeszów (methodology will be proposed by the Consultant at the proposal submission stage and made more specific in the Inception Report);
8. Carry out hydraulic modeling for additional watercourses and verify/complement the models developed during the preparation of the uFHMs, including identification of flood hazard for flows with a probability of 0.2%, 1%, and 10% according to the methodology adopted for the models developed as part of the preparation of the uFHMs and uFRMs.
9. Identify and analyze problem areas in terms of existing flood hazard and risk, taking into account the results of the uFHMs, hydraulic modeling results, and the operation of the reservoirs in the Upper West Vistula and Upper East Vistula water regions.
10. Organize two foreign study visits aimed at familiarizing the Employer’s representatives with implemented flood protection measures.
11. Organize a domestic visit for the LGUs’ and the Employer’ representatives aimed at presenting them implemented flood protection measures.
12. Analyze hydrological data for planned polder retention capacity and other flood protection structures, including identification of an approach to a change in maximum flow values as a result of increased polder retention capacity, taking into account the concept for outlet works and the assumptions for the operation manual for flood storage structures.
13. Analyze the possibility of improving the carrying capacity of the Vistula River diked area as a result of measures involving tree and shrub removal, to the extent acceptable to the Regional Directorate for Environmental Protection (RDOŚ);
14. Analyze the process of sediment transport in the Vistula channel section included in the project area (also in historical terms) – in order to identify places suited for planned measures designed to increase channel retention;
15. Prepare a preliminary list of investment activities in order to create a coherent list of flood protection investments planned under the uFRMPs and those proposed by the Consultant which are feasible to be implemented in the Upper West Vistula and Upper East Vistula area within the project boundaries.
16. Prepare an information and promotion campaign and an educational campaign to increase public awareness and acceptance of proposed flood protection measures;
17. Organize the 2nd conference for the LGUs located in the project area in order to present and discuss the current status of the Program and potential preliminary options.
18. Analyze specific terrain conditions with a view to hierarchization of non-structural measures in the catchment area in order to enhance its flood storage capacity – proposed measures and estimation of their effects – evaluation of the ffectiveness of slower surface runoff on the magnitude of flood flows.
19. Hierarchize the proposals contained in the uFRMPs and those proposed by the Consultant from the point of view of expected effects of measures to be implemented in the catchment area, taking into account the required criteria for the safety of structures and safe conveyance of floodwater in the Vistula River within the project area.
20. Carry out modeling of the high-water channel of the Vistula, including its key tributaries (after the proposals contained in the uFRMPs and those proposed by the Consultant have been hierarchized) for flows with a probability of 0.2%, 1%, and 10% according to the methodology adopted for the models developed as part of the preparation of the uFHMs and uFRMs for the purpose of designing the structure of the polders, perform a hydraulic analysis of the outlet works of the polders and parameters of other flood control structures, and determine water management rules for planned flood storage structures and the impact of sedimentation transport on increased flood risk.
21. Prepare an initial proposal for hierarchization of investments proposed to be implemented in the form of an investment program (with packaging of investments), including the following:
    1. Assessment of investments feasible to be implemented in terms of the completeness of design documentation, the level of preparation of their implementation, estimated implementation time, time necessary to supplement such documentation (if any), timelines for obtaining relevant permits, and readiness of investments for implementation;
    2. Assessment of the scale and probability of potential risks and conflicts (environmental, social, planning ones, etc.) for selected investments as well as viability to prevent or mitigate these risks/conflicts;
    3. Assessment of planned investments in terms of implementation time and schedules.
22. Analyze proposed investments in relation to local land use plans applicable in the project area, including assessment of all investment plans of the LGUs in the area of planned retention-increasing structures;
23. Conduct an environmental analysis, taking into account the World Bank standards for the preparation of SESA and the EU standards.
24. Conduct a strategic social risk analysis and stakeholder mapping, taking into account the World Bank standards, and the existing strategic environmental assessments for some potential investment programs (noted above), for: (i) the identification of potential social risks including: construction works impacts on local populations, community health and safety, involuntary land acquisition and resettlement, measures to protect project-related workers, among others; (ii) analysis of relevant legal and institutional frameworks and local territorial or development plans, relevant to social risks identified, including mechanisms to address grievances; and (iii) the identification of key stakeholders and preparation of a Stakeholder Engagement Plan (SEP)[[2]](#footnote-2) in line with the Project’s existing communications and engagement strategy that aims to build stakeholder participation and ownership over investments and solutions proposed and identifies measures for strategic as well as project level engagements (only strategic level stakeholder engagement will be implemented under this activity).
25. Implement strategic stakeholder engagement to scope out and identify potential risks, concerns and mitigation measures, including feedback to design project level consultation and participation processes and grievance redress mechanisms.
26. Prepare a readable general map at a scale of 1:10 000 or larger (orthophotomap base, topographic map) with the location of investment structures planned under the Program and areas to be protected due to their operation.
27. Prepare a spatial database.
28. Prepare the final list of prioritized flood protection investments in the catchment in question, which should take into account the criteria for permissible parameters of flood flows in the Upper West Vistula and Upper East Vistula area, including a preliminary implementation schedule.
29. Carry out an analysis and scoping and prepare a report on estimated financial costs of the structures and land acquisition costs.
30. Make a preliminary cost and benefit analysis (CBA).
31. Prepare a Feasibility Study for the proposed investment program.
32. Prepare the Program entitled "Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost".
33. Organize the 3rd conference for the LGUs located in the project area in order to present the current status of the Program.
34. Prepare an environmental impact forecast for the Program entitled "Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost".
35. Identify measures that could avoid, reduce or mitigate the types of social risks identified within the strategic social analysis and strengthen or close existing gaps within the relevant legal and institutional frameworks and local territorial or development plans, including mechanisms to address grievances. These measures should be informed by strategic stakeholder engagement processes.
36. Evaluate comments received during strategic stakeholder engagement and incorporate them within the Strategic Social Analysis and overall design of the " Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost".
37. Prepare a physical and financial schedule for the implementation of the Program (design documentation, the critical path for obtaining administrative permits, applications or requests to obtain external funds, timelines for works and for obtaining use permits).
38. Prepare the final version of the " Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost".
39. Prepare a Final Report, including a summary of the activities performed.

## Analysis of the environmental impact, taking into account the requirements of the World Bank standards for preparation of Strategic Environmental and Social Assessment and the EU standards

The Consultant will prepare an environmental analysis taking into account the requirements of the World Bank standards for preparation of SESA. Such frameworks are publicly available for World Bank-financed programs and projects on the Bank’s websites www.worldbank.org.

Strategic environmental and social assessment (SESA) is a systematic examination of environmental and social risks and impacts, and issues, associated with a policy, plan or program, typically at the national level but also in smaller areas. The examination of environmental and social risks and impacts will include consideration of the full range of environmental and social risks and impacts incorporated in ESS1 through 10. SESAs are typically not location-specific. They are therefore prepared in conjunction with project and site-specific studies that assess the risks and impacts of the project.

The environmental analysis of the considered alternative options of investments will be used, among others, to carry out a strategic environmental impact assessment and to prepare an environmental impact forecast.

The preliminary environmental analysis will include at least the following:

1. Characteristics of the planned project:

* Designed technical parameters of planned facilities;
* Planned scope of works.

1. Scenarios and alternative options for the planned project (described in detail in Section 3B):

* Scenario 1 – which includes the investments contained in Polish Waters’ Investment Plan for 2022-2025;
* Scenario 2 – which includes the investments contained in the uFRMPs for the Vistula River and its tributaries downstream to the Zawichost gauging station.

1. For Scenarios 1 and 2, the Consultant will prepare at least 2 alternative options and will select, in agreement with the Employer, the recommended option for either of these Scenarios. The recommended option should meet the Program’s objective.
2. Characteristics of land development and use in the vicinity of the planned investments.
3. The provisions of the planning documents applicable in the areas where the investments are intended to be implemented (local land use plans, and if there are no such plans, zoning studies).
4. Existing land use, including expected locations of archaeological or other cultural heritage sites.
5. An inventory of residential buildings, economically used land, and historical sites in the direct vicinity of the proposed investments using available aerial photos and satellite images as well as updated base and cadastral maps.
6. Description and characteristics of natural elements of the environment:

* Areas protected under the Nature Conservation Act;
* Natura 2000 sites;
* Surface waters;
* Groundwater;
* Land surface and landscape;
* Soils and land;
* Climatic conditions;
* Animate nature;
* Noise climate;
* Aerosanitary condition of the air;
* Population and physical assets.

1. An environmental survey in the impact area of the planned investments using the methodology for conducting such surveys and its results (the level of detail of this study must be at least adequate for the stage of preparation of a program-level document and strategic environmental impact assessments).
2. A survey of cultural heritage sites and artifacts in the impact area of the planned investments, including proposals for their protection.
3. An assessment of the project’s expected emissions and impacts on individual elements of the environment, including cumulative impacts.

Proposals for mitigation, monitoring and compensatory measures that must be applied during the implementation of the investments and after their completion, in line with the measures proposed under Contract 5.7.1. The outcome of the environmental analysis will be the following:

* Assessment of the compliance of the options of project activities with the environmental objectives arising from the Water Framework Directive (WFD);
* Assessment of the compliance of the options of project activities with the requirements of the Birds and Habitats Directives (Natura 2000 sites) and the requirements for other forms of area-based protection in accordance with the Nature Conservation Act;
* Determination of environmental effects of the implementation of the proposed investments (with regard to the requirements of the WFD and the Habitats Directive as well as Polish law);
* Determination of types and the magnitude of compensatory measures as well as the time of their implementation;
* Comparative analysis of the options, taking into consideration environmental criteria;
* Defining and analyzing issues required to be addressed during the preparation of Environmental Assessment and Management Frameworks (EAMFs) for World Bank-financed investments.

Additionally, the said environmental analysis will form the basis for conducting an expert evaluation of the environmental criteria at the stage of multi-criterion analysis (MCA) of the options. Making such evaluation according to the environmental criteria requires the Consultant to carry out a prior analysis and assessment concerning the compliance of the options of project activities with the legal and environmental requirements, including in particular the requirements of the Water Framework Directive as well as of the Birds and Habitats Directives. Investments included in the proposed options (also including any non-structural measures) should be checked in terms of their fulfilment of the legal and environmental requirements (based on the environmental analysis, taking into account the requirements of the World Bank standards for preparation of Environmental and Social Management Frameworks (ESMFs), in particular with respect to the provisions contained in the River Basin Management Plans (the environmental objectives within the meaning of the WFD) and compliance with the objectives of the environment-related Directives. If there is a possible conflict, the Consultant will be obliged to propose mitigation measures and assess whether such mitigation measures are sufficient to eliminate such conflict. Where it is not possible to apply adequate measures in order to mitigate the risk of conflict, it will be necessary to propose compensatory measures. Any mitigation and compensatory measures proposed at the stage of environmental assessment of the planned project activities will be simplified measures and will identify in general terms the possibilities, scope and forms of environmental compensation, accordingly to the level of detail of data held at the stage of preparation of the Program.

