* United Nations Development Programme*

**REQUEST FOR PROPOSAL**

**PREPARATION OF DETAILED DESIGN OF DYKE RECONSTRUCTION ON THE RIGHT BANK OF BOJANA RIVER IN MONTENEGRO**

RFP No.: 11-20

Project: Integrated climate-resilient transboundary flood risk management in the Drin River basin in the Western Balkans

Country: Montenegro

Issued on: 9 March 2020

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# Section 1. Letter of Invitation

The United Nations Development Programme (UNDP) hereby invites you to submit a Proposal to this Request for Proposal (RFP) for the above-referenced subject.

This RFP includes the following documents and the General Terms and Conditions of Contract which is inserted in the Bid Data Sheet (BDS):

Section 1: This Letter of Invitation

Section 2: Instruction to Bidders

Section 3: Bid Data Sheet (BDS)

Section 4: Evaluation Criteria

Section 5: Terms of Reference

Section 6: Returnable Bidding Forms

* Form A: Technical Proposal Submission Form
* Form B: Bidder Information Form
* Form C: Joint Venture/Consortium/Association Information Form
* Form D: Qualification Form
* Form E: Format of Technical Proposal
* Form F: Financial Proposal Submission Form
* Form G: Financial Proposal Form
* Form H: Form of Proposal Security

If you are interested in submitting a Proposal in response to this RFP, please prepare your Proposal in accordance with the requirements and procedure as set out in this RFP and submit it by the Deadline for Submission of Proposals set out in Bid Data Sheet.

You may acknowledge receipt of this RFP by sending an email to procurement.me@undp.org, indicating whether you intend to submit a Proposal or otherwise. You may also utilize the “Accept Invitation” function in eTendering system, where applicable. This will enable you to receive amendments or updates to the RFP. Should you require further clarifications, kindly communicate with the contact person/s identified in the attached Bid Data Sheet as the focal point for queries on this RFP.

UNDP looks forward to receiving your Proposal and thank you in advance for your interest in UNDP procurement opportunities.

Issued by: Approved by:

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| Name: Mirko Bracanovic  Title: Procurement Associate  Date: March 9, 2020 | Name: Miodrag Dragisic  Title: Assistant RR  Date: March 9, 2020 |