### Environmental criteria

As part of the preparation of multi-criterion analysis methodology, the Consultant will propose a set of environmental criteria and the method for determining scores by conducting expert evaluation in reference to the methodology developed under Contract 5.7.1 (a proposed scoring system for the group of environmental criteria).

The minimal range of environmental criteria:

* Impact on protected areas (national parks, nature reserves, landscape parks, Natura 2000 sites) - score-based evaluation;
* Impact on national and regional ecological corridors - score-based evaluation;
* Impact on the water protection objectives within the meaning of the Water Framework Directive - score-based evaluation;
* Threat to natural habitats and protected species - score-based evaluation;
* Risks to cultural heritage sites and culturally valuable artifacts.

The proposed scoring system (evaluation scale) should include the evaluation criteria that take into account the following, among others:

* The location of an investment in relation to protected areas and ecological corridors;
* The scope, intensity and duration of impacts in relation to the functioning of such protected areas and ecological corridors;
* The possibility of applying mitigation and/or compensatory measures;
* The possibility of meeting the conditions set out in Article 4.7. of the WFD or indication how easily measures aimed at meeting such conditions can be undertaken;
* Intensification of impacts on/threats to natural habitats and populations of protected species.

Input data for the multi-criterion analysis with regard to the environmental criteria that will be subjected to expert evaluation will come from the Consultant’s analysis and assessment concerning the compliance of the options for project activities with the legal and environmental requirements, including in particular the requirements of the Water Framework Directive as well as of the Birds and Habitats Directives. The score-based evaluation should include cumulative impacts of investments proposed in the Program, together with impacts of any other investment projects (i.e. not being part of the Program) which are intended to be implemented during the same time (if any). Any data necessary to perform environmental analyses will be acquired by the Consultant at its own cost.

For each criterion, the Consultant will provide in the proposal the scope of environmental information planned to be used and will specify the source of its acquisition. Any cost associated with acquisition of data not possessed by the Consultant or which cannot be acquired at no cost, but which are necessary to perform the assignment, will be paid by the Consultant.

The Consultant will submit any documents to the Employer, including the preparation of all required applications to be filed to the authorities specified in Articles 57 and 58 of the Act on Access to Information on the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessments (EIA Law) for the purpose of obtaining required opinions and approvals. As part of its assignment, the Consultant will provide substantive and technical assistance during the opinion-giving and approval process as well as during the public consultation procedure in order to enable the Employer to adopt the document in question in compliance with the provisions of the aforementioned Section IV of EIA Law. The Consultant will be obliged to revise the content of the draft Forecast as a result of the opinion-giving and public consultation processes conducted based on the provisions of Chapter 3, Section IV of EIA Law. In particular, the Consultant will prepare a list of comments received as a result of stakeholder engagement and submitted by the competent authorities during the opinion giving process, including information how they were taken into consideration and to what extent they were incorporated into the draft Forecast.

Moreover, the Consultant will also prepare a written summary (as specified in Article 55(3) of EIA Law), to be attached to the adopted document (Program), containing the justification for the selection of the adopted document as regards the alternative solutions that were considered, as well as information on how the following aspects were taken into account and to what extent they were incorporated:

* findings included in the environmental impact forecast;
* opinions of the competent authorities referred to in Articles 57 and 58;
* any submitted comments and suggestions;
* outcomes of transboundary environmental impact assessment proceedings (if any);
* proposals concerning the methods and frequency of monitoring of effects of the implementation of the provisions contained in the document.

The outputs of the strategic environmental impact assessment stage will be the following:

* An environmental impact forecast.
* A written summary, as specified in Article 55(3) of EIA Law, which will be included in the Program upon completion of its strategic environmental impact assessment.

### Environmental impact forecast

As part of the strategic environmental impact assessment that will be conducted, including the environmental impact forecast to be prepared for the Program, the Consultant will carry out the following activities:

* 1. Prepare a draft environmental impact forecast for the Program;
  2. Develop methodology for conducting an environmental survey and a survey of culturally and archaeologically valuable sites;
  3. Obtain opinions of the competent authorities and submit in writing a proposal how to include such opinions in the Program and in the forecast;
  4. Organize and conduct consultation meetings as part of stakeholder engagement in the process of the strategic environmental impact assessment conducted for the Program and the forecast;
  5. Submit in writing a proposal how to include opinions and suggestions provided during the public consultation process in the Program and in the forecast;
  6. Prepare the final version of the Program’s environmental impact forecast.

The aforementioned activities are grouped in four tasks:

**Task I**: Prepare an environmental impact forecast for the Program.

**Task II**: Prepare methodology for conducting an environmental survey and a survey of cultural heritage sites for the purpose of implementation of the Program in reference to the methodology developed under Contract 5.7.1.

**Task III**: Conduct public consultation and make agreements on the environmental impact forecast and the Program.

**Task IV**: Prepare the final version of the environmental impact forecast for the Program.

### Detailed description of the individual tasks

**Task I**: Prepare an environmental impact forecast for the Program.

* 1. The environmental impact forecast should be prepared in accordance with the requirements of Articles 51(2) and 52(1) and (2) of EIA Law as well as in accordance with agreements concerning the scope and degree of detail of information required in the environmental impact forecast to be prepared by the Consultant which are made, based on Article 53 of EIA Law, with the following authorities:
* the Regional Director for Environmental Protection in Kraków and the Regional Director for Environmental Protection in Katowice (if necessary);
* the Małopolskie Regional Sanitary Inspector in Kraków, the Podkarpackie Regional Sanitary Inspector in Rzeszów, and the Świętokrzyskie Regional Sanitary Inspector in Kielce (if necessary).
  1. The environmental impact forecast should define the impact of the implementation of the investments identified for the options included in the Program on the status of waters, water-dependent ecosystems and protected areas designated based on Article 113(4) of the Water Law Act as well as on the status and functioning of areas protected under the Nature Conservation Act of April 16, 2004 (Dz.U. (Journal of Laws) of 2021 item 1098z, as amended).

The environmental impact forecast prepared by the Consultant should include the following, in particular:

* + - 1. Information regarding the content of the Program, the main objectives specified for the Program and their linkages with other documents. The forecast should be closely linked to the proposed options and take into account all requirements for their implementation important from the environmental point of view;
      2. Information on the methods to be used to prepare the forecast in question - apart from the appropriate selection of sources as well as data acquisition and processing tools, it is also crucial to maintain a logical and coherent structure of the entire document and consistency of data presented in it; it is absolutely necessary to comply with the rules for citing sources of any data used; in the case of any ambiguous data, it is necessary to thoroughly examine and describe the reasons for any such ambiguity or, where it is not possible, such data should not be used;
      3. Proposals concerning expected methods for analyzing effects of the implementation of the provisions of the document to be prepared and the frequency of such analysis;
      4. Information on any possible transboundary environmental impact resulting from the Program - such information must include the possibility and extent of any transboundary environmental impact, including the impact area and the nature of expected impacts as well as identification of any conflicts and proposals for their solution;
      5. An executive summary prepared in non-specialist language – the summary should be understandable and include graphical presentations (diagrams, maps) of the most important phenomena. It is not allowed to include as the summary selected extracts from the documents;
      6. The author's declaration, and if the forecast has been prepared by a team of authors - the team leader's declaration, regarding the fulfilment of the requirements referred to in Article 74a(2) of EIA Law, which will constitute an annex to the forecast.

The environmental impact forecast should also specify, analyze and assess the following:

1. The existing state of the environment and any potential changes in this state if the Program is not implemented - the description of the state of the environment should also include the status of implementation of the findings included in the Program, with reference to which successive assessments of this state will be made, and/or the state of the environment in areas expected to be significantly affected;
2. The existing state of the environment in areas expected to be significantly affected;
3. Any existing problems associated with environmental protection important from the point of view of implementation of the activities envisaged in the Program, in particular those relating to protected areas under the Nature Conservation Act of April 16, 2004 and relating to the current status of waters, water-dependent ecosystems and protected areas designated based on Article 113(4) of the Water Law Act;
4. The environmental protection objectives established at the international, Community and national level, important from the point of view of the investments described in the Program as investment options that are proposed to be implemented, and the ways in which these objectives and other environmental problems were taken into account during the preparation of the document, including in particular the environmental objectives defined in the updated Vistula River Basin Management Plans (Dz. U. (Journal of Laws) of 2016, item 1911);
5. Expected significant impacts, including direct, indirect, consequential, cumulative, short-term, medium-term and long-term, permanent and temporary as well as positive and negative ones, on the purposes and objects of protection of Natura 2000 sites and the integrity of such areas as well as on the environment, in particular on the biological diversity, humans, animals, plants, water, air, ground surface, landscape, climate, natural resources, historical sites, and physical assets, taking into account relationships between these elements of the environment and between the impacts on these elements.

The environmental impact forecast should present:

1. Specific proposed solutions aimed at preventing, reducing or compensating negative environmental impacts, likely to be the effect of the implementation of the Program, in particular on the purposes and objects of protection of Natura 2000 sites as well as the integrity of such areas - they should relate to identified specific conflict situations;
2. Solutions alternative to the solutions included in the Program, including the rationale for their selection and a description of the assessment method leading to such selection, or an explanation of the absence of alternative solutions, including indication of any encountered difficulties arising from technology deficits or gaps in modern knowledge.

The issues presented in the above points should be analyzed in terms of the purposes for which the Program is to be created, while any expected significant impacts, both positive and negative ones, must particularly be considered in the context of their impact on changes in the status of waters, water-dependent ecosystems and protected areas designated based on Article 113(4) of the Water Law Act and in the context of risk of failure to achieve the environmental objectives by the year 2023 and 2030.

Moreover, in the conducted analyses and assessments of potential environmental effects as well as in the recommended solutions, the Consultant should present a proposed method for valuation of environmental benefits resulting from the introduction of respective prohibitions/orders/restrictions or their combination.

In the environmental impact forecast, the Consultant will include spatial analyses of the assessment of the existing state of the environment and existing environmental problems in the form of map appendices (JPG files) and, for each map separately, map compositions (MXD) (a draft map at a scale of 1: 50 000 and vector layers) - for the option recommended for implementation.

The draft environmental impact forecast as well as each version of the environmental impact forecast prepared for the Program provided to the Employer should meet all the requirements for the performance of this assignment.

**Task II**: Prepare methodology for conducting an environmental survey and a survey of cultural heritage sites for the purpose of implementation of the Program in reference to the methodology developed under Contract 5.7.1.