# Section 2. Instruction to Bidders

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| GENERAL PROVISIONS | |
| Introduction | * 1. Bidders shall adhere to all the requirements of this RFP, including any amendments in writing by UNDP. This RFP is conducted in accordance with the UNDP Programme and Operations Policies and Procedures (POPP) on Contracts and Procurement which can be accessed at <https://popp.undp.org/SitePages/POPPBSUnit.aspx?TermID=254a9f96-b883-476a-8ef8-e81f93a2b38d>   2. Any Proposal submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of the Proposal by UNDP. UNDP is under no obligation to award a contract to any Bidder as a result of this RFP.   3. As part of the bid, it is desired that the Bidder registers at the United Nations Global Marketplace (UNGM) website ([www.ungm.org](http://www.ungm.org)). The Bidder may still submit a bid even if not registered with the UNGM. However, if the Bidder is selected for contract award, the Bidder must register on the UNGM prior to contract signature. |
| Fraud & Corruption,  Gifts and Hospitality | * 1. UNDP strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices, and obstruction of UNDP vendors and requires all bidders/vendors observe the highest standard of ethics during the procurement process and contract implementation. UNDP’s Anti-Fraud Policy can be found at <http://www.undp.org/content/undp/en/home/operations/accountability/audit/office_of_audit_andinvestigation.html#anti>   2. Bidders/vendors shall not offer gifts or hospitality of any kind to UNDP staff members including recreational trips to sporting or cultural events, theme parks or offers of holidays, transportation, or invitations to extravagant lunches or dinners.   3. In pursuance of this policy, UNDP (a) Shall reject a proposal if it determines that the selected bidder has engaged in any corrupt or fraudulent practices in competing for the contract in question; (b) Shall declare a vendor ineligible, either indefinitely or for a stated period of time, to be awarded a contract if at any time it determines that the vendor has engaged in any corrupt or fraudulent practices in competing for, or in executing a UNDP contract.   4. All Bidders must adhere to the UN Supplier Code of Conduct, which may be found at <http://www.un.org/depts/ptd/pdf/conduct_english.pdf> |
| Eligibility | * 1. A vendor should not be suspended, debarred, or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization. Vendors are therefore required to disclose to UNDP whether they are subject to any sanction or temporary suspension imposed by these organizations.   2. It is the Bidder’s responsibility to ensure that its employees, joint venture members, sub-contractors, service providers, suppliers and/or their employees meet the eligibility requirements as established by UNDP. |
| Conflict of Interests | * 1. Bidders must strictly avoid conflicts with other assignments or their own interests, and act without consideration for future work. Bidders found to have a conflict of interest shall be disqualified. Without limitation on the generality of the above, Bidders, and any of their affiliates, shall be considered to have a conflict of interest with one or more parties in this solicitation process, if they:   2. Are or have been associated in the past, with a firm or any of its affiliates which have been engaged by UNDP to provide services for the preparation of the design, specifications, Terms of Reference, cost analysis/estimation, and other documents to be used for the procurement of the goods and services in this selection process;   3. Were involved in the preparation and/or design of the programme/project related to the services requested under this RFP; or   4. Are found to be in conflict for any other reason, as may be established by, or at the discretion of UNDP.   5. In the event of any uncertainty in the interpretation of a potential conflict of interest, Bidders must disclose to UNDP, and seek UNDP’s confirmation on whether or not such a conflict exists.   6. Similarly, the Bidders must disclose in their proposal their knowledge of the following:   7. If the owners, part-owners, officers, directors, controlling shareholders, of the bidding entity or key personnel are family members of UNDP staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving services under this RFP; and   8. All other circumstances that could potentially lead to actual or perceived conflict of interest, collusion or unfair competition practices.   Failure to disclose such an information may result in the rejection of the proposal or proposals affected by the non-disclosure.   * 1. The eligibility of Bidders that are wholly or partly owned by the Government shall be subject to UNDP’s further evaluation and review of various factors such as being registered, operated and managed as an independent business entity, the extent of Government ownership/share, receipt of subsidies, mandate and access to information in relation to this RFP, among others. Conditions that may lead to undue advantage against other Bidders may result in the eventual rejection of the Proposal. |
| PREPARATION OF PROPOSALS | |
| General Considerations | * 1. In preparing the Proposal, the Bidder is expected to examine the RFP in detail. Material deficiencies in providing the information requested in the RFP may result in rejection of the Proposal.   2. The Bidder will not be permitted to take advantage of any errors or omissions in the RFP. Should such errors or omissions be discovered, the Bidder must notify the UNDP |
| Cost of Preparation of Proposal | * 1. The Bidder shall bear any and all costs related to the preparation and/or submission of the Proposal, regardless of whether its Proposal was selected or not. UNDP shall not be responsible or liable for those costs, regardless of the conduct or outcome of the procurement process. |
| Language | * 1. The Proposal, as well as any and all related correspondence exchanged by the Bidder and UNDP, shall be written in the language (s) specified in the BDS. |
| Documents Comprising the Proposal | * 1. The Proposal shall comprise of the following documents:   2. Documents Establishing the Eligibility and Qualifications of the Bidder;   3. Technical Proposal;   4. Financial Proposal;   5. Proposal Security, if required by BDS;   6. Any attachments and/or appendices to the Proposal. |
| Documents Establishing the Eligibility and Qualifications of the Bidder | * 1. The Bidder shall furnish documentary evidence of its status as an eligible and qualified vendor, using the Forms provided under Section 6 and providing documents required in those forms. In order to award a contract to a Bidder, its qualifications must be documented to UNDP’s satisfaction. |
| Technical Proposal Format and Content | * 1. The Bidder is required to submit a Technical Proposal using the Standard Forms and templates provided in Section 6 of the RFP.   2. The Technical Proposal shall not include any price or financial information. A Technical Proposal containing material financial information may be declared non-responsive.   3. Samples of items, when required as per Section 5, shall be provided within the time specified and unless otherwise specified by UNDP, and at no expense to UNDP   4. When applicable and required as per Section 5, the Bidder shall describe the necessary training programme available for the maintenance and operation of the services and/or equipment offered as well as the cost to the UNDP. Unless otherwise specified, such training as well as training materials shall be provided in the language of the Bid as specified in the BDS. |
| Financial Proposals | * 1. The Financial Proposal shall be prepared using the Standard Form provided in Section 6 of the RFP. It shall list all major cost components associated with the services, and the detailed breakdown of such costs.   2. Any output and activities described in the Technical Proposal but not priced in the Financial Proposal, shall be assumed to be included in the prices of other activities or items, as well as in the final total price.   3. Prices and other financial information must not be disclosed in any other place except in the financial proposal. |
| Proposal Security | * 1. A Proposal Security, if required by BDS, shall be provided in the amount and form indicated in the BDS. The Proposal Security shall be valid up to thirty (30) days after the final date of validity of the Proposal.   2. The Proposal Security shall be included along with the Technical Proposal. If Proposal Security is required by the RFP but is not found along with the Technical Proposal, the Proposal shall be rejected.   3. If the Proposal Security amount or its validity period is found to be less than what is required by UNDP, UNDP shall reject the Proposal.   4. In the event an electronic submission is allowed in the BDS, Bidders shall include a copy of the Bid Security in their proposal and the original of the Proposal Security must be sent via courier or hand delivery as per the instructions in BDS.   5. The Proposal Security may be forfeited by UNDP, and the Proposal rejected, in the event of any one or combination, of the following conditions:      1. If the Bidder withdraws itsoffer during the period of the Proposal Validity specified in the BDS, or;      2. In the event that the successful Bidder fails:      3. to sign the Contract after UNDP has issued an award; or   6. to furnish the Performance Security, insurances, or other documents that UNDP may require as a condition precedent to the effectivity of the contract that may be awarded to the Bidder. |
| Currencies | * 1. All prices shall be quoted in the currency or currencies indicated in the BDS. Where Proposals are quoted in different currencies, for the purposes of comparison of all Proposals:  1. UNDP will convert the currency quoted in the Proposal into the UNDP preferred currency, in accordance with the prevailing UN operational rate of exchange on the last day of submission of Proposals; and 2. In the event that UNDP selects a proposal for award that is quoted in a currency different from the preferred currency in the BDS, UNDP shall reserve the right to award the contract in the currency of UNDP’s preference, using the conversion method specified above. |
| Joint Venture, Consortium or Association | * 1. If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Proposal, they shall confirm in their Proposal that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by a duly notarized Agreement among the legal entities, and submitted with the Proposal; and (ii) if they are awarded the contract, the contract shall be entered into, by and between UNDP and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture.   2. After the Deadline for Submission of Proposal, the lead entity identified to represent the JV, Consortium or Association shall not be altered without the prior written consent of UNDP.   3. The lead entity and the member entities of the JV, Consortium or Association shall abide by the provisions of Clause 9 herein in respect of submitting only one proposal.   4. The description of the organization of the JV, Consortium or Association must clearly define the expected role of each of the entity in the joint venture in delivering the requirements of the RFP, both in the Proposal and the JV, Consortium or Association Agreement.  All entities that comprise the JV, Consortium or Association shall be subject to the eligibility and qualification assessment by UNDP.   5. A JV, Consortium or Association in presenting its track record and experience should clearly differentiate between:  1. Those that were undertaken together by the JV, Consortium or Association; and 2. Those that were undertaken by the individual entities of the JV, Consortium or Association.    1. Previous contracts completed by individual experts working privately but who are permanently or were temporarily associated with any of the member firms cannot be claimed as the experience of the JV, Consortium or Association or those of its members, but should only be claimed by the individual experts themselves in their presentation of their individual credentials.    2. JV, Consortium or Associations are encouraged for high value, multi-sectoral requirements when the spectrum of expertise and resources required may not be available within one firm. |
| Only One Proposal | * 1. The Bidder (including the individual members of any Joint Venture) shall submit only one Proposal, either in its own name or as part of a Joint Venture.   2. Proposals submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following:   3. they have at least one controlling partner, director or shareholder in common; or   4. any one of them receive or have received any direct or indirect subsidy from the other/s; or   5. they have the same legal representative for purposes of this RFP; or   6. they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about, or influence on the Proposal of, another Bidder regarding this RFP process;   7. they are subcontractors to each other’s Proposal, or a subcontractor to one Proposal also submits another Proposal under its name as lead Bidder; or   8. some key personnel proposed to be in the team of one Bidder participates in more than one Proposal received for this RFP process. This condition relating to the personnel, does not apply to subcontractors being included in more than one Proposal. |
| Proposal Validity Period | * 1. Proposals shall remain valid for the period specified in the BDS, commencing on the Deadline for Submission of Proposals. A Proposal valid for a shorter period may be rejected by UNDP and rendered non-responsive.   2. During the Proposal validity period, the Bidder shall maintain its original Proposal without any change, including the availability of the Key Personnel, the proposed rates and the total price. |
| Extension of Proposal Validity Period | * 1. In exceptional circumstances, prior to the expiration of the proposal validity period, UNDP may request Bidders to extend the period of validity of their Proposals. The request and the responses shall be made in writing, and shall be considered integral to the Proposal.   2. If the Bidder agrees to extend the validity of its Proposal, it shall be done without any change in the original Proposal.   3. The Bidder has the right to refuse to extend the validity of its Proposal, and in which case, such Proposal will not be further evaluated. |
| Clarification of Proposal | * 1. Bidders may request clarifications on any of the RFP documents no later than the date indicated in the BDS. Any request for clarification must be sent in writing in the manner indicated in the BDS. If inquiries are sent other than specified channel, even if they are sent to a UNDP staff member, UNDP shall have no obligation to respond or confirm that the query was officially received.   2. UNDP will provide the responses to clarifications through the method specified in the BDS.   3. UNDP shall endeavor to provide responses to clarifications in an expeditious manner, but any delay in such response shall not cause an obligation on the part of UNDP to extend the submission date of the Proposals, unless UNDP deems that such an extension is justified and necessary. |
| Amendment of Proposals | * 1. At any time prior to the deadline of Proposal submission, UNDP may for any reason, such as in response to a clarification requested by a Bidder, modify the RFP in the form of an amendment to the RFP. Amendments will be made available to all prospective bidders.   2. If the amendment is substantial, UNDP may extend the Deadline for submission of proposal to give the Bidders reasonable time to incorporate the amendment into their Proposals. |
| Alternative Proposals | * 1. Unless otherwise specified in the BDS, alternative proposals shall not be considered. If submission of alternative proposal is allowed by BDS, a Bidder may submit an alternative proposal, but only if it also submits a proposal conforming to the RFP requirements. UNDP shall only consider the alternative proposal offered by the Bidder whose conforming proposal ranked the highest as per the specified evaluation method. Where the conditions for its acceptance are met, or justifications are clearly established, UNDP reserves the right to award a contract based on an alternative proposal.   2. If multiple/alternative proposals are being submitted, they must be clearly marked as “Main Proposal” and “Alternative Proposal” |
| Pre-Bid Conference | * 1. When appropriate, a Bidder’s conference will be conducted at the date, time and location specified in the BDS. All Bidders are encouraged to attend. Non-attendance, however, shall not result in disqualification of an interested Bidder. Minutes of the Bidder’s conference will be disseminated on the procurement website and shared by email or on the e-Tendering platform as specified in the BDS. No verbal statement made during the conference shall modify the terms and conditions of the RFP, unless specifically incorporated in the Minutes of the Bidder’s Conference or issued/posted as an amendment to RFP. |
| SUBMISSION AND OPENING OF PROPOSALS | |
| Submission | * 1. The Bidder shall submit a duly signed and complete Proposal comprising the documents and forms in accordance with the requirements in the BDS. The submission shall be in the manner specified in the BDS.   2. The Proposal shall be signed by the Bidder or person(s) duly authorized to commit the Bidder. The authorization shall be communicated through a document evidencing such authorization issued by the legal representative of the bidding entity, or a Power of Attorney, accompanying the Proposal.   3. Bidders must be aware that the mere act of submission of a Proposal, in and of itself, implies that the Bidder fully accepts the UNDP General Contract Terms and Conditions. |
| **Hard copy (manual) submission**  **Email Submission**  **eTendering submission** | * 1. Hard copy (manual) submission by courier or hand delivery allowed or specified in the BDS shall be governed as follows:   2. The signed Proposal shall be marked “Original”, and its copies marked “Copy” as appropriate. The number of copies is indicated in the BDS. All copies shall be made from the signed original only. If there are discrepancies between the original and the copies, the original shall prevail.   3. The Technical Proposal and the Financial Proposal envelopes MUST BE COMPLETELY SEPARATE and each of them must be submitted sealed individually and clearly marked on the outside as either “TECHNICAL PROPOSAL” or “FINANCIAL PROPOSAL”, as appropriate. Each envelope SHALL clearly indicate the name of the Bidder. The outer envelopes shall:   i. Bear the name and address of the bidder;  ii. Be addressed to UNDP as specified in the BDS   1. Bear a warning that states “*Not to be opened before the time and date for proposal opening*” as specified in the BDS.   If the envelopes and packages with the Proposal are not sealed and marked as required, UNDP shall assume no responsibility for the misplacement, loss, or premature opening of the Proposal.   * 1. Email submission, if allowed or specified in the BDS, shall be governed as follows:  1. Electronic files that form part of the proposal must be in accordance with the format and requirements indicated in BDS; 2. The Technical Proposal and the Financial Proposal files MUST BE COMPLETELY SEPARATE. The financial proposal shall be encrypted with different passwords and clearly labelled. The files must be sent to the dedicated email address specified in the BDS. 3. The password for opening the Financial Proposal should be provided only upon request of UNDP. UNDP will request password only from bidders whose Technical Proposal has been found to be technically responsive. Failure to provide correct password may result in the proposal being rejected.    1. Electronic submission through eTendering, if allowed or specified in the BDS, shall be governed as follows: 4. Electronic files that form part of the proposal must be in accordance with the format and requirements indicated in BDS; 5. The Technical Proposal and the Financial Proposal files MUST BE COMPLETELY SEPARATE and each of them must be uploaded individually and clearly labelled. 6. The Financial Proposal file must be encrypted with a password so that it cannot be opened nor viewed until the password is provided. The password for opening the Financial Proposal should be provided only upon request of UNDP. UNDP will request password only from bidders whose technical proposal has been found to be technically responsive. Failure to provide the correct password may result in the proposal being rejected. 7. Documents which are required to be in original form (e.g. Bid Security, etc.) must be sent via courier or hand delivery as per the instructions in BDS. 8. Detailed instructions on how to submit, modify or cancel a bid in the eTendering system are provided in the eTendering system Bidder User Guide and Instructional videos available on this link: <http://www.undp.org/content/undp/en/home/operations/procurement/business/procurement-notices/resources/> |
| Deadline for Submission of Proposals and Late Proposals | * 1. Complete Proposals must be received by UNDP in the manner, and no later than the date and time, specified in the BDS. UNDP shall only recognize the date and time that the bid was received by UNDP   2. UNDP shall not consider any Proposal that is submitted after the deadline for the submission of Proposals. |
| Withdrawal, Substitution, and Modification of Proposals | * 1. A Bidder may withdraw, substitute or modify its Proposal after it has been submitted at any time prior to the deadline for submission.   2. Manual and Email submissions: A bidder may withdraw, substitute or modify its Proposal by sending a written notice to UNDP, duly signed by an authorized representative, and shall include a copy of the authorization (or a Power of Attorney). The corresponding substitution or modification of the Proposal, if any, must accompany the respective written notice. All notices must be submitted in the same manner as specified for submission of proposals, by clearly marking them as “WITHDRAWAL” “SUBSTITUTION,” or “MODIFICATION”   3. eTendering: A Bidder may withdraw, substitute or modify its Proposal by Canceling, Editing, and re-submitting the proposal directly in the system. It is the responsibility of the Bidder to properly follow the system instructions, duly edit and submit a substitution or modification of the Proposal as needed. Detailed instructions on how to cancel or modify a Proposal directly in the system are provided in Bidder User Guide and Instructional videos.   4. Proposals requested to be withdrawn shall be returned unopened to the Bidders (only for manual submissions), except if the bid is withdrawn after the bid has been opened |
| Proposal Opening | * 1. There is no public bid opening for RFPs. UNDP shall open the Proposals in the presence of an ad-hoc committee formed by UNDP, consisting of at least two (2) members. In the case of e-Tendering submission, bidders will receive an automatic notification once their proposal is opened. |
| EVALUATION OF PROPOSALS | |
| Confidentiality | * 1. Information relating to the examination, evaluation, and comparison of Proposals, and the recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process, even after publication of the contract award.   2. Any effort by a Bidder or anyone on behalf of the Bidder to influence UNDP in the examination, evaluation and comparison of the Proposals or contract award decisions may, at UNDP’s decision, result in the rejection of its Proposal and may be subject to the application of prevailing UNDP’s vendor sanctions procedures. |
| Evaluation of Proposals | * 1. The Bidder is not permitted to alter or modify its Proposal in any way after the proposal submission deadline except as permitted under Clause 24 of this RFP. UNDP will conduct the evaluation solely on the basis of the submitted Technical and Financial Proposals.   2. Evaluation of proposals is made of the following steps:   3. Preliminary Examination   4. Minimum Eligibility and Qualification (if pre-qualification is not done)   5. Evaluation of Technical Proposals   6. Evaluation of Financial Proposals |
| Preliminary Examination | * 1. UNDP shall examine the Proposals to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, and whether the Proposals are generally in order, among other indicators that may be used at this stage. UNDP reserves the right to reject any Proposal at this stage. |
| Evaluation of Eligibility and Qualification | * 1. Eligibility and Qualification of the Bidder will be evaluated against the Minimum Eligibility/Qualification requirements specified in the Section 4 (Evaluation Criteria).   2. In general terms, vendors that meet the following criteria may be considered qualified:   3. They are not included in the UN Security Council 1267/1989 Committee's list of terrorists and terrorist financiers, and in UNDP’s ineligible vendors’ list;   4. They have a good financial standing and have access to adequate financial resources to perform the contract and all existing commercial commitments,   5. They have the necessary similar experience, technical expertise, production capacity where applicable, quality certifications, quality assurance procedures and other resources applicable to the provision of the services required;   6. They are able to comply fully with UNDP General Terms and Conditions of Contract;   7. They do not have a consistent history of court/arbitral award decisions against the Bidder; and   8. They have a record of timely and satisfactory performance with their clients. |
| Evaluation of Technical and Financial Proposals | * 1. The evaluation team shall review and evaluate the Technical Proposals on the basis of their responsiveness to the Terms of Reference and other RFP documents, applying the evaluation criteria, sub-criteria, and point system specified in the Section 4 (Evaluation Criteria). A Proposal shall be rendered non-responsive at the technical evaluation stage if it fails to achieve the minimum technical score indicated in the BDS. When necessary and if stated in the BDS, UNDP may invite technically responsive bidders for a presentation related to their technical proposals. The conditions for the presentation shall be provided in the bid document where required.   2. In the second stage, only the Financial Proposals of those Bidders who achieve the minimum technical score will be opened for evaluation. The Financial Proposals corresponding to Technical Proposals that were rendered non-responsive shall remain unopened, and, in the case of manual submission, be returned to the Bidder unopened. For emailed Proposals and e-tendering submissions, UNDP will not request for the password of the Financial Proposals of bidders whose Technical Proposal were found not responsive.   3. The evaluation method that applies for this RFP shall be as indicated in the BDS, which may be either of two (2) possible methods, as follows: (a) the lowest priced method which selects the lowest evaluated financial proposal of the technically responsive Bidders; or (b) the combined scoring method which will be based on a combination of the technical and financial score.   4. When the BDS specifies a combined scoring method, the formula for the rating of the Proposals will be as follows:   Rating the Technical Proposal (TP):  **TP Rating** = (Total Score Obtained by the Offer / Max. Obtainable Score for TP) x 100  Rating the Financial Proposal (FP):  **FP Rating** = (Lowest Priced Offer / Price of the Offer Being Reviewed) x 100  Total Combined Score:  **Combined Score =** (TP Rating) x (Weight of TP, e.g. 70%) + (FP Rating) x (Weight of FP, e.g., 30%) |
| Due Diligence | * 1. UNDP reserves the right to undertake a due diligence exercise, also called post qualification, aimed at determining to its satisfaction, the validity of the information provided by the Bidder. Such exercise shall be fully documented and may include, but need not be limited to, all or any combination of the following:      1. Verification of accuracy, correctness and authenticity of information provided by the Bidder;      2. Validation of extent of compliance to the RFP requirements and evaluation criteria based on what has so far been found by the evaluation team;      3. Inquiry and reference checking with Government entities with jurisdiction on the Bidder, or with previous clients, or any other entity that may have done business with the Bidder;      4. Inquiry and reference checking with previous clients on the performance on on-going or contracts completed, including physical inspections of previous works, as necessary;      5. Physical inspection of the Bidder’s offices, branches or other places where business transpires, with or without notice to the Bidder;      6. Other means that UNDP may deem appropriate, at any stage within the selection process, prior to awarding the contract. |
| Clarification of Proposals | * 1. To assist in the examination, evaluation and comparison of Proposals, UNDP may, at its discretion, ask any Bidder for a clarification of its Proposal.   2. UNDP’s request for clarification and the response shall be in writing and no change in the prices or substance of the Proposal shall be sought, offered, or permitted, except to provide clarification, and confirm the correction of any arithmetic errors discovered by UNDP in the evaluation of the Proposals, in accordance with RFP.   3. Any unsolicited clarification submitted by a Bidder in respect to its Proposal, which is not a response to a request by UNDP, shall not be considered during the review and evaluation of the Proposals. |
| Responsiveness of Proposal | * 1. UNDP’s determination of a Proposal’s responsiveness will be based on the contents of the Proposal itself. A substantially responsive Proposal is one that conforms to all the terms, conditions, TOR and other requirements of the RFP without material deviation, reservation, or omission.   2. If a Proposal is not substantially responsive, it shall be rejected by UNDP and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission. |
| Nonconformities, Reparable Errors and Omissions | * 1. Provided that a Proposal is substantially responsive, UNDP may waive any non-conformities or omissions in the Proposal that, in the opinion of UNDP, do not constitute a material deviation.   2. UNDP may request the Bidder to submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Proposal related to documentation requirements. Such omission shall not be related to any aspect of the price of the Proposal. Failure of the Bidder to comply with the request may result in the rejection of its Proposal.   3. For Financial Proposal that has been opened, UNDP shall check and correct arithmetical errors as follows:  1. if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of UNDP there is an obvious misplacement of the decimal point in the unit price; in which case the line item total as quoted shall govern and the unit price shall be corrected; 2. if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and 3. if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail.    1. If the Bidder does not accept the correction of errors made by UNDP, its Proposal shall be rejected. |
| AWARD OF CONTRACT | |
| Right to Accept, Reject, Any or All Proposals | * 1. UNDP reserves the right to accept or reject any Proposal, to render any or all of the Proposals as non-responsive, and to reject all Proposals at any time prior to award of contract, without incurring any liability, or obligation to inform the affected Bidder(s) of the grounds for UNDP’s action. UNDP shall not be obliged to award the contract to the lowest priced offer. |
| Award Criteria | * 1. Prior to expiration of the proposal validity, UNDP shall award the contract to the qualified Bidder based on the award criteria indicated in the BDS. |
| Debriefing | * 1. In the event that a Bidder is unsuccessful, the Bidder may request a debriefing from UNDP. The purpose of the debriefing is to discuss the strengths and weaknesses of the Bidder’s submission, in order to assist the Bidder in improving its future proposals for UNDP procurement opportunities. The content of other proposals and how they compare to the Bidder’s submission shall not be discussed. |
| Right to Vary Requirements at the Time of Award | * 1. At the time of award of Contract, UNDP reserves the right to vary the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions. |
| Contract Signature | * 1. Within fifteen (15) days from the date of receipt of the Contract, the successful Bidder shall sign and date the Contract and return it to UNDP. Failure to do so may constitute sufficient grounds for the annulment of the award, and forfeiture of the Proposal Security, if any, and on which event, UNDP may award the Contract to the Second Ranked Bidder or call for new Proposals. |
| Contract Type and General Terms and Conditions | * 1. The types of Contract to be signed and the applicable UNDP Contract General Terms and Conditions, as specified in BDS, can be accessed at <http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html> |
| Performance Security | * 1. 40.1 A performance security, if required in BDS, shall be provided in the amount specified in BDS and form available at   <https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Solicitation_Performance%20Guarantee%20Form.docx&action=default> within fifteen (15) days of the contract signature by both parties. Where a performance security is required, the receipt of the performance security by UNDP shall be a condition for rendering the contract effective. |
| Bank Guarantee for Advanced Payment | * 1. Except when the interests of UNDP so require, it is UNDP’s preference to make no advance payment(s) (i.e., payments without having received any outputs). If an advance payment is allowed as per BDS, and exceeds 20% of the total contract price, or USD 30,000, whichever is less, the Bidder shall submit a Bank Guarantee in the full amount of the advance payment in the form available at <https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Contract%20Management%20Payment%20and%20Taxes_Advanced%20Payment%20Guarantee%20Form.docx&action=default> |
| Liquidated Damages | * 1. If specified in BDS, UNDP shall apply Liquidated Damages resulting from the Contractor’s delays or breach of its obligations as per the Contract. |
| Payment Provisions | * 1. Payment will be made only upon UNDP's acceptance of the work performed. The terms of payment shall be within thirty (30) days, after receipt of invoice and certification of acceptance of work issued by the proper authority in UNDP with direct supervision of the Contractor. Payment will be effected by bank transfer in the currency of contract. |
| Vendor Protest | * 1. UNDP’s vendor protest procedure provides an opportunity for appeal to those persons or firms not awarded a contract through a competitive procurement process. In the event that a Bidder believes that it was not treated fairly, the following link provides further details regarding UNDP vendor protest procedures: <http://www.undp.org/content/undp/en/home/operations/procurement/business/protest-and-sanctions.html> |
| Other Provisions | * 1. In the event that the Bidder offers a lower price to the host Government (e.g. General Services Administration (GSA) of the federal government of the United States of America) for similar services, UNDP shall be entitled to same lower price. The UNDP General Terms and Conditions shall have precedence.   2. UNDP is entitled to receive the same pricing offered by the same Contractor in contracts with the United Nations and/or its Agencies. The UNDP General Terms and Conditions shall have precedence.   3. The United Nations has established restrictions on employment of (former) UN staff who have been involved in the procurement process as per bulletin ST/SGB/2006/15 <http://www.un.org/en/ga/search/view_doc.asp?symbol=ST/SGB/2006/15&referer> |

# Section 3. Bid Data Sheet

The following data for the services to be procured shall complement, supplement, or amend the provisions in the Request for Proposals. In the case of a conflict between the Instructions to Bidders, the Data Sheet, and other annexes or references attached to the Data Sheet, the provisions in the Data Sheet shall prevail**.**

|  |  |  |  |
| --- | --- | --- | --- |
| **BDS No.** | **Ref. to Section.2** | **Data** | **Specific Instructions / Requirements** |
| 1 | 7 | Language of the Proposal | English |
| 2 |  | Submitting Proposals for Parts or sub-parts of the TOR (partial bids) | Not Allowed |
| 3 | 20 | Alternative Proposals | Shall not be considered |
| 4 | 21 | Pre-proposal conference | Will be Conducted  Time: 15:00 CET  Date: March 16, 2020 3:00 PM  Venue: UNDP Office, UN Eco House,  Stanka Dragojevica bb, Podgorica, MNE  (participants who potentially won’t be able to travel to Montenegro would be allowed to join via skype teleconference)  The UNDP focal point for the arrangement is:  Mirko Bracanovic, Procurement Associate  Telephone: +382 20 447 454  E-mail:  procurement.me@undp.org;  and/or mirko.bracanovic@undp.org |
| 5 | 10 | Proposal Validity Period | 90 days |
| 6 | 14 | Bid Security | Required in the amount of USD 6,000  Acceptable Forms of Bid Security   * Bank Guarantee (See Section 8 for template)   Any Bank-issued Check / Cashier’s Check / Certified Check |
| 7 | 41 | Advanced Payment upon signing of contract | Not Allowed |
| 8 | 42 | Liquidated Damages | Will not be imposed |
| 9 | 40 | Performance Security | Required in the amount of USD 10% of contract value |
| 10 | 18 | Currency of Proposal | United States Dollar |
| 11 | 31 | Deadline for submitting requests for clarifications/ questions | 3 days before the submission deadline |
| 12 | 31 | Contact Details for submitting clarifications/questions | Focal Person in UNDP: Mirko Bracanovic, Procurement Associate  Address: UN Eco Building, Stanka Dragojevica bb Podgorica  E-mail address: [procurement.me@undp.org](mailto:procurement.me@undp.org) |
| 13 | 18, 19 and 21 | Manner of Disseminating Supplemental Information to the RFP and responses/clarifications to queries | Direct communication to prospective Proposers by email and Posting on the website http://www.me.undp.org/content/montenegro/en/home/operations/procurement.html |
| 14 | 23 | Deadline for Submission | **March 30th, 2020**  For eTendering submission - as indicated in eTendering system. Note that system time zone is in EST/EDT (New York) time zone. |
| 14 | 22 | Allowable Manner of Submitting Proposals | ☐ Courier/Hand Delivery  ☐ Submission by email  **x e-Tendering** |
| 15 | 22 | Proposal Submission Address | UNDP  UN Eco Building  Stanka Dragojevica bb  Podgorica  [For eTendering method, keep link below and insert Event ID information]  <https://etendering.partneragencies.org>  Insert BU Code and Event ID number |
| 16 | 22 | Electronic submission (email or eTendering) requirements | * Format: PDF files only * File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard. * All files must be free of viruses and not corrupted*.* * Password for technical proposal must not be provided to UNDP until the date as indicated in No. 14 *(for email submission only)* * Password for financial proposal must not be provided to UNDP until requested by UNDP * Documents which are required in original (e.g. Proposal Security) should be sent to the below address with a PDF copy submitted as part of the electronic submission:   **UN Eco House , street Stanka Dragojevica bb, Podgorica 8100, Montenegro** |
| 17 | 27  36 | Evaluation Method for the Award of Contract | Combined Scoring Method, using the 70%-30% distribution for technical and financial proposals respectively    The minimum technical score required to pass is 70%. |
| 18 |  | Expected date for commencement of Contract | *April 20, 2020* |
| 19 |  | Maximum expected duration of contract | 9 months |
| 20 | 35 | UNDP will award the contract to: | One Proposer Only |
| 21 | 39 | Type of Contract | Contract for Goods and Services for UNDP (FACE SHEET)  <http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html> |
| 22 | 39 | UNDP Contract Terms and Conditions that will apply | UNDP General Terms and Conditions for Professional Services  <http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html> |
| 23 |  | Other Information Related to the RFP | *[All other instructions and information not yet mentioned so far in this Data Sheet but are relevant to the RFP must be cited here, and any further entries that may be added below this table row]* |

# Section 4. Evaluation Criteria

**Preliminary Examination Criteria**

Proposals will be examined to determine whether they are complete and submitted in accordance with RFP requirements as per below criteria on a Yes/No basis:

* Appropriate signatures
* Minimum documents provided
* Technical and Financial Proposals submitted separately
* Bid Validity
* Bid Security submitted as per RFP requirements with compliant validity period

**Minimum Eligibility and Qualification Criteria**

Eligibility and Qualification will be evaluated on Pass/Fail basis.

If the Proposal is submitted as a Joint Venture/Consortium/Association, each member should meet minimum criteria, unless otherwise specified in the criterion.

|  |  |  |
| --- | --- | --- |
| **Subject** | **Criteria** | **Document Submission requirement** |
| **ELIGIBILITY** |  |  |
| **Legal Status** | Vendor is a legally registered entity. | Form B: Bidder Information Form |
| **Eligibility** | Vendor is not suspended, nor debarred, nor otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization in accordance with ITB clause 3. | Form A: Technical Proposal Submission Form |
| **Conflict of Interest** | No conflicts of interest in accordance with RFP clause 4. | Form A: Technical Proposal Submission Form |
| **Bankruptcy** | Not declared bankruptcy, not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against the vendor that could impair its operations in the foreseeable future. | Form A: Technical Proposal Submission Form |
|  |  |  |
| **QUALIFICATION** |  |  |
| **History of Non-Performing Contracts[[1]](#footnote-1)** | Non-performance of a contract did not occur as a result of contractor default for the last 3 years. | Form D: Qualification Form |
| **Litigation History** | No consistent history of court/arbitral award decisions against the Bidder for the last 3 years. | Form D: Qualification Form |
| **Previous Experience** | Minimum 5 years of relevant experience. | Form D: Qualification Form |
| Minimum 3 contracts of similar nature and complexity implemented over the last 5 years *(For JV/Consortium/Association, all Parties cumulatively should meet requirement).* | Form D: Qualification Form |
| **Financial Standing** | Minimum average annual turnover of Euro 600,000 for the last 3 years.  *(For JV/Consortium/Association, all Parties cumulatively should meet requirement).* | Form D: Qualification Form |
| Bidder must demonstrate the current soundness of its financial standing and indicate its prospective long-term profitability.  *(For JV/Consortium/Association, Lead partner should meet the requirement).* | Form D: Qualification Form |
| **Local support** | The Bidder has to be able to ensure local on-site support (through a legal entity registered in Montenegro) for the delivered solution, so that all the potential problems in the operation of the system can be solved in the shortest possible time and provide support and testing system with five selected Montenegrin municipalities. |  |
| **Warranty** | Warranty period of 24 months from the date the acceptance test is signed. |  |
|  | Any additional criteria if required |  |