Proposals for expected methods (including tools) should be closely linked to the objectives of the Program and the implementation conditions of the proposed investments as well as they should include, to the greatest possible extent, the possibility of using in analyses publicly available data collections. Moreover, they should include a methodology for monitoring effects of the implementation of the Program, containing at least the following:

* 1. The scope of information and data necessary to conduct such monitoring;
  2. Detailed specification of the frequency, format and manner of providing the a.m. information and data;
  3. A list of institutions/persons that would be obliged to provide the said data and information, specifying the legal basis for the fulfilment of such obligations.

**Task III**: Conduct public consultations and obtain opinions of the relevant authorities on the Program and the forecast of its environmental impact.

As part of this assignment, the Consultant will be obliged to perform the following activities:

* 1. Obtain opinions of the competent authorities concerning the prepared Program and the environmental impact forecast (i.e. the Regional Director for Environmental Protection and the Małopolskie Regional Sanitary Inspector in Kraków and, if necessary, the equivalent authorities in Katowice);
  2. Organize and conduct consultation meetings in a number resulting from the need to fully conduct a strategic environmental impact assessment, including the preparation of the environmental impact forecast for the Program - as part of ensuring stakeholder engagement in public consultation proceedings to be conducted in accordance with specific requirements, also those defined in any opinions obtained by the Consultant which will be issued, among others, by the administrative authorities specified in subparagraph a); specific requirements concerning such consultation meetings will be agreed each time between the Consultant and the Employer;
  3. Conduct consultation meetings, which should be led by persons designated from the group of experts performing this assignment who will serve as moderators, in order to present the documents being consulted and summarize such meetings - in accordance with specific requirements determined each time between the Consultant and the Employer;
  4. Submit in writing a proposal how to include opinions of the competent authorities in the Program and the forecast;
  5. Process comments and proposals submitted during the public consultation process and submit in writing a proposal how to include them in the Program and the forecast;
  6. Prepare a public consultation report - in accordance with requirements specified each time in detail by the Employer and in compliance with the WB's standards for this type of activities - examples of such reports are available on the Bank's websites.

**Task IV**: Prepare the final version of the environmental impact forecast for the Program.

As part of this task:

* 1. The Consultant will prepare the final version of the environmental impact forecast for the Program, which will include opinions of the competent authorities and results of considered comments and proposals submitted during the public consultation process;
  2. The final version of the environmental impact forecast will include a descriptive part and a graphical part;
  3. The descriptive part must include all the elements specified in subparagraphs c) – e) of Task III of these TOR, including a written summary of the strategic environmental impact assessment procedure conducted in the course of the preparation of the Program and the forecast according to the requirements of Article 55(3) of EIA Law;
  4. The graphical part of the final document should include maps in the form of JPG files illustrating the spatial phenomena and their interactions. For each map, it is required to include a separate map composition in MXD format (a draft map at a scale of 1: 50 000 and vector layers) - for the option recommended for implementation. As regards any map composition prepared, it is required to export it to JPG format with a minimum resolution of 300 DPI or to any other format agreed with the Employer;
  5. The spatial database in GDB format, which can be opened and edited using ArcMap 10.2 software, should include the spatial layers relating to the study area, provided by the Employer or created as a result of the performance of this assignment.

The strategic environmental impact assessment (SEIA) should identify, analyze and assess any potential significant environmental impact resulting from the implementation of the plan or program as well as sound alternative solutions which should take into account the objectives and geographical coverage of such plan or program. This requires, among others, determining linkages of the document to be prepared with other documents which define, in particular, the environmental objectives and analyses of the environmental protection objectives relevant to the document to be prepared, and the ways in which these objectives and other environmental problems were taken into account during the preparation of the document (Article 51(2)(2)(d) of EIA Law). This means, among others, the obligation to include in the SEIA process the environmental objectives for waters, as specified in the updated River Basin Management Plan (uRBMP) or the Flood Risk Management Plan (FRMP) for the river basin. Furthermore, Article 51(2)(2)(e) and (3) of EIA Law provides for the obligation to make an assessment of the impact of effects of the implementation of the document on the biodiversity of humans, animals, plants and water as well as other environmental elements (including the relationships between such elements) and the obligation to present solutions aimed at preventing, reducing or compensating any negative environmental impacts that may result from the implementation of the document to be prepared and options alternative to the solutions proposed in the document to be prepared, together with a justification for their selection. The analyses indicated in the above cited Article must, in particular, relate to any Natura 2000 site, including the purposes and objects of protection of Natura 2000 sites and the integrity of such sites. Given the above, the Consultant must present a comparative analysis of the options analyzed. The Consultant must in particular indicate the scope of any required environmental protection measures. As regards any investments for which environmental permits have been issued, an analysis and assessment of the conducted proceedings will be made in terms of the possibility of using existing environmental documentation in the proposed configuration of the planning option indicated for implementation. The document should clearly indicate the investment scope recommended to be included in specific environmental proceedings (i.e. proceedings leading to the issuance of environmental permits) which will allow meeting the requirements of EIA Law and the EIA Directive as well as the WB's requirements. In particular, the recommended configuration concerning obtaining environmental permits must ensure that 1) cumulative environmental impacts will be taken into account; 2) the division of the investment program into particular investments being the object of individual environmental permits will not affect the classification of such investments as regards the need to conduct an environmental impact assessment.

## Strategic Social Analysis in accordance with the requirements of the World Bank Environmental and Social Framework (ESF).

The Consultant will prepare a Strategic Social Analysis taking into account the requirements of the World Bank standards (ESF) for preparation of Social Assessments (ESS1), Labor and Working Conditions (ESS2), Community Health and Safety (ESS4), Land Acquisition, Restrictions on Land Use and Involuntary Resettlement (ESS5), and Stakeholder Engagement and Information Disclosure (ESS10). Whereas the Project that is financing this Technical Assistance Activity is not being implemented under the ESF (as it was approved under the World Bank’s prior Environmental and Social Safeguards), in light of potential future financing, the Strategic Social Analysis will be prepared with a forward looking approach and assess the most recent ES Standards, i.e., the ESF. These Standards are publicly available for World Bank-financed programs and projects on the Bank’s websites[[3]](#footnote-3).

### Purpose of the analysis

The purpose of this analysis is to inform about the strategic decision making of the proposed programs and investments to reduce flood risk while maximizing social benefits, minimizing social risks while promoting stakeholder ownership over proposed solutions. It will do this through strategic social risk and benefit analysis together with effective stakeholder engagement. The scope of the social risk analysis will be comprehensive of the World Bank’s current Environmental and Social Framework, described in detail below. At the same time, this work will prepare a Stakeholder Engagement Plan (SEP) that identifies key stakeholders and proposes ways to carry out meaningful consultation and engagement processes with them at both the upstream planning phase and during project preparation and implementation. This task will include the implementation of the strategic planning phase included within the SEP in order to inform the risk identification, design alternatives, and potential measures to maximize benefits and avoid, reduce or mitigate risks. Such analysis should include a comparison of alternative options feasible to be implemented – as regards their potential social risks, impacts and benefits.

### Scope of Risk Analysis

### The scope of the risk analysis should take into account the objectives and principles of the following Standards.

#### **ESS1:** [**Assessment and Management of Environmental and Social Risks and Impacts**](https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards?cq_ck=1522164538151#ess1)

* To identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with the ESSs.
* To adopt a mitigation hierarchy approach to: (a) Anticipate and avoid risks and impacts; (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (c) Once risks and impacts have been minimized or reduced, mitigate; and (d) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.
* To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project. For further guidance, please see the [*Directive: Addressing Risks and Impacts on Disadvantaged or Vulnerable Individuals or Groups*](https://ppfdocuments.azureedge.net/9598117e-421d-406f-b065-d3dfc89c2d78.pdf)
* To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development and implementation of projects, whenever appropriate.
* To promote improved environmental and social performance, in ways which recognize and enhance Borrower capacity.

The Strategic Social Analysis should also assess risks of “Associated Facilities”, which although not necessarily financed by the proposed subproject are: (a) directly and significantly related to the project; (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist.

#### **ESS2:** [**Labor and Working Conditions**](https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards#ess2)

* To promote safety and health at work for *direct workers, contracted workers, primary supply workers; and community workers (please see definitions within ESF).*
* To promote the fair treatment, nondiscrimination and equal opportunity of project workers.
* To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate.
* To prevent the use of all forms of forced labor and child labor. 1
* To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.
* To provide project workers with accessible means to raise workplace concerns.

***ESS4: Community Health and Safety***

The Analysis under this Standard should assess potential risks on communities that may be affected by project activities.

* To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and nonroutine circumstances.
* To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams.
* To avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials.
* To have in place effective measures to address emergency events.
* To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.

#### **ESS5:** **[Land Acquisition, Restrictions on Land Use and Involuntary Resettlement](https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards" \l "ess5)**

* Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs as regards the implementation of the Program;
* To avoid forced eviction.
* To mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
* To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure.
* To conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant.
* To ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected.

The Analysis should of risks should assess potential permanent or temporary physical and economic displacement resulting from the following types of land acquisition or restrictions on land use undertaken or imposed in connection with project implementation:

* Land rights or land use rights acquired or restricted through expropriation or other compulsory procedures in accordance with national law;
* Land rights or land use rights acquired or restricted through negotiated settlements with property owners or those with legal rights to the land, if failure to reach settlement would have resulted in expropriation or other compulsory procedures;
* Restrictions on land use and access to natural resources that cause a community or groups within a community to lose access to resource usage where they have traditional or customary tenure, or recognizable usage rights. This may include situations where legally designated protected areas, forests, biodiversity areas or buffer zones are established in connection with the project;
* Relocation of people without formal, traditional, or recognizable usage rights, who are occupying or utilizing land prior to a projectspecific cut-off date;
* Displacement of people as a result of project impacts that render their land unusable or inaccessible;
* Restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, fresh water, medicinal plants, hunting and gathering grounds and grazing and cropping areas;
* Land rights or claims to land or resources relinquished by individuals or communities without full payment of compensation;
* Land acquisition or land use restrictions occurring prior to the project, but which were undertaken or initiated in anticipation of, or in preparation for, the project.

#### **ESS10:** [**Stakeholder Engagement and Information Disclosure**](https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards#ess10)

The Consultant should prepare a Stakeholder Engagement Plan (SEP) for both upstream strategic analysis and downstream project preparation and implementation. The Consultant should implement the upstream/strategic aspects of the SEP. The SEP should be aligned with the Project’s Communication and Engagement Strategy. Stakeholders can be defined as: (a) affected or likely to be affected by the project (project-affected parties); and (b) may have an interest in the project (other interested parties). Vulnerable populations within both these groups should also be idnetificed and specific measures to reach out and seek vulnerable groups feedback should be included.