**Technical Evaluation Criteria**

|  |  |  |
| --- | --- | --- |
| **Summary of Technical Proposal Evaluation Forms** | | **Points Obtainable** |
| 1. | Bidder’s qualification, capacity and experience | 300 |
| 2. | Proposed Methodology, Technology, Approach and Implementation Plan | 200 |
| 3. | Management Structure and Key Personnel | 500 |
|  | **Total** | **1000** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Section 1. Bidder’s qualification, capacity and experience** | | **Points obtainable** | |
| 1.1 | Reputation of Organization and Staff Credibility / Reliability / Industry Standing | **80** | |
|  | General reputation, description of company, size of company, number of projects, size of projects, complexity of projects | **20** |  |
|  | General reputation, description of company | 5 |
|  | poor | 1 – 2 |
|  | good | 3 – 4 |
|  | excellent | 5 |
|  | size of company | 5 |  |
|  | 600,000 EUR of annual turnover | 3 |
|  | 800,000 EUR or more of annual turnover | 4 – 5 |
|  | number of implemented projects | 5 |
|  | Up to 5 projects | 1 – 2 |  |
|  | 5 - 10 projects | 3 – 4 |
|  | More than 10 projects | 5 |
|  | size and complexity of projects | 5 |
|  | minimum 1 large and complex project | 1 – 2 |
|  | 2- 4 large and complex project | 3 – 4 |
|  | 5 or more large and complex project | 5 |
|  | Proven track of references (number of references, especially on similar nature and complexity projects and CVs and references of the proposed staff) | **60** |
|  | number of provided references | 20 |  |
|  | Up to 3 references | 1 – 9 |  |
|  | 4 – 5 references | 10 - 14 |  |
|  | 5 – 10 references | 15 - 20 |  |
|  | number of provided references for projects on similar nature and complexity | 20 |  |
|  | minimum 3 | 1 - 9 |  |
|  | 4 or more | 10 -20 |  |
|  | CVs and references of the proposed staff | 20 |  |
|  | poor | 1 -9 |  |
|  | good | 10 - 19 |  |
|  | excellent | 20 |  |
| 1.2 | General Organizational Capability | **80** | |
|  | Number of employees, financial stability, management structure | **50** |  |
|  | number of employees | 20 |
|  | Up to 20 employees | 1 – 10 |
|  | More than 20 employees | 11 – 20 |
|  | presented financial stability (annual turnover, net-profit, current ratio) | 20 |  |
|  | Relevant scope of activity and 3 or more similar contracts of individual contracts each values less than 200,000 EUR | 1 – 10 |  |
|  | Relevant scope of activity and 3 or more similar contracts of individual contracts each values more than 200,000 EUR | 11 – 20 |  |
|  | presented management structure | 10 |  |
|  | No clear management structure or without distinction between responsibilities | 1 – 5 |  |
|  | Clear management structure with clear lines between duties and responsibilities | 6 – 10 |  |
|  | Company years of experience | **30** |  |
|  | 5 to 10 years of experience | 1 - 9 |  |
|  | 10 to 15 years of experience | 10 - 19 |  |
|  | Over 15 years of experience | 20 - 30 |  |
| 1.3 | Experience | **120** | |
|  | - Experience on similar projects (i.e. projects of similar size, content) | **60** |  |
|  | Up to 3 projects | 1 – 20 |
|  | 3 - 5 projects | 21 – 40 |
|  | More than 5 projects | 41 – 60 |
|  | - Experience on Projects in Western Balkans | **40** |
|  | Up to 2 | 1 – 20 |
|  | More than 2 | 21 – 40 |
|  | - Experience in work with UN/major multilaterals (World Bank, EU, etc.) | **20** |
|  | poor | 1 – 7 |  |
|  | good | 8 – 15 |  |
|  | excellent | 16 – 20 |  |
|  |  |  |  |
| 1.4 | Quality assurance procedures (for ex: MEST ISO/IEC 27001, MEST EN ISO 9001 and similar) | **20** | |
|  | 2 of listed certificates | 1 - 15 | |
|  | 2 of listed certificates + significant number of similar | 16 - 20 | |
| Total Section 2 | | 300 | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Section 2. Proposed Methodology, Technology, Approach and Implementation Plan** | | **Points obtainable** | |
| 2.1 | Understanding of the requirement: Have the important aspects of the task been addressed in sufficient detail? Are the different components of the project adequately weighted relative to one another? | **40** | |
|  | satisfactory | 1 – 20 |  |
|  | good | 21 – 32 |
|  | very good | 33 – 40 |
| 2.2 | Description of the Offeror’s approach and methodology for meeting or exceeding the requirements of the Terms of Reference | **100** | |
|  | satisfactory | 1 – 50 |  |
|  | good | 51 – 85 |
|  | very good | 86 – 100 |
| 2.3 | Assessment of the implementation plan proposed including whether the activities are properly sequenced and if these are logical and realistic | **60** | |
|  | satisfactory | 1 – 25 |  |
|  | good | 26 – 45 |
|  | very good | 46 – 60 |
| **Total Section** **2** | | 200 | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Section 3. Management Structure and Key Personnel** | | | **Points obtainable** |
| 3.1 | Qualifications of key personnel proposed |  | **500** |
| 3.1 a | **Project Design Manager** |  | **70** |
|  | - General Experience | 20 |  |
| 10 years of experience | 1 – 15 |
| more then 10 years of experience | 16 – 20 |
| - Specific Experience relevant to the assignment | 30 |
| up to 7 years of experience | 1 – 20 |
| more then 7 years of experience | 21 - 30 |
| - Regional experience | 15 |
| 5 - 7 years of experience | 1 – 7 |
| 8 – 10 years of experience | 8 – 15 |
| - Language Qualifications | 5 |
| English | 1 – 4 |
| Local and English | 5 |
| 3.1 b | **Project Engineers/Designers (5)** |  | **70** |
|  | - General Experience | 20 |  |
| 7 years of experience | 1 – 15 |
| more then 7 years of experience | 16 – 20 |
| - Specific Experience relevant to the assignment | 30 |
| up to 5 years of experience | 1 – 19 |
| more then 5 years of experience | 20 - 30 |
| - Regional experience | 15 |
| 5 - 7 years of experience | 1 – 7 |
| 8 – 10 years of experience | 8 – 15 |
|  | - Language Qualifications | 5 |
|  | English | 1 – 4 |
|  | Local and English | 5 |
| 3.1 c | **Hydrologist** |  | **60** |
|  | - General Experience | 20 |  |
| 10 years of experience | 1 – 15 |
| more then 10 years of experience | 16 - 20 |
| - Specific Experience relevant to the assignment | 25 |
|  | up to 8 years of experience | 1 – 18 |
|  | more then 8 years of experience | 19 - 25 |
|  | - Regional experience | 10 |  |
|  | 5 - 7 years of experience | 1 – 7 |  |
|  | 8 – 10 years of experience | 8 – 15 |  |
|  | - Language Qualifications | 5 |  |
|  | English | 1 – 4 |  |
|  | Local and English | 5 |  |
| 3.1 d | **Hydraulic Modeller** |  | **60** |
|  | - General Experience | 20 |  |
| 10 years of experience | 1 – 15 |
| more then 10 years of experience | 16 - 20 |
| - Specific Experience relevant to the assignment | 25 |
| up to 8 years of experience | 1 – 18 |
| more then 8 years of experience | 19 - 25 |
|  | - Regional experience | 10 |
|  | 5 - 7 years of experience | 1 – 7 |
|  | 8 – 10 years of experience | 8 – 15 |
|  | - Language Qualifications | 5 |
|  | English | 1 – 4 |
|  | Local and English | 5 |
| 3.1 e | **Geologist** |  | **50** |
|  | - General Experience | 20 |  |
| 7 years of experience | 1 – 15 |
| more then 7 years of experience | 16 - 20 |
| - Specific Experience relevant to the assignment | 15 |
| 5 years of experience | 1 – 7 |
| more then 5 years of experience | 8 - 15 |
|  | - Regional experience | 10 |
|  | 3 - 5 years of experience | 1 – 7 |
|  | 5 and years of experience | 8 – 10 |
|  | - Language Qualifications | 5 |
|  | English | 1 – 4 |
|  | Local and English | 5 |
| 3.1 f | **Geotechnical Engineer** |  | **60** |
|  | - General Experience | 25 |  |
| 7 years of experience | 1 – 20 |
| more then 7 years of experience | 21- 25 |
| - Specific Experience relevant to the assignment | 20 |
| 5 years of experience | 1 – 15 |
| more then 5 years of experience | 16 – 20 |
| - Regional experience | 10 |
| 5 -7 years of experience | 1 – 7 |
| 7 and more years of experience | 8 – 10 |
| - Language Qualifications | 5 |
| English | 1 – 4 |
|  | Local and English | 5 |
| 3.1 g | **Surveyor** |  | **40** |
|  | - General Experience | 20 |
|  | 7 years of experience | 1 – 15 |
|  | more then 7 years of experience | 16 - 20 |
|  | - Specific Experience relevant to the assignment | 10 |
|  | 5 years of experience | 1 – 8 |
|  | more then 5 years of experience | 9 - 10 |
|  | - Regional experience | 5 |
|  | 3 -5 years of experience | 1 – 3 |
|  | 5 and more years of experience | 4 – 5 |
|  | - Language Qualifications | 5 |
|  | English | 1 – 4 |  |
|  | Local and English | 5 |
| 3.1 h | **Environmental engineer** |  | **40** |
|  | - General Experience | 20 |
|  | 7 years of experience | 1 – 15 |
|  | more then 7 years of experience | 16 – 20 |
|  | - Specific Experience relevant to the assignment | 10 |
|  | 5 years of experience | 1 – 8 |
|  | more then 5 years of experience | 9 - 10 |
|  | - Regional experience | 5 |
|  | 3 - 5 years of experience | 1 – 3 |
|  | 5 and more years of experience | 4 – 5 |
|  | - Language Qualifications | 5 |
|  | English | 1 – 4 |  |
|  | Local and English | 5 |
| 3.1 i | **Social safeguards specialist** |  | **40** |
|  | - General Experience | 20 |
|  | 7 years of experience | 1 – 15 |
|  | 8 and more years of experience | 16 – 20 |
|  | - Specific Experience relevant to the assignment | 10 |
|  | 5 years of experience | 1 – 8 |
|  | more then 5 years of experience | 9 - 10 |
|  | - Regional experience | 5 |
|  | 3 - 5 years of experience | 1 – 3 |
|  | 5 and more years of experience | 4 – 5 |
|  | - Language Qualifications | 5 |
|  | English | 1 – 4 |  |
|  | Local and English | 5 |
| 3.2 | **Gender equality** |  | **10** |
|  | At least 1 female in the management structure or ownership of the company | 10 |  |
| **Total Section 3** | | | 500 |

# 

# Section 5. Terms of Reference

Annex: 1

**PREPARATION OF DETAILED DESIGN OF DYKES RECONSTRUCTION ON THE RIGHT BANK OF BOJANA RIVER IN MONTENEGRO**

# DESCRIPTION OF PROJECT AND BACKGROUND OF PLANNED ACTIVITIES

The Adaptation Fund/UNDP “Integrated climate-resilient transboundary flood risk management in the Drin River basin in the Western Balkans (Albania, Montenegro and North Macedonia) Project (Drin FRM Project)” aims to assist the riparian countries in the implementation of an integrated climate-resilient river basin flood risk management approach in order to improve their existing capacity to manage flood risk at regional, national and local levels and to enhance resilience of vulnerable communities in the Drin River Basin (DRB) to climate-induced floods.The following results shall be achieved: (i) Improved climate risk informed decision-making, availability and use of climate risk information; (ii) Improved institutional arrangements, legislative and policy framework for climate-resilient flood risk management (FRM), and development of climate change adaptation (CCA) and FRM strategy and plans at the basin, sub-basin, national and sub-national levels; (iii) Strengthened community resilience through improved flood management, through implementation of structural and non-structural measures and enhanced local capacity for CCA and FRM.

Outcome 3.3: Strengthened resilience of local communities through improved flood forecasting and early warning, implementation of structural and non-structural measures and the strengthened capacity for CCA and FRM at the local level will be achieved by construction of structural risk reduction measures in prioritized areas. In Montenegro, the priority areas were identified on Bojana River and Gračanica River. Drin FRM Project will finance the detailed design of these structures during project implementation and take account of the full river basin impact of the intervention measures. It will undertake detailed climate-risk based assessment to appraise all options and develop the detailed design of the proposed interventions.

# OBJECTIVE OF TERMS OF REFERENCE

The main objective of this Terms of Reference (ToR) is the preparation of the detailed design for the reconstruction of the dykes on the right bank of the Bojana river, Montenegro, which will significantly strengthen flood protection on the right bank of this watercourse.

The Company is expected to: a) conduct surveys (topographical, geomorphological, geological, and ground investigation), undertake detailed hydrological and hydraulic assessment, b) prepare detailed drawings and specifications for the agreed works; and c) prepare bills of quantities and procurement documents for the preferred works.

The Company will work under the supervision of the UNDP Country Office Montenegro and in coordination with regional project team, international structural engineers and the Ministry of Agriculture and Rural Development of Montenegro as main beneficiary.

These Terms of Reference provide all instructions and guidelines for the preparation of project documentation, taking into account hydrologic input parameters, hydraulic analysis of high waters required to raise the dyke to the needed elevations, the existing dyke condition and measures for its reconstruction, specifics related to state border area - this is due to the fact that watercourse represents the border between Montenegro and Albania, the possibility of access during the construction works, the distance of the location of the borrowing earth materials for the reconstruction of the dykes, etc.

# SUBJECT MATTER AND PROJECT REQUIREMENTS

The subject of this project assignment is preparation of the Detailed Design for the dyke reconstruction on the right bank of the Bojana River, Montenegro. These Terms of Reference (ToR) provides basic information related to existing condition of the river basin, conditions that affect the sizing of dyke height/reconstruction of the existing dykes and provide guidelines and instructions for the preparation of relevant project documentation on the basis of which it will be possible to commission construction work on the reconstruction of these significant structures.

Related to preparation of the project documentation required by this project, the obligation of the Company is as follows:

* Collect all available documentation and data relevant to the technical assessment and design activities. As a minimum the following types of information and data should be collected:
  + Documents generated by previous flood management projects in the study area (available studies will be sent to registered bidders via link);
  + Existing topographic mapping including DEM data from previous studies;
  + Base mapping;
  + Flooding history (recurrence intervals, extent, heights etc.), records and analysis of past flooding;
  + As built details of existing structure;
  + Aerial photography;
  + Details of existing land use;
  + Geology, soil composition and records of previous geotechnical investigations; and
  + Relevant Montenegrin national standards and particular considerations.
* Perform geodetic survey of watercourses and existing dykes and on that basis prepare a Geodetic study as an integral part of the Detailed Design, in accordance with the legal regulations. Following the initial site inspections and review of available data the design team a scope, and specification for the survey – to be undertaken by a Company appointed by the project. Outputs will be specified in paper and suitable electronic formats to allow the survey information to be integrated with any available or acquired DEM data. As far as possible standard survey specifications and requirements will be used. Typical topographic surveys are likely to include the following elements:
  + Establishment of a control network, including permanent ground markers, referenced to the same datum as the DEM data, and suitable for use during construction/implementation of the measure.
  + Recording position and level of all features of significance, for example buildings, existing embankments, river and stream banks, roads, pits, rocky outcrops.
  + Recording ground levels between features at an appropriate grid spacing.
  + Recording position and size of all trees.
  + Where appropriate recording river/stream channel cross sections above and below water level at specified intervals.
* Collect and analyze hydrological data of flows of Bojana river's high waters and the capacity of the Drin riverbed on the section downstream of the dam on this watercourse in Albania. Hydrological data collected should be assessed in terms of quality and availability and the strategy for undertaking hydrological assessment should be developed. This should include a review of the GIZ hydrological model[[2]](#footnote-2) available for the entire Drin/Bojana basin to identify any adjustments that may be required to model, and to use (to the extent possible) the existing Drin basin hydrological modelling in detailed design.
* Develop hydraulic model of the Bojana river in order to analyze high waters for the return periods of flow 1/20, 1/50 and 1/100 years, in order to determine the level of high waters that will be used to define the elevations of the reconstructed dyke crown. Hydraulic analysis is required to cover areas larger than the area for which the main design will be carried out. This analysis will cover the section from the mouth of the Bojana river into the sea to the location where the Bojana river becomes a border river between Montenegro and Albania. It is also necessary to calculate the high water level of the Bojana river for the flow coming from the Drin river. It is recommended to use open source software and the work should build upon the Hec Ras 2D model for the entire Drin River basin, with improved data and other model upgrades that can be achieved. The Hec Ras 2D model is developed within GIZ project “Adaptation to Climate Change in transboundary Flood Risk Management”.
* Undertake hydraulic modelling and assessment which takes account of all of the hydraulic processes that contribute to flooding in the Bojana river. Prepare a report on hydraulic modelling which will support the detailed design. The stated reference to the GIZ developed Hec Ras 2D model applies.
* Undertake condition survey of the existing embankment. Prepare a report on the condition of the existing embankment to be used in detailed design. Length of section that will be considered by this condition survey study is 13 km, from St. Nicholas church to location of canal mouth from Šaško lake on the right bank of the Bojana river.
* Develop analysis of the geological reserves of the materials to be used for the dyke reconstruction, defining their positions and distances from the dyke reconstruction site.
* Prepare detailed design of the dyke reconstruction on the right bank of the Bojana river on the section from the site located upstream of the Bojana river fork on the right and left branches (location St. Nicholas Church) to the mouth of the canal which inflows into the Bojana river from Šaško Lake (location on south of Šaško lake).

All data collected by the Company should be provided as a deliverable of the Drin FRM Project to the Ministry of Agriculture and Rural Development of Montenegro as main beneficiary. The data will be used for the basin-level spatial data initiative (SDI) that will be developed through the Project.

**General principles:**

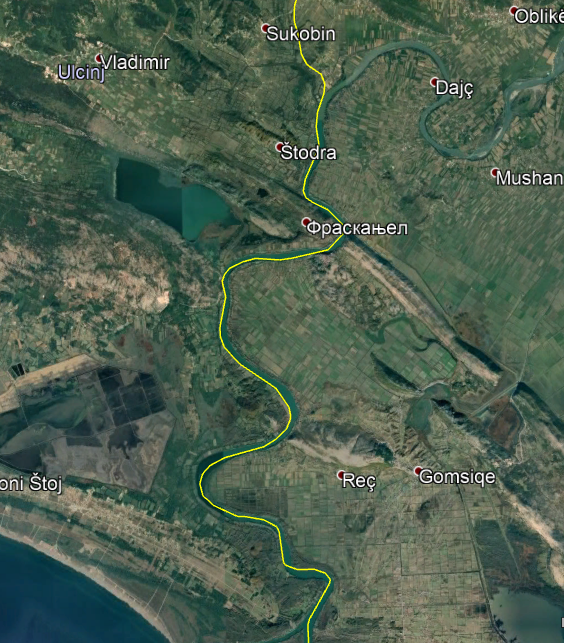
In order to develop the Detailed Design as best as possible, the Company should generally adhere to the following:

* During the design preparation, use data from existing studies and project designs, data about the river basin and basin specifics, the history of occurrences at the mouth of the Drin and Bojana and the occurrence of high waters and floods in the previous period, data related to Bojana river flows, left bank dyke height data on Bojana river in the territory of Albania, information regarding the capacity of the dam overflows on the Drin river in Albania, information about current conditions of the dyke on the right bank of the Bojana river, and any other information that may be useful for the preparation of project documentation.
* Select the type of material for the dyke reconstruction and analyze the justification of transport to the location planned for reconstruction.
* All hydro-engineering principles and applicable legal regulations must be respected.
* Company is obliged to use any other data, maps and backgrounds, which are not specified in this Terms of Reference, that may have influence on adoption of design solution during project design preparation.
* It is necessary to follow this Terms of Reference, existing spatial planning documents and construction regulations.

# GENERAL CHARACTERISTICS OF SUBJECT AREA

* 1. **General description**

The subject area is located on the territory of Montenegro. The central lowland area of Montenegro includes the area of Skadar lake, the valley of the lower course of the Zeta river (240 km²) and the Niksic field (48 km²). There is point intersection of roads from the hinterland (Zeta and Moraca valleys) to the coast. Suitable location and free space enable the development of Podgorica, the capital of Montenegro. The largest part of the plain is covered by a thick layer of sterile fluvioglacial gravel.



***Figure 1. Layout of subject area - Bojana river***

The climate on the coast is mediterranean, in the Skadar Lake area sub-mediterranean, and inland moderately continental to mountainous. The average July (summer) temperature in the coastal area, the sub-Mediterranean area of ​​the Skadar lake area and the Zeta river valley is around 26°C, in the lower inland areas 18 to 20°C, and in the high mountains (Durmitor, Bjelasica, Visitor, Sinjajevina, etc.) 10 to 14°C. The average January (winter) temperature is highest in the coastal region (8°C) and in the sub-mediterranean parts (4 to 5°C); inland and in the mountains it is from 0° to –7°C. The annual rainfall is the highest in the mountainous area of ​​the coastal hinterland (Orjen, Lovćen; about 5000 mm), where it rains up to 8000 mm in extremely rainy years (Crkvice on Orijen mountain).

The Adriatic Sea Basin includes the Morača, Sitnica, Bojana, Sutorina, Drenovštica, Kucac, Sutorman, Bistrica and Orahovštica rivers, as well as Skadar Lake and the Repaj river.

# DESCRIPTION OF CURRENT CONDITIONS AND CHARACTERISTICS OF RIVER BASINS

* 1. **Description of Bojana river and its river basin**

The Bojana River flows from Skadar lake, and immediately downstream (at a distance of 1.2 to 2.0 km) on the left receives the Drin river. After 18 km of flow through Albania, the Bojana river represents the approximately 25 km long border between Montenegro and Albania. At the exit of the lake, the regime of the Bojana River is relatively normal. However, with the high water level of the Drin river, the water level and flow of the Bojana River increase too. This phenomenon, on the one hand, causes flooding along the Bojana river, and on the other hand slows the discharge of water from the lake, causing flooding on the north side of Skadar lake.

***Figure 2. View on river island – Ada Bojana***

* + 1. **Flood risk along the Bojana River floodplain**

Floods along the river are also caused by changes in the sea due to high and low tides, which slows the flow of the Bojana river or causes increasing of water level.

The floodwaters of the Drin river carry large amounts of sediment previously deposited in the Bojana riverbed. Sediment transport was reduced after the Fierza and Vau i Dejes reservoirs were created, thereby partially intensifying the reverse process - sediment transport from the Bojana riverbed and sliding of the bed.

On this downstream part, the Bojana river receives several tributaries from the Montenegrin side. These tributaries are: the Kravarski creek, the Meraja river formed by the Rastiska creek which joins to Brasis river, Vladimir creek, which divide on upstream section and partly flows into the Bojana river near Stodra and partly into Šaško lake, from where it flows into the Bojana river, Medjurjec River and the Klezna creek (first inflow into Šaško lake), then into the Sveti Đorđe creek, and then into the Bojana river near St. George.

Some of the watercourses mentioned are from natural water sources, of which are most significant Rastis, Bryza, Kaliman, Klezna and Gac. The mentioned watercourses drain the karst area with a very high rainfall (1,500 to 2,500 mm per year, and in extreme cases the height of one-hour rainfall exceeds 100 mm).

Due to the present morphological formations of the terrain and rainfalls, smaller lakes are formed in this area. Šaško lake is the best representative example.

In the area along the Bojana river and in the basins of these small watercourses, there are approximately 2,400 hectares of fertile land, which represents a significant percentage of the total agricultural land in the coastal zone of Montenegro. The entire area along the Bojana river is endangered by the flooding by this river and the mountain watercourses.

Before the embankments were constructed along the Bojana river, water levels penetrated deep into the mainland through tributary valleys, which is especially characteristic of the farthest area on downstream section. The Bojana river, in fact, penetrated the mainland for approximately 8 km, flooding the valley of Medjurec and Klezna, including the whole of Šaško lake. The bottom of the Bojana river and parts of other mountain watercourses are at relatively high ground levels, so that the terrain descends from the river. Therefore, in the event of dyke break through, floods can affect significant areas at a relatively long distance from the break point. The following are areas that often have been flooded:

- Vladimir-Sukobinsko field,

- Šaško lake,

- Ulcinj field.

Vladimir's field is divided into several areas by a series of ridges. The largest is a Vladimir field that stretches along the Vladimir creek. Further to north it extends into Sukobinsko polje. In this area, about 500 hectares were flooded by the Bojana river. In addition, this plain is threatened by high water levels of other watercourses, such as: Cow Creek, Rastiski Creek, Bryce and Vladimir.

Šaško lake is also "threatened" by high water levels in the backwaters of the Bojana river and the Medjugorje watercourse.

Ulcinjsko lake is threatened by high water levels of the Bojana river, and in the past significant damage was recorded due to these floods.

The Bojana river is a natural reserve of flora and fauna. Namely, the bottom of the riverbed was, before its inflow into the sea, two meters below sea level, and sometimes up to five meters below sea level.

There is also salt water and fresh river water in the Bojana riverbed. The salty water - seawater penetrates the bottom of the Bojana riverbed to the St. George location.

Archival data indicate that in the second half of the 19th century the Drin river changed its course and since then one branch of that river has inflowed into Bojana river.

Ada island, framed by the Bojana river, is triangular in shape. Two sides are splashing river, and one is seawater. It covers an area of ​​600 hectares and the beach is about 3,800 meters long.

* + 1. **Flood risk of the Bojana river coastal area**

In the Ulcinj municipality, large areas of land and private buildings along the Bojana River are most endangered. These are mostly one-floor, two-floor buildings, as well as large fruit and vegetable plantations.

The floods along the Bojana river mainly endanger the settlements Sukobin, Lisna-Bori and Fraskanjel, and to a lesser extent the settlements Sveti Đorđe, Rec, Donji Stoj and Gornji Stoj.

Flood protection structures have been built in the endangered area; however, the condition of these structures is unsatisfactory and there is no safe protection in the event of high waters.

In November and December 2010, extreme rainfall in the observed river basins was recorded. Such prolonged heavy rains caused an overflow of accumulations near Nikšić, record water levels in Skadar Lake and record water levels in the Bojana River and other rivers. The situation in the Skadar Lake area was alarming when the water level of the lake reached a level of 10.44 m above sea level.

The catastrophic floods that occurred in Ulcinj in January and December 2010 were caused by the simultaneous occurrence of heavy rainfall, sudden melting of snow and the inflow of large amount of water from the Drin river, which caused a record breaking of water levels in the Bojana River, when the maximum daily level was reached on December 4th, 2010. The following settlements were flooded: part of Sukobin, Lisna Bori, Fraskanjel, Sas, Stodra, Sv. Djordje, Rec, Sutjel, Sv. Nikola, as well as Ada Bojana.

The most serious damage occurred on residential buildings in the settlements Lisna Bori, Sukobin, Fraskanjel and Sas, downstream summer houses and restaurants on the delta and buildings of the company "Ulcinjska riviera" on Ada Bojana.

A total of 7.4% of the territory of Ulcinj municipality was flooded, with agricultural land, agricultural equipment, plantations (greenhouses) and tangerine plantations suffering the most.

Flooded infrastructure structures/facilities:

          - water source (12 wells with pumping stations),

   - transformer stations delivering electricity to 4 (four) pumping stations,

          - hydrological station in Fraskanjel.

The St. George-Suthel and Rec-St. Nicholas embankments were important defensive infrastructure that were partially damaged earlier and damaged even more during the January floods.

Table 1: Maximum water levels in watercourses in the Adriatic Sea Basin and Skadar lake[[3]](#footnote-3)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Water/ hydrological station** | **Watercourse** | **H max**  **before the floods** | **Date** | **H max**  **During the floods** | **Date** |
|  | Plavnica | Skadar lake | 530 cm | 14 Jan 1963 | 588cm | 4 Dec 2010 |
|  | Duklo | Zeta | 243cm | 18 Oct 1992 | 243cm | 2 Dec 2010 |
|  | Fraskanjel | Bojana | 603cm | 5 Dec 1966 | 636cm | 4 Dec 2010 |
|  | Podgorica | Moraca | 1226cm | 17 Nov 1979 | 1177cm | 2 Dec 2010 |

Immediate intervention followed on these embankments in the most critical locations and works on the St George's embankment were initiated for the purpose of complete reconstruction.

However, after the January floods of 2010, approx. 900 m of dyke remained unfinished, so the first days of the November-December floods, emergency intervention on this part was made, because it was the most critical section. Also, at the last moment, the embankment of St. George-Sutel was repaired, which could not be damaged, even though it was partially covered by water.

When the water level of the Bojana river reached its maximum, on December 4th, 2010, another Rec-Sveti Nikola embankment was flooded, partly used as a road to the village of Rec. The water level was at approx. 40 cm above the road surface/dyke crown. This part has also been the subject of intensive intervention work to repair critical areas where it has been observed that water can leak or spill over the embankment.

# EXISTING DATA AND ACTIVITIES CARRIED OUT ON FLOOD PROTECTION ON THE BOJANA RIVER

* 1. **Description of the existing flood protection measures on the Bojana river**

The following structures have been constructed for flood protection due to the high water level of the Bojana river:

          - long embankment of Sv. Nikola (St. Nicholas) - Rec 6,337 meters long

          - Sutjel embankment - St. George (St. George), 1,455 meters long

The mentioned embankments made a protected area of ​​about 600 ha between the Bojana river and the old salt embankment, as well as the Ulcinj field itself. There is no documentation based on which these embankments were constructed. After the flood of 1963, it was found that the Sutjel-Sveti Djordje embankment was not high enough - at 40% of its length, and the Sveti Nikola-Rec embankment was not high enough at a length of 27% of its length. The embankments were not maintained, they were covered with shrubs and trees, and their protective function against high water waves was not reliable. Also, the following structures were built:

- Paratuk embankment was built in 1966 in the area between the embankment along the Bojana river and the old Bojana embankment. The embankment is 195 meters long and divides the protected area into two cassettes.

- Gropat-Stodra embankment, 960 meters long, was built to protect Vladimir field from the high water levels of the Bojana River, protecting about 110 ha.

- Stodra-Sukobin embankment, 2900 meters long, protects about 360 ha of agricultural land in Sukobin field from the high water level of the Bojana River. Along this part, the embankment is constantly threatened by the movement of the Bojana riverbed.

During the field visit of the coastal zone of the Bojana river, in order to develop this project assignment/ToR, in October 2019, the following activities were carried out:

- Field prospecting of the geometry and condition of the existing dyke on the right bank of Bojana river

- Low and high vegetation that covered coastal zone of this watercourse has been detected

- The sections where the overflow of the embankment crown occurred during the appearance of high waters on the right bank were detected

- The locations where the foot of the existing embankment erodes are also detected

The field visit was carried out by a team composed of UNDP MNE representatives, UNDP MNE consultant, Ulcinj municipality representatives and local community representatives.

# TECHNICAL ASSESSMENTS/STUDIES FOR DETAILED DESIGN

* 1. **Hydrological data analysis and assessment**

For the purpose of hydraulic analysis of high waters of the Bojana River, it is necessary to perform hydrological data analysis and processing, and undertake all necessary hydrological calculations to obtain the flow values on the Bojana River for the return period 1/20, 1/50 and 1/100 years and 1/100 + Climate Change[[4]](#footnote-4).

In undertaking the hydrological assessment, particular attention should be paid to the flow from the Drin River, given the fact that this watercourse significantly affects to the occurrence of high waters of the Bojana River. Data related to capacity of the Qyrsaq and Zadea dams - overflows on the Drin River in Albania, whose overflows directly affect the appearance of high waters of the Bojana River, should also be available and presented.

Hydrological assessment should include, as far as possible consideration of groundwater, snowmelt and reservoir outflow process that affect flows in the Bojana.

The collection of hydrological data available on the Bojana River and its tributaries is obligation of Company.

* 1. **Geodetic survey data**
     1. **General**

For the purpose of undertaking the hydraulic assessment and for the preparation of the detailed design, it is necessary to carry out geodetic survey of the terrain and riverbed in such a way that all the necessary data for technical assessment, design and project realization are obtained.