* To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties.
* To assess the level of stakeholder interest and support for the project and to enable stakeholders’ views to be taken into account in project design and environmental and social performance.
* To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them.
* To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format.
* To provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances.

## Main deliverables of consulting services

**The Inception Report** (1.5 month from the signing of the contract, but the working version of this report should be submitted to the Employer within1 month from the signing of the contract) containing:

* 1. Proposed detailed methodology for prioritization of investments in the catchment area covered by the project, with special attention to the assumptions of flood protection criteria and the spatial structure of inhabited areas at significant risk of flooding and economic activity areas in the catchment area covered by the Program.
  2. Collection and verification of the existing documents related to flood protection in the Upper West Vistula and Upper East Vistula water region.
  3. An analysis of flood hazard in the project area (resulting from the uFHMs and other documents) and identification of watercourses essential for the Program in question for which maps have not been prepared according to the methodology used to prepare the uFHMs and which have been selected and approved by the Employer, in consultation with the respective LGUs (a minimum total length of about 120 km).
  4. A plan to carry out supplementary field surveying measurements for sections of watercourses selected by the Employer which were analyzed as part of the preparation of the uFHMs to define them more specifically and to develop necessary hydraulic models for additional watercourses selected to be included in the Program (measurements will be performed according to the methodology used to prepare the uFHMs).
  5. A plan for a conference to familiarize the LGUs with the Program’s issues and the creation of the project’s website that will facilitate communication with stakeholders.
  6. Presentation of a schedule for site visits to the LGUs (a list of the LGUs is included in Appendix 1) to discuss flood protection problems and possible solutions.
  7. Preparation of a plan and a schedule plan for a domestic visit and a foreign visit.
  8. Diagnosis of problems, work organization and the Consultant’s work plan, including a time schedule.
  9. Plan to carry out the SESA

**Report No. 1** (3.5 months from the signing of the contract, but the working version of this report should be submitted to the Employer within3 months from the signing of the contract) containing:

* 1. An analysis of the technical condition of infrastructure and land use, with special attention to identification of socially and environmentally important places (e.g. protected areas) and sections of watercourses sensitive to morphological changes (erosion, sedimentation).
  2. A report on site visits to the LGUs that was conducted in order to discuss flood protection problems and possible solutions.
  3. A report on supplementary surveying measurements that were carried out for sections of watercourses selected by the Employer which were analyzed as part of the preparation of the uFHMs to define them more specifically and to develop necessary hydraulic models for additional watercourses selected to be included in the Program (measurements will be performed according to the methodology used to prepare the uFHMs).
  4. Preparation of the Stakeholder Engagement Plan (SEP), including a schedule for key activities related both to stakeholder consultation and an information and promotion campaign and an educational campaign to increase public awareness and acceptance of proposed flood protection measures, in line with the Project’s existing Communications Strategy.

NOTE: During the preparation of Report No. 1, the 1st conference will be organized to familiarize the LGUs’ representatives with the scope of the Program.

**Report No. 2** (7 months from the signing of the contract, but the working version of this report should be submitted to the Employer within6.5 months from the signing of the contract) containing:

* 1. Hydraulic modeling for such additional watercourses and verification/complementing the models developed during the preparation of the uFHMs for flows with a probability of 0.2%, 1%, and 10% according to the methodology adopted for the models developed as part of the preparation of the uFHMs and uFRMs, including identification of flood hazard.
  2. Analysis of the process of sediment transport in the Vistula channel section included in the project area (also in historical terms) – in order to identify places suited for planned measures designed to increase channel retention.
  3. Identification and analysis of problem areas in terms of existing flood hazard and risk, taking into account the results of the uFHMs, hydraulic modeling results, and the operation of the reservoirs in the Upper West Vistula and Upper East Vistula water regions.
  4. Analysis of hydrological data for planned polder retention capacity and other flood protection structures, including identification of an approach to a change in maximum flow values as a result of increased polder retention capacity, taking into account the concept for outlet works and the assumptions for the operation manual for flood storage structures.
  5. Preparation of a preliminary list of investment activities in order to create a coherent list of flood protection investments planned under the uFRMPs and those proposed by the Consultant which are feasible to be implemented in the Upper West Vistula and Upper East Vistula area within the project boundaries.
  6. Analysis of the possibility of increasing retention capacity of selected urban areas in coincidence with flood events on rivers, including an analysis of the impact caused by stormwater drainage systems in the following three cities: Kielce, Nowy Sącz, and Rzeszów.
  7. Draft structure/outline of the SESA and progress report on ES analysis and upstream stakeholder engagement.

**Report No. 3** (8.5 months from the signing of the contract, but the working version of this report should be submitted to the Employer within8 months from the signing of the contract) containing:

1. Analysis of specific terrain conditions with a view to hierarchization of non-structural measures in the catchment area in order to enhance its flood storage capacity – proposed measures and estimation of their effects – evaluation of the effectiveness of slower surface runoff on the magnitude of flood flows.
2. Hierarchization of the proposals contained in the uFRMPs and those proposed by the Consultant from the point of view of expected effects of measures to be implemented in the catchment area, taking into account the required criteria for the safety of structures and safe conveyance of floodwater in the Vistula River within the project area.
   1. Modeling of the high-water channel of the Vistula, including its key tributaries (after the proposals contained in the uFRMPs and those proposed by the Consultant have been hierarchized) for flows with a probability of 0.2%, 1%, and 10% according to the methodology adopted for the models developed as part of the preparation of the uFHMs and uFRMs for the scenarios described in Section III.B.
   2. Preparation of the proposed hierarchization of investments proposed to be implemented in the form of an investment program (with packaging of investments), including the following:
      1. Assessment of investments feasible to be implemented in terms of the completeness of design documentation, the level of preparation of their implementation, estimated implementation time, time necessary to supplement such documentation (if any), timelines for obtaining relevant permits, and readiness of investments for implementation;
      2. Assessment of the occurrence of possible conflicts (environmental, social, planning ones, etc.) for selected investments;
      3. Assessment of planned investments in terms of implementation time and schedules.
   3. Analysis of proposed investments in relation to local land use plans (or other planning documents) applicable with respect to the project area, including assessment of all investment plans of the LGUs in the area of planned retention-increasing structures.

NOTE: During the preparation of Report No. 3, the 2nd conference will be organized for the LGUs’ representatives at which the Program’s outcomes achieved thus far will be presented.

**Report No. 4** (10 months from the signing of the contract, but the working version of this report should be submitted to the Employer within9.5 months from the signing of the contract) containing:

1. An environmental analysis, taking into account the World Bank standards for the preparation of Environmental and Social Management Frameworks and the EU standards.
2. A social impact analysis, taking into account the World Bank standards (Environmental and Social Framework - ESF) including results from the stakeholder engagement carried out and how feedback has informed design of alternatives.
3. Preparation of a readable general map at a scale of 1:10 000 or larger (orthophotomap base, topographic map) with the location of investment structures planned under the Program and areas to be protected due to their operation.
4. Preparation of a spatial database.
5. Preparation of the final list of prioritized flood protection investments in the catchment in question, which should take into account the criteria for permissible parameters of flood flows in the Upper West Vistula and Upper East Vistula area, including a preliminary implementation schedule.
6. An analysis and scoping and prepare a report on estimated financial costs of the structures and land acquisition costs.
7. Performance of a preliminary cost and benefit analysis (CBA).
8. Preparation of Feasibility Study for the proposed investment program.
9. Preparation of a stakeholder engagement plan, including public consultations.
10. Preparation of the Program entitled "Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost".

NOTE: During the preparation of Report No. 4, the 3rd conference will be organized for the LGUs’ representatives at which the Program’s outcomes will be presented.

**Report No. 5** (12 months from the signing of the contract, but the working version of this report should be submitted to the Employer within11.5 months from the signing of the contract) containing:

* 1. Report on the implementation of the SEP and the information and promotion campaign and the educational campaign that have been conducted.
  2. Preparation of an environmental impact forecast for the project entitled: "Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost”.
  3. Preparation of a social impact assessment for the recommended option, including the preparation of a stakeholder engagement plan and a list of stakeholders;
  4. Evaluation of comments and their incorporation into the draft document entitled " Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost".
  5. Preparation of a preliminary implementation schedule for the Program (design documentation, the critical path for obtaining administrative permits, timelines for works and obtaining use permits).
  6. Preparation of the final version of the document entitled "Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost".

**The** **Strategic Environmental and Social Assessment** (no later than the deadline for submission of the Final Report)

1. The Strategic Environmental Impact Assessment:
   1. The environmental impact forecast.
   2. A summary as set out in Art. 55(3) of EIA Law.
2. The Strategic Social Assessment
   1. The final results of the strategic social impact assessment,
   2. Final report on all stakeholder engagement.

**The Final Report** (14 months from the signing of the contract) containing:

1. The final report and a summary regarding the preparation of the Program.
2. The Program.

The following table of contents of the Program is proposed:

1. Description of the Upper Vistula catchment area, including among others its location, hydrography, a description of flood hazard, social and economic conditions, etc.
2. Methodology for prioritization of investments to be carried out in the catchment area covered by the project, consistent with the methodology developed under Contract 5.7.1.
3. Evaluation of the technical condition of existing flood control infrastructure, including identification of any quantitative and qualitative deficiencies.
4. Description of assumptions of the hydrological model and hydraulic model of the catchment.
5. The considered options for flood protection in the catchment area, including hydraulic modeling results – evaluation of these options and indication of the optimal implementation option.
6. List of hierarchized investment priorities proposed for implementation in the form of an investment program, including a description of structural measures.
7. Results of the environmental impact forecast, the social impact assessment, and the public consultations.
8. Results of the cost and benefit analysis.
9. Summary of SESA documents.
10. Summary of the Program.

The final table of contents of the Program, including any annexes, will be agreed at the stage of preparation of the Program between the Consultant and the Employer.

Each of the a.m. Reports should be submitted (following the Employer’s approval of the electronic version) in five copies and in two language versions: Polish and English (within the above specified time limits):

* For the Employer - 5 copies in paper form and 2 copies in electronic form (files in editable form and in PDF format);
* All accepted documents, reports and the draft Concept should be prepared in two language versions (Polish and English).

After conducting a public consultation on the Program, the Consultant will be obliged to update all reports in order to include arrangements and solutions worked out during such consultations.

## Scope and compliance of the content of the Program

### Scope of tasks with regard to existing documentation

The Consultant will review all existing available information, in particular any data, tools and models employed in preparing the existing planning documents using reports, maps, measurements, hydrological analyses, hydrometric measurements, hydrological and hydraulic models, cost estimates, concepts, environmental and social assessments, economic analyses, etc., that have been made/prepared/conducted to date. The review that will be carried out should result in assessment of the analyzed information in terms of its updatedness and usefulness during the further stage of preparation of the Program as well as the maintenance of consistency with other planning documents. The existing information that has been reviewed should be used to prepare an input to the Inception Report.