Detailed geodetic recording should be performed using modern surveying equipment such as GPS, total station and ECHo Sounder. All geodetic measurements will be linked to the State Geodetic Network. All recorded geodetic data in a spatial situational view, which will be attached to the main design, must be shown in an appropriate scale.

In addition to the cross-sections of the watercourse, it is necessary to survey structures that affect the water regime (bridges, estuaries, narrows, etc.) along the watercourse. It would also be necessary to undertake a longitudinal survey of existing embankment.

The Company will prepare and agree with UNDP Montenegro and relevant experts, the survey brief prior to starting the work.

* + 1. **Common requirements**

All surveying will be in metric units. The technical specifications of the requirements for this survey are given below.

* Horizontal Datum: WGS 1984
* Projection UTM Zone: 34 N
* Vertical Datum: ellipsoid of the reference system GRS80

*General accuracy requirements:*

* Horizontal +/- 100mm; and
* Vertical +/- 5mm.
* Cross-section spacing - Generally, geodetic surveying should be done by survey of the cross sections of the Bojana river at a distance of 40 to 60 m, which will cover the existing dykes (left and right bank), inundation surfaces and the riverbed. For the hydraulic analysis development, geodetic surveying of cross sections must be done at a distance of 70-100 m.
* Points along each cross-section should be spaced at approximately 5m intervals at random and at changes of slope. *Conventions to be observed:*
* River chainages (distance) used in reports drawings/maps to increase in the upstream direction; and
* Cross-sections are viewed looking upstream.

The Company will construct temporary reference points as required within the survey area which are referenced in compliance with the above and maintain these during the period of the survey.

Presentation of results to local or assumed horizontal and vertical datums will not be acceptable.

**Output and Reporting of Geodetic Surveys**

In addition to hard copy maps the survey data will be provided in the following electronic formats:

1. Processed survey data in shp, xls and ascii (x,y,z or grid) format (as a minimum).
2. All survey data shall be provided on external hard drive(s) in soft copy format and provided in mutually agreed hard copy format.
3. A survey report shall be provided summarizing the survey results including survey methods used, equipment used, survey teams employed, survey accuracies achieved, any legitimate difficulties and delays in work execution, etc.
4. Maps showing river cross-section locations and end point reference points at an appropriate scale.
5. Structural cross-section and plan diagrams showing dimensions and levels.

The following should apply in the work execution:

1. Ensure that the survey data meet requirements by the Governmental institutions in Montenegro.
2. The survey data should be used to upgrade the Hec Ras 2D hydraulic model developed by GIZ within “Adaptation to Climate Change in transboundary Flood Risk Management” project.
3. The survey data will be provided as a deliverable of the Drin FRM Project to the Ministry of Agriculture and Rural Development of Montenegro as main beneficiary. The data will be used for the basin level spatial data initiative (SDI) that will be developed through the Project.

Where access to private or protected land is required for conducting the survey, UNDP Montenegro will offer assistance in contacting the relevant agencies, but it will be the Company’s responsibility to ensure that all necessary permissions are obtained prior to entry.

**Acceptable Technologies**

Whilst the Company will be responsible for the final selection of survey technologies to be deployed in order to achieve the desired outcomes for the site, the following points indicate the technologies which are likely to be appropriate:

* Real time kinetic (RTK) GPS for setting of reference points and for detail survey (static method required for reference points);
* Aerial survey by drone using photogrammetric or lidar technology – this will require adequate ground control to achieve required vertical accuracy;
* Electronic total station (ETS); and
* For the below water parts of river cross-sections, depth sounding by level staff or pole where applicable, linked to ETS or DGPS or echo-sounder preferably linked to DGPS. It is likely that the water depth will require boat-based survey for the underwater sections, in which case the preferred methodology is using an echo sounder for depth measurement linked to DGPS to obtain the overall profile. Other approaches to obtaining the below water profile may be considered but must provide a comparable output. The Company should take these factors into account in preparing their proposal for the survey component and must include details of their chosen methodology.

**Site specific requirements**

The survey brief should identify the positions of the cross sections in such a way that their sequence represents the true and realistic morphological look of the river. Generally, geodetic surveying for the preparation of the Detailed design should be done by survey of the cross sections of the Bojana river at a distance of 40 to 60 m, which will cover the existing dykes (left and right bank), inundation surfaces and the riverbed. For the hydraulic analysis development, geodetic surveying of cross sections must be done at a distance of 70-100 m.

The cross sections will be selected at places where there are changes in the width of the watercourse, the heights of the banks, the slope of the river bank or where there are some existing measures of flood protection, as well as in places where there may be potential damage, as well as at locations of estuaries, narrowings, significant meandering etc. Geodetic surveying of cross sections should be done perpendicular to the direction of flow of the Bojana river, in such a way that detailed survey of the bottom of the river bed, inundation surface, existing dyke and area behind the embankment (flood protection area), at least 10 m on each river bank. The width of the Bojana River on the considered section in average is from 150 to 200 m.

For each geodetic surveying of cross-section, the coordinates and elevations of the surveyed points, the elevations of “start” and “end” of the berm of the embankment on the cross sections, both edges of the dyke crown and the dyke foundation, must be given. Measurements must be made and the widths of the dyke crown, inclination of dyke slopes on both sides, deformation and damage due to erosion / sliding or any other reason, which changed the original dyke geometry, surrounding terrain and all other details (ramps, drainage canals) required for project design preparation.

In areas where vegetation interferes of land surveying, it should be cut and removed in order to achieve the required accuracy.

For the geodetic survey of these elements, it is necessary to select an appropriate geodetic instrument of satisfactory accuracy in order to provide a better quality of the existing condition of the dyke on the right bank of the Bojana river and the riverbed of this watercourse.

All surveying materials must be geo-referenced and computer-ready. To view recorded geodetic elements, it is necessary to use digitalized topographic and ortho-photo maps of appropriate scale (1: 500, 1: 1000 or the like).

* 1. **Condition survey of the existing embankment**

The geotechnical characteristics and behavior of the existing embankment and its foundations are key factors affecting performance and should be assessed as part of the detailed design, to assess potential hazards or potential risks of failure such as (a) zones of weak or highly permeable material causing slippage or seepage; (b) reduction of crest level and standard of protection due to settlement or the crest being worn away in places causing overtopping; and (c) local seepage paths at junctions with other structures. Condition survey of the existing embankment will also provide key inputs to the design of the new sections of embankment. The condition survey will consider existing dyke on the right riverbank of Bojana river in the length of 13 km and Vladimirski creek in the length of 5 km and should include:

1. Vegetation - Effects of vegetation on the function of flood embankments; Implications for management and maintenance; Current actions and initiatives. The assessment should include:
   1. Identify existing areas of vegetation over or under growth. Identify vegetation condition indicative of surface erosion, embankment use (or misuse) or symptomatic of internal problems (e.g. seepage leading to patchy growth).
   2. Is the quality of topsoil and / or subsoil sufficient to promote good growth?
   3. Does the embankment contain contaminated materials with subsequent leachate affecting growth?
   4. Identify existing and required vegetation management approaches for appropriate and well-maintained vegetation to provide a valuable surface protection layer for the embankments, which can reduce or prevent slope erosion and prolong the resistance of an embankment to deeper erosion and breaching during extreme overtopping or overflowing events.
2. Settlement - Causes of settlement, current treatment of settlement; factors that will influence future settlement; estimated rate and magnitude of future settlement
   1. Inspect the site and carry out a desk study using any appropriate existing records to conform or establish potential causes of the settlement.
   2. Confirm extent of settlement by undertaking a detailed survey of embankment crest and toe levels and some section profiles. The survey should extend beyond the area of suspected settlement. The observed crest levels should be compared with historic data and, if necessary, records should be taken over a period of time to establish the rate of settlement.
   3. If necessary, carry out an intrusive ground investigation to confirm the geological model and establish geotechnical design parameters.
   4. Identify the causes of the settlement and establish remedial measures if necessary
   5. Identify requirements for repair and continued monitoring of crest and toe levels.
3. Global Instability (rotational and translational failures) and Shallow instability (surface failure) - Causes of instability; symptoms of instability; options for dealing with instability
   1. Carry out a desk study, making full use of any relevant existing records, and inspect the site to establish potential causes of the failure. Identify if any adjacent areas are at risk.
   2. Confirm embankment layout and the extent of the failure by undertaking a detailed survey of embankment crest and toe levels and some section profiles. The survey should extend beyond the area of the suspected failure.
   3. Carry out an intrusive ground investigation to confirm the geological model and establish geotechnical design / remedial parameters.
   4. Carry out an intrusive ground investigation to confirm the nature of the embankment fill material and any sources of water (e.g. seepage, local drainage). Establish the likely soil water regime.
   5. Identify the causes of the failure and establish remedial measures as necessary (these might include a repair of the failed zone and the construction of berms or flatter side slopes etc.) along any length of embankment found to be at risk.
   6. Include necessary repairs in the detailed design including requirements to monitor crest levels and horizontal movements of the toe to validate the performance of the remedial works.
4. Cracking and Fissuring –
   1. Identify areas of cracking and fissuring.
   2. Soil type, moisture content, vegetation, weather conditions that exacerbate where fissuring is likely to pose a serious threat to embankment performance.
   3. Recommend any connective works to be implemented.
5. Seepage and Piping - Mechanisms of seepage through embankments; areas where seepage/leakage constitute a threat to embankment stability; identification of options for dealing with seepage and piping
   1. Identify areas where seepage is observed and symptoms representative of a longer-term process.
   2. Undertake site investigation, making full use of any relevant existing records to establish material condition, pore pressures etc.
   3. Identify requirements for remedial works and monitoring of the seepage.
6. External Erosion –
   1. Identify discontinuities in the crest or face protection which may allow excessive water into the body of the embankment leading to internal erosion and/or instability. Identify low spots in the crest that might have been caused by erosion and may provide a focus for overflowing water. The basic cause of the erosion should be identified.
   2. Identify protection measures required for embankment.

Considering transboundary nature of Bojana River, the Company should be provided with relevant information from Republic of Albania:

1. The As-built drawings/ surveys data for the embankments on Albanian side; and
2. Any reports of condition inspections conducted.
   1. **Geological data and geotechnical investigations**

Geotechnical investigations should be conducted where these are necessary, to provide engineering properties of native ground and the existing earth structures. Ground investigations will comprise boreholes or, where appropriate, trial pits. Boreholes are best suited for in-situ testing, but trial pits enable better visual inspection of soil conditions. Samples will be collected for laboratory testing and Standard Penetration Tests carried out to allow soil properties to be estimated. Where necessary falling head permeability tests may be performed in the boreholes. The testing of samples is likely to include testing to determine whether the soils are dispersive (pin hole test), Atterberg limits, particle size distribution, undrained shear strength (quick undrained triaxial test) and effective shear strength (consolidated drained triaxial test).

Where appropriate to the works required, sediment samples may also be collected from the riverbed, channel bars, and banks. These samples would be analyzed for particle size distribution in order to assist with the design of dredging, flow training and scour protection works for laboratory testing to determine the soils’ suitability for use in earthworks.

Where sources of borrow material can be identified samples of possible fill material will be collected and samples from these will be tested for classification, compaction, undrained shear strength and their potential to be dispersive. In addition, bulk samples will be taken from trial pits and subjected to the same tests. Results of field observations and geotechnical testing will be used to determine the typical geotechnical properties for use in design.

On the route of the existing dykes on the right bank of the Bojana river, it is necessary for the Company to provide appropriate geological data in accordance with the valid legislation for geological activities in Montenegro. Geological reports should contain information about geological composition of the material from which the existing embankment was built in order to control the stability of the embankment. It is also necessary to provide information on the availability of earthen material to be used for the construction of the embankment / site of the site, the possibility of transport of this material and the distance from the taking earth location to the site etc.

For the purposes of this Detailed design preparation, excavations should be made in the embankment body up to 2.5 m deep.

* At the dyke on the right bank of the Bojana river, it is necessary to excavate 4 geological pits per 1 km of embankment along the section covered for reconstruction. For the length of 13 km, the total number is 52 pits.
* A total of 20 geological pits, should be made on dykes on the Vladimirski creek and Gorički creek.
  + 1. **Hydraulic analysis development**

Hydraulic analysis should be carried out on a section of approx. 26 km long, from the location of the mouth of the Bojana River into the Adriatic Sea to the location where the Bojana River becomes a border river between Montenegro and Albania. For the purpose of undertaking this analysis, it is necessary to perform geodetic surveying of cross sections at the distance of 70-100 m, that consists of geodetic survey of the bottom of the Bojana river, inundation surfaces and dykes on both banks of this river. (as per Geodetic survey considerations outlined above).

Reliable hydrological data of high waters on the Bojana River for the return period of 1/20, 1/50, 1/100 and 1/100 +CC years (Climate Changes) should be used as input to the hydraulic model, which will be developed to provide the calculation of the level of high waters. Also, for the analysis, it is necessary to consider the impact of flow of Bojana River from the Qyrsaq and Zadea dams in Albania upstream of the treated section. The hydraulic model should be calibrated and validated on historical flood events and it would be necessary to undertake analysis of the events when the floods occurred in the last decade, when the release of water from the overflows of these dams resulted in a significant increase of flow in the Bojana River, causing large floods. The work done on the development of the Hec Ras 2D model for the entire Drin River basin within GIZ project “Adaptation to Climate Change in transboundary Flood Risk Management” should be used, with necessary re-calibration and re-validation, as standard modelling procedure. Based on the results of the hydraulic modelling and analysis, adopt a relevant flow for determination of height of dyke on the right bank of the Bojana River, comparing these results with the height of dyke on the left bank of this river in Albania to ensure the appropriate standard of protection is provided on both banks. Using this adopted flow it is necessary to calculate the level of this water and to show it on the cross sections and longitudinal profiles.

In the hydraulic calculation of high water, the influence of the tides of the Adriatic Sea and the influence of high water of Bojana river tributaries in Montenegro shall be taken into account.

For the hydraulic modelling and calculation, it is necessary to use a proven modelling software that will give clear results in terms of high water levels on all considered cross sections, show of high water levels on the longitudinal profile of the watercourse, show of velocities in the waterstream for the flows of the mentioned high water return periods, and outline/layout of flooding area (i.e. flood map) showing flood levels and velocities in the floodplain etc.

Appropriate roughness should be used in the calculation, based on using different value for the main riverbed and the inundation surfaces, considering morphological, land use etc.

In addition to activities on the Bojana river, as part of this project, a hydraulic analysis will be carried out on the Gorički creek and its tributaries. The Gorički creek is a right tributary of the Bojana River, and originates from the Vladimirski and Kravarski creek, where floods occur, and enters the Bojana River near the Gorica village. The total length, section that hydraulic analysis of Goricki Potok will be carried out is approx. 3.0 km, which means section from the junction of the Vladimir and Kravarsky creeks, to the mouth of the Bojana River. The length of section covered by hydraulic analysis on Vladimir creek is approx. 8.5 km, which means the section from the mouth of the Kravarski Potok to the upstream point of Vladimirski creek, near the village of Krute. So, the total length covered by hydraulic analysis on these tributaries is 11.5 km.

The following scenarios in the hydraulic calculation of Gorički and Vladimirski creek must be considered:

- The case when the influence of the tides and the adopted high water of the Bojana River occurs at the same time when the flow of Gorički creek is on the level of return period of 1/10 years high water or lower

- The case when low tide and when high water of Goricki creek occurs with a high water of 1/100 years of returning period, and in the same time, flow of the Bojana river is on level of 1/10 years return period or lower

Check the results of the performed hydraulic analysis of high waters with real occurrence of high waters so far on the analyzed rivers. Also, compare the crown dyke elevations of the Bojana River on the right bank of Montenegro on characteristic profiles, with elevations on existing dykes on the left bank of the Bojana River located in Albania.

* + 1. **Description and guidelines for project design development**

The Detailed design for the rehabilitation of dykes on Bojana River, on the section from the Church of St. Nicholas to the mouth of the canal that flows into the Bojana River from Šaško Lake (location directly southern from Šaško Lake), must be made in accordance with the applicable technical legislation and professional rules for hydrotechnical design area.

In order to develop the main design of the dyke reconstruction, the Company must prepare hydrological, geodetic and geological data, and carry out an appropriate hydraulic calculation based on which the new rehabilitated dyke crown will be performed and all rehabilitation works done.

* + 1. **Preparation of Detailed design**

By the Detailed design of dyke reconstruction is needed to cover a section with a total length of 13.0 km, where dyke overflowing occurs, on different sections and microlocations. The basic parameters for raising the dyke to the required elevation will be obtained from the performed hydraulic analysis and calculations. The height of the rehabilitated dyke crown should be 80 cm above the line of the calculated high water of the Bojana river, as minimum.

As a part of this project design, the following calculations are required:

* Calculation of expected and critical tangential force for the purpose of defining of bottom and slope stability / tangential forces in the curves
* Calculation of water rising in curves
* Calculation of the relevant stone diameter that can be used for local stabilization of eroded sections of dyke, etc.

The detected problems of the Bojana river dyke overflowing are between, the beginning point of the right bank dyke on the Bojana river (St. Nicholas) and location of canal mouth from Šaško lake on the right bank of the Bojana river (on the south from Šaško Lake).

The existing dyke on the Bojana river was constructed with an average crown width of approx. 4.0 m, with a total height of 0.5 m to 3.0-4.0 m. The dyke, on the unprotected side / non-exposed side to the river, was constructed with a horizontal berm / 'path' with an average width of 3.0 m, which was used as an access route for the local population. The inclination of the existing slopes of the dyke is variable and it is from 1: 1.5 to 1: 2. It is noted that, for the needs of the local population, smaller vehicles are using for transportation by the dyke crown.

During the construction of the over-height of the existing dyke, it is necessary to perform excavation of baseline in existing substrate / along the 'foot' of berm and the stepwise incline of the existing dyke should be excavated in order to provide the necessary stability. The slope of the dyke should be at most 1: 1.5. Fill up the soil in layers up to 30 cm of thickness, with constant compaction and eventual wetting to achieve maximum soil weight with optimum humidity. It is obligatory to carry out the compaction test of soil, with a static plate every approx. 100 m of length of this dyke. Pay particular attention to the appearance of coastal waters (water on the coast, 'closed' by dyke). If there are structure/facilities for drainage of coastal waters, it needs to be checked, their condition determined and if the condition is unsatisfactory, needs to be rehabilitated. If these do not exist, it should be designed as part of this project. It is also necessary to carry out control of the dyke related to holes made by the animals, that could endanger water resistance and stability of the dyke and provide measures to fill / close these 'microtunnels' inside the embankment.

After raising of dyke crown to the required height, humidify and grass slopes, geodetic survey using 'as built' conditions and arrange the terrain after the construction works must be completed.

Also, in addition to Bojana river dyke reconstruction, a construction /rehabilitation of the dykes on Vladimirski creek, where floods occur, is required. Reconstruction of these dykes should be carried out on the length of 5.0 km.

In the parts where the dyke is eroded in its foundations, slope or crown, it is necessary to design protection of dyke by stone of appropriate diameter, which will be calculated based on flow velocity and tangential force for the high water appearance of the Bojana river.

On the characteristic sections of dyke, a geotechnical analysis of dyke stability after rehabilitation /crown raising, must be done.

# CONTENT OF PROJECT DESIGN DOCUMENT

* 1. **Hydrology and hydraulic analysis of Bojana river and its tributaries**

Hydrology and hydraulic analysis as a separate document, should contain a text and graphic part with all necessary elements, which will be used as a basis for the preparation of plans and project documents in the future.

**The textual part of the project design**

* General documents: company register document for the activity concerning to the type of design that will be performed, certificates, resolutions, statements, evidence of staff competence, etc.
* Description of all activities carried out, description of method and operation in the software applied for hydraulic calculation, description of results and parameters obtained, description of sections where high water overflows over existing crown dykes, and description of proposals and measures for their rehabilitation.
* Hydrological data processing, calculation and definition of relevant high waters of the Bojana River and hydrological input parameters
* Hydraulic calculation of the high waters of the Bojana River with all parameters for defining the height of the dyke rising on the right bank of this river, to be rehabilitated.
* Table of the results obtained by hydraulic calculation by cross sections

**• The graphic part of project design**

* Overview map with a view of the scope for which hydraulic analysis be performed, in the scale 1: 10000 or 1: 25000
* Detailed layout showing the flooding areas for the existing condition of the dykes on the Bojana River, in the scale of 1: 5000 or 1: 10000.
* Detailed layout showing the flooding areas for the condition after rehabilitation / rising of the dyke on the Bojana river, in the scale of 1: 5000 or 1: 10000.
* Detailed layout with critical sections/points shown, on which water overflows over the crown of dykes is carried out and for which it is necessary to do dyke rehabilitation, at the scale of 1: 2500 or 1: 5000.
* Hydraulic longitudinal profile of the Bojana River for the relevant high waters with the indicated riverbed bottom line, high water level, dyke crown level on the left and right banks of this river and indicated sections for dyke rehabilitation on the right bank of Bojana river, in scale 1: 100/10000.
* Cross sections of the river, indicated relevant levels of high waters of the Bojana River showing the elevations of the relevant high waters at the scale of 1:50, 1: 100 or similar.

**Visualization of project results:**

The Company must develop 3D animation of hydraulic analysis performed that will be part of documents delivered. The 3D animation should be done using one of the best applicable softwares with clear visibility of topographic elements, type of the land surface, river and flooded areas.

* 1. **Detailed design dyke rehabilitation on the right bank of the Bojana river and its tributaries**

The project design should be made at the level of the main project and contain a textual and graphic part with all details and elements for the execution of the planned works.

**The textual part of the project documentation**

The textual part of this main design involves the following:

* General documents: company register document for the activity concerning to the type of design that will be performed, certificates, resolutions, statements, evidence of staff competence, etc.
* Technical description of all activities foreseen by this main design. The technical description should include a description of the subject area, bases for the project design, description of the existing conditions of the Bojana river basin drainage area and embankments, description of the technical solution of dyke rehabilitation, description of all characteristic details and technical elements that are listed in the graphic part of the project design. The technical description shall also include the geological prospecting of the terrain with a description of the locations for borrowing earth materials for the dyke rehabilitation. Also, in this description it is necessary to specify the detailed conditions of construction and maintenance, with special emphasis on way of quality control of the work performed and the materials used.
* Technical conditions of construction for all works performed under this project (preparatory works, surveying / geodetic defining of route of dyke, removal and relocation of underground installations if any, earthworks, prefabricated works if any, finishing works and landscaping, safeguards and fire protection, taking over of works performed, etc.)
* Hydraulic calculations and hydraulic analysis using the appropriate model for the subject sections
* Geotechnical analysis of dyke stability for characteristic cross sections before and after rehabilitation / raising of dyke crown
* Geodetic elements for defining of rehabilitated dyke route with all elements necessary for carrying out these activities, which have to be prepared as a separate document of this main design.
* Bill of quantities of works with calculations shown for each item described. The cost sheet of all works should be made in “excel” format by type of work. In addition to the description of BoQ items, also provide the unit measure designation, quantity, unit price and total price in EUR - currency, and finally show recapitulation by type of work and the total cost for each section, separately.

The **Bill of Quantities** must be performed for all types of works that will be considered through the dyke rehabilitation:

* Preliminary works (geodetic survey of cross-sections, cleaning of municipal waste and defining of landfill for disposal of these materials, cutting and removal of low and high vegetation, building of access roads, etc.)
* Earthwork (removal of the humus and the surface layer of the dyke which is in bad condition and removal to the landfill, transport and filling of the appropriate earth material for making the dyke rising in such a way that the overheight of the dyke crown be done by earth filling from one side of the dyke slope. It is necessary to perform excavation of baseline in existing substrate along the bottom of berm and the stepwise incline of the existing dyke should be excavated in order to provide the necessary stability, compaction of the filled material in layers with a maximum thickness of 30 cm with a static plate test conducted, planning of the surface of the dyke crown, excavation of the ditch in the embankment foundation, construction of transitional ramps over the embankment, construction of access ramps into the inundation area etc.)
* Installation works (possible rehabilitation or construction of facilities for drainage of coastal waters, etc.)
* Finishing works (smoothing and grass cover of embankment surface, bringing the surrounding terrain to its original condition, geodetic surveying of rehabilitated dykes, etc.)

Bill of quantities should show proofs of calculations for each item where the procedure for obtaining the calculated quantity will be clearly visible. In addition, a table of earthworks / main works, should be prepared and enclosed BoQ, which will take into account the quantities on each cross section of the Bojana River / embankment.

In this BoQ, apart from usual types of works, it is necessary that Company provide elaboration of geodetic survey and drawings of rehabilitated dyke – as built design.

In the description of the items of BoQ, define in detail the technical standards of quality of materials and equipment for execution. The Company is also obliged to submit this BoQ in digital form (Microsoft Office Excel).

Important: The BoQ should be done for entire length covered by detailed design (BoQ for Bojana River and BoQ for Gorički and Vladimirski creek, separately) and BoQs in phases/ by priority sections, in lengths that will depend of available Drin FRM Project budget for civil works.

The above will be agreed in coordination with UNDP Montenegro and national counterparts.

* **Graphic part of project design**

Within the graphic part of the project documentation, the following should be done:

* Overview map should be developed in which it is necessary to indicate the watercourse, all major structures, scope of the Detailed design and the sections of the dyke being reconstructed. Prepare the review layout in one of the following scales: 1: 5000, 1: 10000 or 1: 25000.
* On detailed layouts, indicate all the sections where the dyke is going to be reconstructed / raised on the right bank of the Bojana River, indicate the stations and lengths of sections planned for reconstruction, show description of important structures, objects, etc. Prepare detailed layouts at a scale of 1: 1000, 1: 2500 or similar.
* For each section planned to the dyke reconstruction, prepare a longitudinal profile with stationary sections, indicated sections for reconstruction with shown lengths, the elevations of the bottom of the Bojana riverbed by cross sections, the elevations of the existing dyke crown on the right and left banks by the profiles, the elevations of the reconstructed / raised crown of dyke at right bank, coast elevations behind the dykes, etc. Prepare longitudinal profiles in the scale 1: 100/1000 or similar.
* Normal profiles of the Bojana river have to be designed, with a focus on the embankment on the right bank that will be reconstructed. On normal profiles, must be indicated the sections to which it applies, the width of the dyke crown, the width of the berm/path on the dyke, the total width of the embankment at the bottom, the height relative to the surrounding terrain, the inclination of the dyke slope. Normal profiles prepare in the scale of 1:25, 1:50 or similar.
* The cross sections of the Bojana river need to be prepared showing the embankment on the right bank that is going to be reconstructed. On the cross sections, show the elevations of the relevant high waters, the elevations of the existing embankment crown and the position of the reconstructed / raised dyke with the position of the operational polygon for the works performing, as well as the width of the embankment crown, the height of the embankment, the inclination of the slopes of the embankment, etc. Prepare these design drawings in the scale of 1:50, 1: 100, or similar.
* Detail of structures of coastal waters drainage and details of reconstruction of existing sewerage outlets in the body of the embankment have to be made, if any. For these details, prepare these drawings in the scale of 1:25 or similar.
* All other details regarding the dyke reconstruction / dyke raising, must be done.

**Visualization of project results:**

The Company must develop 3D animation of Detailed design developed, that will be part of documents delivered. The 3D animation should be done using one of the best applicable softwares with clear visibility of topographic elements, river and river structures/dykes.

# ENVIRONMENTAL SAFEGUARDS

A policy of proposing and implementing of safeguards is one of the most important ways to prevent and mitigate unnecessary harm to people and their environment while carrying out planned activities. During the identifying and preparing a project, safeguards aim is to help assess the potential environmental and social risks and impacts (positive or negative) connected to planned activities. During project implementation, safeguards also have the task of helping to define measures and processes for effective risk management and amplification of positive impacts.