The Employer does not allow for duplicating the content of any already existing documents, studies, analyses, etc., in the documents that will be deliverables under this assignment, while as regards any information that is cited, compared or modified based on such documents, the Employer requires the copyrights of their authors or of the holders of such rights to be respected. The applicable regulations on copyright and related rights will apply to the prohibition to duplicate the content of any existing documents.

### Scope of tasks with regard to documentation to be prepared

The requirements concerning the concept documentation and any approvals and permits that will need to be prepared and/or obtained and/or collected by the Consultant selected under this procurement process are presented below.

The Consultant will obtain on its own:

* archival materials from the resources of relevant institutions and authorities as well as from private entities;
* materials necessary to prepare any expected deliverables;
* requirements for the construction, reconstruction or refurbishment which are to be issued by the administrators of any structures and facilities and which are necessary to prepare designs.

To perform the relevant tasks, the Consultant will need to acquire the following, among others:

* Base materials: a Digital Terrain Model (DTM), a Digital Surface Model (DSM), surveying cross sections of river channels, and orthophotomaps;
* Hydrological and meteorological data, standardized and incorporating climate change scenarios.

The Employer is not the owner of the above-mentioned materials and data. The Consultant should acquire them from relevant institutions (and pay the cost of acquisition of such materials and data). As part of its work, the Consultant needs to assess the quality of any materials and data acquired.

### Compliance of the concept documentation with the contract and with applicable regulations

The Consultant is responsible for organizing the process of preparing the concept documentationin such a manner that the assumed objectives of this assignment will be achieved in accordance with the provisions of the contract. The Consultant is also responsible for methods used in preparing such documentation.

The Consultant is obliged to be familiar with all regulations issued by any EU and Polish authorities (central and local) as well as with any other regulations, rules and guidelines which are related in any way to the concept documentationto be preparedand the Consultant will be fully responsible for compliance with their provisions during the performance of this assignment.

The Consultant will respect any copyright and patent right, and will be fully responsible for the fulfilment of all legal requirements relating to any trademarks, names or other protected rights to any design, equipment, computer software and materials or devices used for the preparation of concept documentation or connected with its preparation. Any losses, legal costs, charges and expenditures arising from any failure to meet this requirement or connected with the infringement of any patent rights by the Consultant will be paid by the Consultant.

Photocopies of any obtained requirements, approvals and opinions should be promptly submitted to the Employer, within time periods enabling the appeal procedure to be initiated. Documentation should be prepared in accordance with the requirements of Polish and EU law as well as in accordance with the World Bank’s guidelines and policies.

# Preparation of documentation

## Hydrological/hydraulic models

To model flows with a probability of 0.2%, 1%, and 10% in the Vistula River and other rivers, the Consultant will use the hydrodynamic models developed under the projects associated with the preparation of the updated flood hazard maps (uFHMs) and flood risk maps (uFRMs) as well as the updated Flood Risk Management Plans (uFRMPs). When developing models for the areas that are not included in the uFRMPs, a uniform format should be maintained with the models already developed for the uFRMPs. As far as the identified Vistula section is concerned, the Consultant will also carry out sediment transport modeling using 1D models (a section not shorter than 100 km) and 2D models (a section not shorter than 15 km) in order to compare results obtained by these models. This will be designed to investigate the impact of sediment accumulation on flood risk in the Vistula section in question.

All the above models should be used to assess the impact of different concepts of proposed mitigation and flood management measures. These models are necessary to assess the proposed solutions and measures as well as other projects to be implemented in the Upper Vistula catchment area. These models will be updated during the implementation of the Program by contractors for design documentation that will be prepared for the recommended investments and they will be used to verify any design solutions and other flood management scenarios depending on the needs. The models will be submitted to the Employer in a format enabling their subsequent edition, making changes in them, and generation of flood simulations.

Moreover, the Consultant will develop hydraulic models for phenomena related to the impact of the urbanization process on water resources in the context of current and future changes in their use. Such analysis should cover urbanized areas in Kielce, Nowy Sącz, and Rzeszów in terms of their exposure to urban floods and the coincidence of discharges from stormwater drainage systems and river floods as well as hydraulic modeling should be carried out for selected pilot catchments in the above-mentioned cities. The Consultant will propose and model solutions designed to reduce the harmfulness and frequency of local flooding and urban floods. This analysis will be performed in cooperation with the respective City Offices and the local agencies operating stormwater drainage systems in the above-mentioned cities.

## Technical concepts

The Consultant will carry out modeling of the high-water channel of the Vistula River and its key tributaries for flows with a probability of 0.2%, 1%, and 10% according to the methodology adopted for the models developed as part of the preparation of the uFHMs and uFRMs for the following scenarios:

* Scenario 1 – existing situation;
* Scenario 2 – which includes the activities contained in Polish Waters’ Investment Plan for 2022 – 2025;
* Scenario 3 – which includes all activities contained in the uFRMPs for the Vistula River and its tributaries downstream to the Zawichost gauging station.

For Scenarios 1 and 2, the Contractor will prepare at least 2 alternative options and will select, in agreement with the Employer, the recommended option for either of these Scenarios. The recommended option should meet the Program’s objectives. The proposed options should also include measures recommended by the Consultant – structural measures (among others, the construction of polders, improvements to flood embankments, expansion of the diked area) and non-structural measures (among others, the level of tree vegetation in the diked area). At the same time, the relevant entities should give a preliminary opinion on the options included in the Program as regards the feasibility of their implementation, while the option to be included in the further stage of preparation of design documentation should be approved by the Employer.

## Preparation of formal and legal documentation

On behalf of the Employer and based on the authorization granted by the Employer, the Consultant will:

* obtain all required opinions and approvals;
* submit relevant applications and take all necessary measures to obtain relevant permits;
* also be obliged to actively participate in the process of obtaining such permits by providing clarifications and making any required changes and additions to any design documentation.

## Preparation of surveying and legal documentation

The Consultant will define and conduct the analyses in the context of any permanent land acquisition or temporary land use expected by the Consultant. The Consultant will determine estimated quantitative data concerning the number of plots to acquire and their area.

## Preparation of geological, geotechnical, engineering, and hydrological documentation

The necessary quantitative scope of investigations and studies should be determined by the Consultant, with the reservation that it must be approved by the Employer, but such approval does not release the Consultant from its responsibility for the quality and usefulness of any document in achieving the objective for which it is to be used.

## Computer software

Computer software used to prepare the concept documentation must meet the requirements as set out in the Contract and the requirements relating to any individual element of such concept documentation, as described in the individual sections of these Terms of Reference. The scope of the license to use of any computer program must be consistent with the scope and manner of using such software planned by the Consultant for the purpose of preparation of the concept documentation. Any computer hardware and data must be protected against access of any unauthorized personnel by means of an integrated user authentication system and anti-virus software, in accordance with the Consultant's Information Security Policy. If there is no such policy in place, the Consultant will prepare an information security policy and submit it to the Employer for approval.

## Equipment and transport during the performance of investigations and measurements and the preparation of design documentation

During the performance of any work associated with this assignment, the Consultant is obliged to use only equipment and means of transport that will not have an adverse impact on the condition of any facilities and structures within the area where such investigations and measurements will be carried out as well as on the quality of design documentation being prepared. The Consultant will submit a declaration to the Employer or copies of the documents confirming the approval of such equipment for use, if required by legal provisions or upon the Employer's request.

## Format of concept documentation

Apart from the conventional (printed) version of documentation (in five copies), the Consultant should also submit the following documents in electronic version (2 copies for the Employer):

* The entire concept documentation in PDF format (i.e. scans of the entire paper version of the documentation with the authors' signatures, including scans of signed drawings), with the exclusion of any pages protected under the Personal Data Protection Act of May 10, 2018, as amended;
* Conceptual solutions, i.e. basic projections, cross sections, longitudinal profiles and situations enabling viewing and editing in CAD-based software, i.e. in DWG or DGN format;
* The vector layer with the location of the river system, the catchment boundaries, verified river chainage, the location of cross sections of the main riverbed extended to the flood terraces, the location of embankments and embankment infrastructure, reservoirs, hydraulic and bridge structures, water gauge profiles, and river training structures;
* The vector layer enabling viewing and editing in GIS-based software, i.e. in SHP format, and maps printed at a scale enabling obtaining appropriate quality and legibility of the documentation, with the location of investment activities (storage reservoirs, embankments and associated infrastructure, hydraulic and bridge structures), indicating the main structural elements;
* Data from surveying measurements:
* cross sections of riverbeds, valleys, hydraulic and bridge structures in the form of PDF files and in a version editable in the CAD environment;
* site plans of cross sections in the form of PDF files and in a version editable in the CAD environment, with numbers of spot heights and the water flow direction;
* for each section, a tabulated summary, including codes of land cover forms in a TXT file;
* photographic documentation of the location of any surveying cross section.

Note: In connection with the Regulation of the Council of Ministers of December 19, 2019 amending the Regulation on the National Spatial Reference System, on December 23, 2023 the new altitude system PL-EVRF2007-NH (Amsterdam) is to be finally implemented and therefore surveying documentation should be prepared in the flat rectangular coordinate system (PUWG-2000, PUWG 1992), geodetic coordinates in the EUREF-89 system, and the Kronstadt and Amsterdam vertical datum should be used.

* Hydraulic models developed using the DHI MIKE platform (version 2012 or older) should be submitted in electronic form; the outcomes of work carried out during the preparation of the Program, including any calibrated and verified hydraulic models together with a set of input and output data files in formats enabling their retrieval, edition and saving in MIKE software. Model calibration reports, including the obtained calibration results, should also be attached;
* Hydraulic models of urban floods, the coincidence of discharges from stormwater drainage systems with river floods, and an integrated hydraulic model for a pilot catchment, developed using the DHI MIKE platform or software with equivalent functionalities (as regards modeling) and geoinformatic ArcMap tools for visual spatial data processing. Reports on analyses performed, together with obtained results and spatial layers in SHP format, should be attached, including the location of areas prone to urban floods.
* An updated digital terrain model (DTM), including the generated flood extent in the form of a digital water surface model (DWSM) for individual probable flows according to the considered options, with the possibility of viewing and editing them in GIS-based software, i.e. in SHP format;
* The boundaries of the flood extent with a set probability of exceedance, in SHP format with the possibility of viewing and editing them in GIS-based software, also saved in the layer grouping the combined flood extent with the set probability, for all the watercourses included in the study;
* A preliminary estimated bill of quantities and cost estimates of works in MS WORD and MS EXCEL editable format;
* All text and tabulated documents in WORD and EXCEL editable format;
* Photographic documentation from the survey of the sites of planned investments in JPG or PNG format;
* If any documentation is provided in formats other than those specified above, the Consultant will provide to the Employer software licenses enabling such submitted formats to be edited.

All spatial layers being the results of analyses performed should be saved in shapefile (SHP) format and provided to the Employer in the form of a spatial database supported by ArcMap 10.2 software. Based on the final complete spatial database of measures, a spatial layer will be created which contains the geometries of such measures, including the assigned limited (basic) set of attributes (among others, measure identifier, measure name, costs, implementation timeline, assignment to a watercourse/catchment/water region/basin). Layer attributes should be presented directly, without using relationships. Based on this layer, a layer will created in shapefile (SHP) format which will contain the same scope of information with necessary modifications arising from the specificity of SHP format (e.g. limitation of field names to 10 signs, descriptions in text fields shortened to 255 signs).

The structure of the table should provide for attributes that will allow entering results of analyses leading to the selection of the optimal option, which will be performed during the next stage of preparation of the documentation.

The structure of the database and spatial layers should be consistent with the databases and layers prepared under the project involving the preparation of the uFRMPs.

## Protection and archiving of concept documentation and source materials

The Consultant will be responsible for protection of the concept documentation and any source materials used and received during the performance of this assignment. The Consultant will keep the prepared documentation and any source materials until they are submitted to the Employer.

During the carrying out of their activities, the Consultant, the Engineer-Consultant and the Employer will create documents associated with the performance of this assignment and they will constitute documentation of the process of performance the Consultant’s activities and documentation of any inspections carried out.

Documents related to this assignment include the following:

1. Reports;
2. Retention activities program as an element of flood risk management in the Upper Western Vistula and Upper Eastern Vistula water region between Kraków and Zawichost;
3. Memoranda and minutes from meetings relating to the Program to be prepared;
4. Correspondence between the Employer’s and the Consultant’s representatives;
5. The Consultant's correspondence with any third parties;
6. Any assessments, opinions, approvals, permits, verification certificates, audit reports, and inspection reports, etc., including their analysis made by the Consultant, which are obtained for the concept documentation;
7. Memoranda from meetings with stakeholders and third parties, among others as part of the consultation of the Program and the EIA forecast.
8. Complaints and correspondence/documentation concerning complaints received by the Consultant.

## Purchase of software and training

The Consultant will provide to the Employer the following software:

* MIKE 21c module (two license keys);
* MIKE 21FM module (two license keys);
* MIKE Urban (two license keys).

The Consultant will organize for the Employer training (theoretical training with a practical part) in the following area:

* 1- and 2-dimensional sediment transport modeling on the DHI MIKE platform (at least 5-day training for 8 people);
* Modeling of a stormwater drainage system and a combined sewer system (at least 5-day training for 8 people).

The specific scope, date and venue of such training will be agreed with the Employer. Such training can be organized at the Contractor’s office or at the office of RZGW Kraków or RZGW Rzeszów, but the Consultant is obliged to provide computer equipment, including software necessary to conduct training (1 computer per participant). Training will be conducted by a trainer that has at least 4 years of professional experience in the area of modeling and training. The date of training will be agreed on a working basis between the Employer and the Consultant. Trainers will remain at the disposal of training participants throughout the entire training.

## Schedules, reports, acceptance certificates

The general plan and the implementation schedule for this assignment, which must be submitted by the Consultant in accordance with the instruction for preparing proposals related to this contract, must be adjusted to the schedule for carrying out the tasks to be performed by the Consultant. Such a general plan and work schedule will form the basis for the Consultant's detailed schedule which will be prepared according to the arrangements specified below. The schedule referred to in these TOR must be prepared in electronic format in MS Project or equivalent software.

## Preparation of a detailed schedule

Within 30 calendar days from the signing of the contract, the Consultant will prepare a detailed schedule for all activities associated with the performance of the services and will submit it to the Employer for approval. The schedule prepared by the Consultant will include all related activities, including any required deadlines for providing data, deadlines for submitting various documents, and time periods allocated for their review. Such a schedule will include at least the following data with respect to all activities provided for in the schedule:

* schematic diagram (prepared using a computer);
* tables specifying:
  + earliest dates of commencement and completion;
  + latest dates of commencement and completion;
  + free periods and the total number of periods;
  + information on any planned breaks, summer holidays and other periods during which work will not be carried out;
  + a procedure to be followed during successive COVID-19 pandemic waves;
  + the critical path.

The Client is entitled to submit comments to the schedule and the Consultant should incorporate such comments within 7 calendar days. Following the Employer’s approval of the schedule, it will become the basis for monitoring the performance of the Consultant’s activities, and the Consultant will not change or modify it without the Employer's prior consent. Failure to agree the schedule does not relieve the Consultant from the performance of the Assignment in a timely manner and without undue delay.

In the case of any deviations from the adopted schedule, the Consultant should submit an explanation indicating such deviations, including a justification and information on the tasks being in the critical path, together with a description of preventive measures in the case of such deviations and the indication of persons responsible for the implementation of remedial and preventive measures designed to eliminate the delays in the performance of this Assignment.

If, during its work on the Program, the Consultant concludes that the assumed objectives will probably not be achieved, the Consultant will prepare alternative schedules that will allow the overall objective to be achieved within the originally planned time for completion of this project, including recommendations. Such schedules will be submitted to the Employer for approval.

## Acceptance certificates

Together with the Reports and Deliverables referred to in Section II.D of these Terms of Reference, the Consultant will submit a handover certificate, including a declaration concerning the Consultant’s internal review of the documents and the uniformity of the Polish and English language versions. The making of this statement should be preceded by the Consultant’s thorough review of such documents (based on a checklist prepared by the Consultant). The checklist should be appended to the statement.

Following the Client’s evaluation of any Report/Deliverable submitted by the Consultant, the Parties will sign a Report/Deliverable acceptance certificate or the Client will submit its objections to the Report/Deliverable. The date of completion of any Deliverable is the date of signing of a relevant acceptance certificate.

The Consultant may issue an invoice for any Report/Deliverable referred to in in Section II.D of these Terms of Reference after the Parties have signed the acceptance certificate.

# Conducting information and promotion activities

## Preparation of a schedule for information and promotion activities and an educational campaign

## The Consultant will prepare a schedule for information and promotion activities and an educational campaign (SEP elements) within 30 days from the signing of the contract and submit it to the Employer for approval. Organization of an information and promotion campaign and an educational campaign

In connection with the Employer’s planned implementation of the Program, it is necessary that the Consultant prepares and conducts an information and promotion campaign understood as:

1. Reliable presentation of the process of preparation of the Program for implementation.
2. Public disclosure (in agreement with the Employer) of information on successive steps and activities with regard to administrative permits to be obtained, documents to be prepared, etc.
3. Providing information (after agreement with the Employer) to representatives of local communities, local governments, the media, and non-governmental organizations and conducting public consultations through which the Consultant will obtain feedback from households and other interested entities.
4. Building awareness about the Investment, in particular among target groups (including residents of areas that are necessary to implement the Program and the local governments) – a specific objective of such a campaign is to increase awareness among selected target groups, to engage the respective local community, to build an effective message concerning planned activities and a positive climate for the Program, to enhance cooperation between the Employer and stakeholders, and also to remain open to the entire region – in order to reduce the information gap.
5. Education targeted at the general public, including children and young people. The campaign is aimed at increasing the population’s awareness of implemented and planned flood prevention activities. The implementation of this project is designed to disseminate knowledge about flood risk, increase the general public’s awareness of flood protection activities, and contribute to making location decisions in spatial planning in a rational way.

All services provided should be performed in compliance with Polish law and the World Bank standards, with due diligence characteristic of professional entities, taking into account the professional character of the Consultant’s activities.

### Assumptions of the information and promotion campaign and the educational campaign

The information and promotion campaign is designed to communicate the Program’s assumptions and essential objectives in a comprehensive, multi-channel, consistent, and reliable manner. The implementation of the campaign is to show in an interesting way that attracts attention and is tailored to the needs of stakeholder groups what effects will be brought by the implementation of the Program and in what way Polish Waters will secure and protect residents of the project area. The Employer pays special attention to highlighting social and environmental aspects.

The educational campaign is to provide in a consistent and reliable manner knowledge about flood risk, increase public awareness about flood protection activities, and contribute to making rational location decisions in spatial planning in a rational way. The campaigns must be consistent in terms of image for all forms of communication and activities used during the campaign and must have a uniform key visual that is unambiguously associated by recipients with the topic of the campaign.

The Consultant will organize the information and promotion campaign in the media, including showing an information and promotion spot in regional TV channels (e.g. TVP Kraków, TVP Kielce, and TVP Rzeszów), radio stations, the Internet, and social media. The Contractor will propose an exact campaign schedule prepared based on an analysis of target groups and the coverage of individual broadcasters. The Contractor will ensure at least 10 broadcasts of the spot created according to Section IV.2 in TV channels with regional coverage, following agreement and approval of the broadcast schedule by the Employer.

The campaign message should be made uniform in terms of:

* the campaign slogan – common for all communication means used in the campaign;
* the leading element that will be consistent for all channels and tools used in the campaign; for example, this can be a graphic element;
* graphics;
* information communicated.

The campaign should be conducted taking into account the above-mentioned elements and should demonstrate to the population and interested entities in a reliable manner that any activities of the Employer are carried out in a transparent way and with respect for their rights and dignity.

During the preparation of the campaign, the basic communication principles should be followed, i.e. trustworthiness of information, reliability, objectivism, rationality, accessibility, easy identification, availability, and also the communication standards of the State Water Holding Polish Waters and the Odra-Vistula Flood Management Project (OVFMP).

### Services

The Consultant should also envisage the provision of the following services at times that will be agreed with the Employer:

* creation and printing of posters;
* preparation and printing of information brochures;
* graphic design, creation, and delivery of rollups – about 100 cm x 200 cm;
* graphic design, creation, and delivery of a fabric conference wall consistent with the campaign layout, with dimensions of about 300 cm x 230 cm;
* creation of infographics relating to the project and flood protection in order to post it on the Employer’s website and in the social media;
* creation of content to be posted in the Employer’s social media (Facebook, LindedIn);
* creation of the Program’s information and promotion spot, not longer than 6 min.

Distribution of the above-mentioned materials should be documented by handover/takeover certificates, while draft materials must be approved by the Employer before distribution of such materials is commissioned.

* Organization of public consultations; as far as the performance of this part of its services is concerned, the Consultant will be responsible for:
  1. comprehensive organization (including among others renting a room, providing overall support, catering, preparation of presentations, and provision of equipment) and conducting conferences, meetings, consultations, etc., in stationary form at times that will be agreed with the Employer;
  2. comprehensive organization (including among others preparation of presentations and provision of equipment and appropriate software) and conducting conferences, meetings, consultations, etc., in online form at times that will be agreed with the Employer;
  3. all activities in the above-mentioned area should be carried out according to the World Bank’s Visual Identity Guidelines for Contractors and Implementing Partners;
  4. ensuring that all interested entities are informed and invited to participate in public consultations.

## Organization of conferences relating to the implementation of the Program

The Consultant will be responsible for organizing and conducting 3 one-day conferences in accordance with the WB’s requirements. The purpose of these conferences will be to inform representatives of local government units (LGUs) about details of the Program’s implementation. The Consultant will also conduct site visits to the municipalities located both in the Program’s area and in the problem areas in order to discuss these municipalities’ needs associated with flood risk reduction. After consultations with all the municipalities, a set of proposals received from the LGUs will be prepared, including the rationale for their implementation, which should be supported by the Consultant’s expertise. A plan to conduct such conferences will be prepared in agreement with the Employer.

The Consultant will provide an appropriately equipped room that will enable conferences for 200 people to be organized. In the conference room, the Consultant will provide a meeting moderator, chairs arranged as in a theater, a pulpit, air conditioning, audio recording of the entire conference, a sound system, a laser pointer, a multimedia projector, a laptop, a screen with dimensions of min. 2x2 m, including technical support for installed equipment so that the conference can proceed smoothly (including installation and removal of equipment), at least 2 wireless microphones, and at least 2 small microphones for the presidium table, the capability to connect conference participants to a sound source, sanitary facilities, a cloakroom, and coffee and refreshments for all conference participants.

The Consultant will send invitations to the conference in accordance with a list of participants earlier approved by the Employer, will conduct registration and confirm participation of conference participants. The Consultant will also propose a package of materials for conference participants, which it will prepare and deliver. The final part of the conference will include a questions and answers session and a discussion.

NOTE: The Consultant will be obliged to monitor the Health Minister’s guidelines concerning the epidemic situation in Poland and related restrictions, if any, which could affect the organization of the conference or public consultation. Given the above, the Employer envisages organization of online meetings.

## Organization of public consultations as part of the SEIA

Public consultations on draft environmental impact predictions for the Program will be conducted over a 21-day period, in accordance with the provisions of Art. 39(1)(4) of EIA Law. In agreement with the Employer, the Contractor will prepare notices, in accordance with Art. 39 of EIA Law, containing information about:

1. the possibility of familiarizing oneself with necessary documentation and the place where it is made available for inspection;
2. the possibility of submitting comments and suggestions;
3. how and where comments and suggestions can be submitted, at the same time indicating the time limit for their submission;
4. the authority competent to consider comments and suggestions;

in order to provide public disclosure through the Employer’s website and the project’s website; information will also be provided in a customary manner – at the Employer’s office. An interactive form for submitting comments will be made available at the Employer’s website and the project’s website. Comment submission forms will also be made available at the Employer’s office.

One consultation meeting will be conducted. The Consultant will prepare such a consultation meeting technically and organizationally. Consultation meetings will be conducted by a moderator whose task will be to efficiently conduct the meeting and make sure that the risk is minimized that the discussion is dominated by one person or a group of people. The Consultant will provide a moderator for each meeting. The Consultant will collect comments and suggestions submitted/presented during the meeting and present a proposal how to consider them.

The final shape, scope, venue, and date of the consultation meeting will be agreed with the Employer during the implementation of the project, but not later than 30 days before the planned commencement of the consultation.

## Creation of the project’s website

Within 60 days from the signing of the contract, the Consultant will launch the Program’s website. As part of the provision of content for this website, the following tasks are envisaged:

1. ongoing provision of content in Polish and English (also on an emergency basis);
2. preparation of the content of information materials based on materials provided by the Employer;
3. preparation of graphics and text for information materials based on materials provided by the Employer;
4. English translation of information materials for the website, as indicated by the Employer;
5. proofreading and style correction of any texts before they are ultimately posted on the web.

The website service must be prepared using the CMS open system. Templates prepared by the widzialni.org Foundation or with an identical functionality should be used for the website layout and the service must be fully compliant with the standard WCAG 2.0. During the duration of the project, the Consultant will manage the website, maintaining the highest standards, and will regularly update the CMS system immediately after patches have been published by the producer.

Software must support posting of the following, among others:

* news concerning the project and the Employer;
* libraries of project related documents (documents in PDF, DOC, DOCX, XLS, XLSX, PPT, and PPTX format);
* libraries/galleries of graphic documents;
* documents relating to the Program with the possibility of submitting consultation comments on documents posted and posting answers to submitted comments;
* posting banners;
* posting links to the Employer’s other websites;
* posting questionnaires in electronic form necessary to submit comments on the Program, including the possibility of filling and sending such questionnaires online (active forms);
* posting summaries of comments submitted during the consultation, including answers given. The basic summary should only contain comments submitted and enable an answer to a comment to be added.

Software should support reporting on the following:

* recording of website visits (including a unique visitor counter);
* downloaded files;
* recording of comments submitted in online questionnaires and showing them in a single file.

The website service should have the Employer’s logotypes and the logotype of the relevant Program financed by the World Bank, in accordance with the documents defining obligations of beneficiaries of such a program; it should also have Polish Waters’ address and contact data in the footer.

The developed system must support advanced edition of the content and page layout, including among others the following:

* edition of graphic content;
* sharing file links;
* file manager that enables remote file management on the server from the administration panel level;
* layout adjustment;
* adding and removing banners;
* making temporary changes in colors;
* making changes in the website logotype and name – in case of planned amendments in the law governing the Employer’s activities;
* user authorization that allows the content to be made available to selected users;
* an administration panel to manage the service (with the capability to assign to individual users access rights to edit, post and manage);
* tracking website statistics using Google Analytics or another tool with equivalent functionality.

The Consultant will prepare documentation relating to the website operation, including advanced edition of the service, and will also conduct training on CMS operation for at least 4 persons indicated by the Employer. Training must include all aspects related to website edition. For this training, the Consultant will prepare training materials containing information being the object of the training. Documentation relating to the operation of the website and training materials should be prepared in Polish. The Consultant will conduct training on management of the service for the Employer’s designated specialists. Such training must include all aspects of service management – including a template editor, a structure editor, and content management (the structure of files and service libraries).

The website service must be adjusted to parameters of the Employer’s servers in accordance with provided specifications and should enable trouble free updating of the server’s software and the website service as security patches are issued. During the duration of the project, a helpdesk should be available, which will be able to restore the service to the pre-failure level within 24 hours, and if it is not possible, it will work out and implement equivalent substitute solutions within 72 h, whereas during the failure the website will display an appropriate message. Failures will be reported to the email address proposed by the Consultant.

## Organization of foreign study visits

The Consultant will organize at its own cost at least two foreign study visits,. These visits will be aimed at familiarizing the Employer’s representatives with implemented measures related to “green” polder retention. The Employer expects participation of at least 30 people. Such visits should be organized within the European Union and should last not less than 5 days. Air transport should be used. Participants should be accommodated in a hotel with at least 3\*\*\* standard. The Consultant will provide to participants transport and food during the visit.

## Organization of a domestic visit

The Consultant will organize at its own cost at least one domestic trip aimed at familiarizing the LGUs’ and the Employer’s representatives with implemented flood protection measures. The Employer expects participation of at least 60 people. The visit should last not less than two days (one night accommodation). Participants should be accommodated in a hotel with at least 3\*\*\* standard. The Consultant will provide to participants transport and food during the visit.

# Personnel

## Team structure and management

The Consultant’s Project Manager will be responsible for management and coordination of the Team's activities as well as for supervision of the performance of this assignment. The Project Manager will be responsible to the Employer for all issues associated with coordination of the performance of this assignment. The Project Manager will supervise the team of engineers and experts (the structure of this Team should be proposed by the Consultant in its proposal).

## Key personnel

To fulfill its obligations, the Consultant must provide highly-qualified personnel. The Consultant should specify its own needs with respect to work organization applied and employ all necessary personnel for an effective and efficient performance of this assignment.

The Consultant is required to determine time inputs of its personnel in man-months. The Consultant should provide to its team of experts any necessary support and technical assistance of other specialists (short-term experts) that can be necessary to properly perform this contract. If necessary, apart from the personnel specified above, the Consultant should additionally provide appropriate English translator services required for an effective performance of this contract.

Before commencing the work (not later than 30 calendar days after the signing of the contract), for each team the Consultant will prepare and submit to the Employer's Project Manager for approval an organizational chart of the teams of experts as well as the expected work program for the persons that will perform this contract, which should be prepared on the basis of data contained in this section. Such a document should be signed by the Consultant's Project Manager.

The list of the key personnel presented below may not be exhaustive and may be supplemented by the Consultant.

The Consultant should appoint the following persons for the performance of this assignment:

**Expert 1 – Project Manager (1 person)**

General qualifications:

Higher education in water management, environmental engineering or environmental protection. Knowledge of project management methodology.

Adequacy for the assignment:

Over the last 15 years, at least 10 years of professional experience in scientific and research work or in conducting studies related to environmental protection, water management or flood protection as well as in project management and management of a team of specialists during the implementation of at least 4 projects related to water management or flood protection with a gross contract value of at least PLN 500,000 each, including a minimum of 2 projects that were financed by the European Union or another International Financial Institution.

**Expert 2 – Hydraulic Engineer (1 person)**

General qualifications:

Higher education in environmental engineering, water management, hydrology or hydraulic engineering. A license to design hydraulic structures with no restrictions (or an equivalent license issued under previously applicable law) and at least 10 years of work experience in the position of a designer.

Adequacy for the assignment:

Experience in preparation of at least 3 concept documents for hydraulic structures, flood protection structures (embankments, earthen dams), river training structures or flood protection studies. Experience in similar projects financed by the European Union or International Financial Institutions will be an additional asset.

**Expert 3 – Hydrologist (1 person)**

General qualifications:

Higher education in hydrology, water management, environmental engineering, hydraulic engineering or environmental protection. At least 8 years of work experience related to hydrology, water management or environmental engineering. Experience in performing calculations for hydrological characteristics and maximum flows as well as in conducting hydrological analyses and surveys, and also experience in hydrological modeling. Experience in conducting field investigations and in determining hydrological characteristics for both controlled and uncontrolled catchments.

Adequacy for the assignment:

Experience in the preparation of at least 2 assignments associated with the performance of scientific and research work or studies related to flood protection or water management.

**Expert 4 – Modeling Expert (2 persons)**:

General qualifications:

Higher education in exact sciences, hydrology, water management, environmental engineering, hydraulic engineering or environmental protection.

At least 5 years of work experience in the area of 1D and 2D hydraulic modeling and hybrid models as well as at least 2 years of work experience in sediment transport modeling. Experience in work in the MIKE environment will be an additional asset.

Adequacy for the assignment:

Experience in the performance of at least 3 projects corresponding to the type of the service which is the object of this contract and which related to the problems of hydraulic modeling (in 1D and 2D standards as well as using hybrid models) of natural watercourses and channels.

**Expert 5 - Environmental Management Expert** **(1 person):**

General qualifications:

Higher education in life sciences, environmental protection, environmental engineering or geography, with specialization in life sciences. At least 8 years of work experience in environmental management and preparation of environmental management plans.

Adequacy for the assignment:

Experience in environmental management support under at least 3 regional scale projects co-financed from EU funds or by International Financial Institutions.

**Expert 6 – Bridge Construction Engineer** **(1 person):**

General qualifications:

Higher technical education and a license to design that meets the requirements of the Building Law Act in the field of bridge construction (or an equivalent license issued under previously applicable law).

Adequacy for the assignment:

Experience in implementation of similar regional scale projects/contracts.

**Expert 7 – GIS Expert (1 person):**

General qualifications:

Higher education in environmental engineering, environmental protection, water management, surveying and cartography, geography, geoinformation or geoinformatics. At least 5 years of work experience in geodata processing, spatial interpretation of hydrodynamic modeling results as well as in processing of metadatabases and cartographic images.

Adequacy for the assignment:

Experience in implementation of at least 3 projects involving design, creation and edition of spatial databases, meta-data, in performing spatial analyses, preparing and editing cartographic maps as well as in preparing data for the purpose of hydraulic modeling and spatial analysis of hydraulic modeling results.

**Expert 8 – Social Risk Management and Land Acquisition Experts (2 persons):**

General qualifications:

Higher education in law, social sciences or surveying and cartography. At least 5 years of work experience.

Adequacy for the assignment:

Experience in providing legal support, in particular in handling matters associated with land availability and acquisition for construction purposes, under at least one project co-financed from EU funds or by International Financial Institutions as well as knowledge of international good practices in social risk management, community engagement ( Social Risk Management expert) and land acquisition and resettlement (Land Acquisition expert).

**Expert 9 – Geotechnical Engineer** **(1 person):**

General qualifications:

Higher education in hydraulic engineering or civil engineering, with specialization in geotechnical engineering. A license to design with no restrictions in the field of structural and construction engineering (preferably, the licenses held should also include geotechnical specialization) or an equivalent license issued under previously applicable law, and at least 5 years of work experience in the position of a designer.

Adequacy for the assignment:

Experience in developing at least 3 concept documents associated with the preparation of geotechnical documentation for design and construction purposes related to the construction of earthen structures (flood embankments, earthen dams) and concrete hydraulic structures.

**Expert 10 – Finance and Economic Expert (1 person):**

General qualifications:

Higher economic education. At least 5 years of work experience, including 3 years in financial support of public sector entities.

Adequacy for the assignment:

Experience in preparation of financial and economic analyses under at least 3 projects co-financed from EU funds or by International Financial Institutions and at least one project financed from funds of the International Bank for Reconstruction and Development (World Bank). Knowledge of financial issues relating to public sector entities will be an additional asset.

**Expert 11 – Mediation and Crisis Management Expert (1 person):**

General qualifications:

Higher education in law, psychology, sociology, or management. At least 5 years of work experience, including 3 years in mediation.

Adequacy for the assignment:

A completed mediator course, compliant with the mediator training standards adopted on October 29, 2007 by the Social Council for Alternative Methods of Solving Conflicts and Disputes under the Minister of Justice. Practice and experience in mediation.

**Expert 12 – Public Consultation Expert (1 person):**

General qualifications:

Higher education. At least 5 years of work experience in cooperation with public sector entities in carrying out scientific and research work or in conducting studies related to public consultations in the area of environmental protection or water management.

Adequacy for the assignment:

Participation in at least 3 assignments/projects associated with cooperation with public sector entities in carrying out scientific and research work or in conducting studies related to public consultations in the area of environmental protection or water management.

**Expert 13 – Spatial Planning and Development Expert (1 person):**

General qualifications:

Higher education (preferably in architecture or land management). At least 3 years of work experience in preparation of planning documents. Knowledge of law in the area of spatial planning, properties, environmental protection, administrative procedures, and geodesy is required. Experience in work with computerized spatial information processing tools is required. The above-mentioned requirements should be confirmed by a list of assignments in which the candidate participated. Experience in participation of projects financed by the European Union or International Financial Institutions will be an additional asset.

**Expert 14 – Landscape Architecture Expert**

General qualifications:

Higher education in architecture, landscape architecture, or land management. At least 3 years of work experience in preparation of local land use plans and giving opinion on applications and documentation regarding changes in land use. Experience in preparation of zoning permits and location permits for public purpose projects.

The above-mentioned Personnel does not exhaust the requirements needed for reliable fulfillment of the Consultants’ obligations and should be treated as the Employer’s minimum requirements.

However, the Employer does not limit the proposed team only to these positions and if the Consultant deems that it is necessary or appropriate to propose any additional experts, it may do so without the need to include them in this list of Personnel.

The Consultant should select and hire other experts and indicate whether they are to be regarded as long-term/short-term, international/local.

The Consultant should pay attention to the need to ensure active participation of local professional skills where available, and a suitable mix of international and local staff in its Team. All experts must be independent and free from conflicts of interest in the responsibilities accorded to them.

## Non-key specialists

The group of Support Experts will include personnel with large experience who will provide consulting and support services to the supervising personnel; such experts may work in the field away from their home office, if necessary. In particular:

**Non-key Expert 1 – Legal Expert** **(1 person):**

Qualifications: Higher legal education. At least 5 years of work experience, including 3 years in support of public sector entities.

Experience in providing legal support under at least one flood protection project co-financed from EU funds or by International Financial Institutions.

**Non-key Expert 2 – Expert for Investment Cost Estimates and Engineering Structures (1 person):**

Qualifications:

Higher education (preferably in civil engineering or architecture). At least 3 years of work experience in preparing cost estimates in the field of hydraulic or civil engineering under infrastructure construction projects. The candidate is required to have experience in implementation of projects co-financed from EU funds or by International Financial Institutions. The license of a certified cost estimator will be an additional asset.

**Non-key Expert 3 – Creative Graphic Designer** **(1 person):**

Qualifications:

Higher education in graphic design. Knowledge of software used to design raster and vector graphics.

**The other Support Personnel should meet the following minimum requirements:**

General qualifications:

* Job related higher education.
* At least 3 years of work experience.

Adequacy for the assignment:

* Experience in implementation of a project co-financed from EU funds or by International Financial Institutions will be an additional asset.

# Logistics, time, and quality control during the implementation of the Program

## Logistics

This assignment will be carried out within the Upper Vistula catchment area and in the cities where the Consultant's offices are located. The Consultant is not required to set up any additional offices in order to implement the Program that these TOR relate to.

All items supplied or paid for by the Employer for the Consultant’s use will remain the Employer's property and, if possible, will be labelled as such. If the Services are terminated or interrupted, the Consultant will provide to the Employer a list of items that have not been used for the performance of the Services and will return them according to the Employer's instructions.

## Contract term and important dates

1. The Consultant will commence the performance of the Contract the next day after its signing.
2. Consulting services will be required throughout the entire period of implementation of the Program, i.e. 14 months.
3. After familiarization with the documentation held by the Employer and on the basis of its knowledge and experience, the Consultant will prepare, at the latest within 30 calendar days from the date of contract execution, a schedule of the Consultant's work/activities, as referred to in Section IV.I, for the Employer's approval. Upon its approval, this schedule will form the basis for monitoring the Consultant's work.

## Implementation arrangements

1. The Consultant will closely cooperate with the Employer, i.e. PGW WP RZGW Kraków.
2. On the part of RZGW Kraków, its Director will be the Client’s representative who will appoint a person to coordinate activities with the Consultant. Such a person will assist the Consultant in solving various administrative problems that may arise during the provision of the services.
3. The Consultant will be responsible for all aspects of the provision of the services, as defined in the preceding parts of these TOR. The Employer will be responsible for providing any existing data and information held by it, including all reports prepared to date which relate to the project area which are held by the Employer.

## Monitoring and evaluation

The Consultant's work will be evaluated in terms of the timeliness and diligence in the performance of its duties, and the effects of its work will be evaluated in terms of:

* meeting deadlines specified in the mutually agreed schedule of activities;
* completeness of the provision of any service and its compliance with the TOR;
* achieving the objectives set in the Contract;
* high quality of services provided;
* timeliness of submission of the Reports;
* timeliness in the performance of tasks presented in the service provision methodology prepared by the Consultant;
* availability of the Consultant (Key Personnel) at the Employer’s each request during office hours of RZGW.

The Consultant, who should have the required knowledge and experience, will also be evaluated based on measures aimed at minimizing any risk and potential hazard which, based on its knowledge, the Consultant could reasonably predict and warn the Employer against their negative consequences.

## Control of the quality of concept documentation and the Employer's supervision over the process of performance of this Assignment

The Employer will provide ongoing supervision of the compliance of the process of performing this assignment with the requirements of the Contract during meetings with the Consultant. During the period of performance of this Assignment, the following types of meetings concerning the concept documentation will be held:

1. Review of the concept documentation – a meeting with the Consultant in the Consultant's office or in the Employer's office, with the participation of the Employer and possibly other invited parties, whose main objectives will be as follows:
   1. Assessment of the current progress in conceptual work;
   2. Regular assessment of the conformity of the concept documentation with the requirements of the Contract, which will be carried out by the Employer;
   3. Discussion of current problems and solving them, if there are any.
2. Meetings of the Project Board – a meeting with the Consultant in the Consultant's office or in the Employer's office, with the participation of the Employer and possibly other invited parties, whose main objectives will be as follows:
   1. The Consultant's presentation of a report on progress in the performance of this Assignment;
   2. The Employer's presentation of conclusions from its reviews of the concept documentation;
   3. Discussion of current problems and solving them, if there are any.

Project Board meetings will be held with a frequency of at least once per month. At the request of one of the parties, Project Board meetings can be held remotely. The Consultant is obliged to provide, on a regular basis or at request, intermediate results of calculations, drawings, and conceptual studies for the purpose of ongoing control. Such materials can be provided by e-mail and on a dedicated FTP server.

1. Environmental and Social Framework (ESF)

   <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework> [↑](#footnote-ref-1)
2. <https://thedocs.worldbank.org/en/doc/909361530209278896-0290022020/original/ESFTemplateESS10SEPJune2018.docx> [↑](#footnote-ref-2)
3. <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework> [↑](#footnote-ref-3)