The current laws related to environment of Montenegro, that need to be followed are:

* + - The Environmental Law of Montenegro (“Official Gazette of Montenegro No.27-1/15-1/11, 28.07.2016”)
    - The Law of environmental impact assessment of Montenegro (“Official Gazette of Montenegro No.075/18, 23.11.2018”)
    - Air protection law of Montenegro (“Official Gazette of Montenegro No.025/10, 05.05.2010, 040/11, 08.08.2011, 043/15, 31.07.2015”)
    - The Law on noise protection of Montenegro (“Official Gazette of Montenegro No.028/11, 10.06.2011, 001/14, 09.01.2014, 002/18, 10.01.2018”).
  1. **Potential environmental impacts of regulation works /river works**

As part of this project, it is necessary to analyze and assess the environmental impact of the planned works and to define measures to mitigate these impacts.

Contamination, which may occur at various stages of construction, reconstruction or rehabilitation, is temporary in nature and can be mitigated by applying standard measures to reduce these impacts, as well as by applying good engineering experience, applying codes of good construction practice and regular maintenance for specific cases.

Generally speaking, the potential effects that need to be focused on, during the implementation of the planned regulation works/river works are: soil degradation by pollution of the surrounding soil by the emission of gases, dust or heavy metals from transport vehicles / construction machinery, temporary construction sites, temporary roads or disposal waste; water pollution by discharging various waste products from the construction site process and site complexes (liquids, particles and solid waste) onto shorelines or directly into river beds leads to the spread of pollution along watercourses with a negative impact on flora and fauna; discharge of used water from construction sites (technological and hygienic) into watercourses, disturbance of groundwater (groundwater cycle and quality of water resources) as a result of excavation; air pollution by increased concentrations of pollutants - dust and exhaust gases from vehicles (machines involved in the works); noise from human presence and on-site work, vehicle movement and construction machinery; disturbance of flora and fauna by increased noise level, and influences that can occur during the work due to improper and negligent operation and handling of equipment, whereby the watercourse can reach: parts of used formwork, packaging in which building material is wrapped and stored, construction steel, flakes and solidified concrete, insulating materials, paints, varnishes and solvents, construction machinery, oil from machine hydraulics, oil for the operation of construction machinery, etc.

Particular attention should be paid to the specific types of activities that will be performed as part of the regulation works/river works, which in this case is earthworks. Earthworks will be performed at the contact of the water surface with the slope of the riverbank/dyke. At this contact it is impossible to completely avoid partial erosion and entry of amounts of soil into the river. The eroded land will be partly carried off by the river stream and partly deposited on parts of the coast with lower velocity. During earthworks, the occurrence of rain events can lead to the erosion of surface dust and runoff into the watercourse, which can increase turbidity on downstream sections. Dust particles carried by the wind reach the surface of the watercourse, which can further pollute the watercourse.

Any possible impacts on the Albanian side of the river caused by embankment reconstruction in Montenegro should be analyzed to the extent possible, appropriate for this type of intervention.

* 1. **Measures to mitigate impact on environment**

Measures to mitigate the impact of planned works and activities on the environment need to be defined for:

* air quality
* water quality
* soil
* flora and fauna
* natural heritage
* cultural and historical heritage
* noise
* visual effects
* waste management
* accidents
* transboundary impact
* society and economy

For each of these impacts it is necessary to define separately:

* character of influence (positive / negative)
* spatial reach of impact (limited / possible spread)
* duration / frequency of impact
* probability of impact (safe / probable)
* the intensity and the ability to mitigate the negative impact

This part of the project needs to be done in accordance with local legislation and appropriate international standards.

# SOCIAL SAFEGUARDS

As part of this project, it is necessary to undertake an assessment of the social impact of the planned activities on the society and identify the measures be taken to mitigate any negative impacts. The main activities to be covered by this part of the project are:

* Population displacement: Resettlement should not be considered as an option. Thus, no engineering solution should be proposed, which might include resettlement
* Impacts on the most vulnerable groups: Analyze whether there are vulnerable groups that can feel the direct impact caused by the project
* Gender equality: Analyze the level of human development, looking specifically at how women “score” on income, education and health (GDI measures), and exam the gap between women and men in four categories: economic participation and opportunity, educational attainment, health and survival and political empowerment (GGGI)
* Land expropriation: It should not be considered as an option.
* Economy: Analyze whether the level of business activity and employment will increase as a result of project implementation
* Security: Considering the nature of the work to be carried out whether an increased level of security for the local population is required.

It is necessary to analyze whether there are other activities that should include aspects of social protection, and if any, they should be covered by the project and appropriate safeguards and measures that will mitigate these impacts should be defined.

The Company will be required to follow the project Social and Environmental Safeguards Plan.

# OPERATING AND MAINTENANCE PLAN

The operation and maintenance plan of controlled rivers must be prepared to establish in one primary controlled document (with associated supporting documents) the complete, accurate, current structure-oriented instructions for operation and maintenance of rivers and canals. This plan includes all applicable operating instructions to adequately, safely, and reliably operate rivers including its structures.

The purpose is to ensure adherence to approved operating procedures over long periods of time and during changes in operating personnel.

The plan must be prepared primarily for the use of operating personnel located at or nearest to the river structures and their immediate supervisors (i.e. section officers) who are assigned the responsibility for the operation and maintenance of the river.

This plan contains as a minimum all information and instructions necessary for operating personnel and section officers to perform their duties.

The works in the riverbed and on the riverbanks include the following:

• necessary removal of channel silt and/or aquatic weed growth

• removal of obstructions from the river which restrict the free flow of water

• general maintenance (which may include upgrade or replacement if necessary) of grilles, culverts/outlets, flap-valves

• construction, repair or protection of flood defenses, culverts/outlets, revetments and watercourse structures

• measures for the protection or rehabilitation of fishery, conservation or other interests. The embankments considered herein are of earth-fill construction and it include the following elements that must be controlled:

**a. Erosion:** Erosion involves the loss of embankment material due to wind and water action. It reduces the cross section and undermines structures, thereby impairing the safety and stability of the embankment and structures.

Semiannually and after heavy rains, inspect for erosion and replace lost material is necessary.

**b. Trees and Vegetation:** Trees and deep-rooted vegetation on embankments create voids and provide seepage flow paths when the roots decay. Upon reaching maturity, trees are also susceptible to being toppled and shortened seepage paths in the embankment.

Semi-annually inspect embankments and flow channels for tree, brush, and shrub growth and remove such growth by cutting at the ground line and removing the cuttings.

**c. Animal burrows:** Animal burrows in embankments can create seepage paths and weaken the integrity of the structure. Often, animals burrow deep into the embankment which allows water to travel freely to the downstream face, thus allowing piping to occur and ultimate failure of the dyke.

Monthly inspect for animal burrows, excavate burrows to the maximum extent possible, filling excavation with earth material tamped and compacted into place, and eliminating the burrowing animals, is needed.

**d. Encroachments:** Encroachments may occur in various ways, including buried utilities, utility lines and poles on the embankment top and side slopes of embankments, construction of buildings on embankments, and removal of embankment material to accommodate construction or to obtain material for other use. Encroachments weaken embankments and may seriously jeopardize the integrity of the structure.

Weekly inspect for encroachments is required.

**e. Stability and settlement:** Sloughs, slumps, bulges, depressions in the top of the bund, cracks, or other irregularities are often signs of instability and settlement of the embankment or foundation, or both.

Quarterly inspect embankments for sloughs, slumps, bulges, depression and cracks, is needed.

**f. Seepage:** Seepage occurs to some extent at almost all embankments. The monitoring and control of any seepage are essential to proper maintenance. The amount of seepage may vary from wet spots to large quality flows. Uncontrolled seepage (large flows or flows that carry sediment) indicates internal erosion, which weakens the embankment, foundation, or abutments; creates voids; and leads to embankment failure. Where possible, the quantity of seepage should be measured and recorded in a logbook. Water measurement weirs and devices may need to be constructed and installed.

At least semiannually and especially during periods of river carrying heavy discharges, inspect and record the quantity and clarity of seepage must be taken. Inspect downstream slope for piping, sloughing, sand boils. Watch for vortex in canal water.

**g. Slope protection:** The river/canal lining, if any, must be protected against destructive action. The canal lining is sometimes distressed, displaced, and impaired by various causes, including deterioration of concrete surface, settlement, or removal by humans for use elsewhere, or to accommodate recreational use such as building a seat for placing a pump or a windbreak for fishing. Annually inspect the river slopes is required.

Also, this plan must contain number of operating staff, mechanization and equipment needed to perform mentioned activities. The Company must consider and give estimated costs of full long-term Operation and Maintenance plan.

# REQUIRED STAFF QUALIFICATIONS AND DESIGN PREPARATION DEADLINE

* 1. **General conditions for the Bidder**

For preparation of this project, the Bidder must meet the following conditions:

* The preparation of the main project should be done by a legal entity / company with an official license for preparation of project documentation in Montenegro. If the Bidder is consortium (or similar type of business association), the references of all the companies / members of the consortium will be evaluated cumulatively.
* For the purpose of development of this project documentation, the Bidder must have experience in the preparation of project documentation in the field of river hydrotechnics/river hydraulics, minimum 5 years. It is necessary to submit a minimum of 3 reference letter in the subject area for the last 5 years, for projects of similar scale and value. If the Bidder is consortium (or similar type of business association), the references of all the companies / members of the consortium will be evaluated cumulatively.
* The Bidder must have at least 5 permanent Designers available to perform this work. Details of the required qualifications of the work staff are given in the next section. Proposed Project Design Manager, Geologist and Surveyor must be holders of a valid licenses to perform requested tasks in Montenegro.

During the preparation of project documentation, the Company must adhere to the following:

* The Detailed design should contain all elements in accordance with the "Rulebook on the Method of Design and Content of Technical Documentation for the Construction" / "Official Gazette of Montenegro", No. 044/18 of 06.07.2018), "Law of Spatial Planning and construction"(Official Gazette of Montenegro 64/2017) and" Rulebook of the Method of Design, Scale and Close Content of Technical Documentation "/" Official Gazette of Montenegro "No.23-14 of May 30, 2014, following the rules of the profession for field of river hydrotechnics/hydraulics.
* In order to meet the requirements of the Work Safety Law and Health Act, the Bidder is obliged to comply with the applicable legal regulations.

The design development should cover all aspects of the design experience of the hydrotechnical profession in the field of river hydrotechnics/hydraulics, which can affect the quality of the technical solution and at the end, on realization of this project.

* 1. **Required staff qualifications**

To prepare this project documentation, the Bidder must have the following personnel available:

**a. Project Design Manager:**

Master of Civil Engineering / Hydro-engineering department, with work experience of min. 10 years of project documentation preparation in the field of river hydrotechnics/hydraulics, who is permanent employee of the Bidder - 1 engineer. Experience in design of river structures, hydraulic analysis development and similar. Experience in the South East Europe (SEE) region will be consider as advantage.

**b. Project Engineers/Designers:**

Bachelor of Civil Engineering, Master of Civil Engineering will be considered as advantage - Hydro-engineering department, with work experience of min. 5 years of project design preparation in the field of river hydrotechnics/hydraulics, who is permanent employee of the Bidder - 5 engineers. Experience in design of river structures (river regulations and river dykes), hydraulic analysis development and modeling softwares. Experience in the SEE region will be consider as advantage.

**c. Hydrologist:**

Bachelor of Engineering – Hydrologist, Master degree will be considered as advantage, with work experience of min. 10 years in the field of hydrology with experience in hydrology processing data, hydrology calculations, who is permanent employee of the Bidder or hired as external expert / consultant - 1 expert. Experience in the SEE region will be consider as advantage.

**d. Hydraulic Modeller:**

Bachelor of Engineering / Hydraulic Engineering, Master degree will be considered as advantage, with work experience of min. 10 years in the field of hydraulic assessment of flood risk and the design of flood protection structures who is permanent employee of the Bidder or hired as external expert / consultant - 1 engineer. Experience in conducting of hydraulic analysis of the rivers and open canals, experience in modeling software (HEC Ras, Mike 11 or similar softwares). Experience in the SEE region will be consider as advantage.

**e. Geologist:**

Bachelor of science in geology, Master of geology will be considered as advantage, with work experience of min. 7 years in the field of geology who is a permanent employee of the Bidder or hired as external expert / consultant - 1 engineer. Experience in geology works on river embankments would be an asset. Experience in the SEE region will be consider as advantage.

**f. Geotechnical Engineer:**

Bachelor in Geotechnical or Civil Engineering, Master degree will be considered as advantage, with 7 years of related experience, who is a permanent employee of the Bidder or hired as external expert / consultant - 1 engineer. Experience performing geotechnical investigations, including drilling, field testing/sampling, instrumentation, and test pitting, experience in the design and construction of embankments, experience monitoring earthwork and foundation related construction, experience with civil/site design and modeling software, including AutoCAD, HydroCAD, Slope/W and Seep/W is preferred. Experience in the SEE region will be consider as advantage.

**g. Surveyor:**

Bachelor of geodetic engineering, Master degree will be considered as advantage, with minimum of 7 years work experience in the field of geodesy who is a permanent employee of the Bidder or hired as external expert / consultant - 1 engineer. Experience in conducting topographic surveys for the structural measures in the following areas: riverbank protection measures, flood protection measures, riverbed strengthening/protection measures (minimum requirement). Experience in the SEE region will be consider as advantage.

**h. Environmental engineer:**

Bachelor of science in environmental, Master degree will be consider as advantage, with a work experience of min. 7 years in the field of environmental protection who is a permanent employee of the Bidder or hired as external expert / consultant – 1 engineer. Experience in the SEE region will be consider as advantage.

**i. Social safeguards specialist:**

Bachelor of science in Social Engineering, Master degree will be considered as advantage, with a work experience of min. 7 years in the field of social safeguards documents preparation, who is a permanent employee of the Bidder or hired as external expert / consultant – 1 expert. Experience in the SEE region will be consider as advantage.

* 1. **Deadline of project design preparation**

The total timeframe of preparation of the project design, which involves the preparation of a hydrology and hydraulic analysis of the Bojana river with its tributaries (Goricki and Vladimirski Creek), and the preparation of the Detailed design for the reconstruction of the embankments on the right bank of the Bojana River and Vladimirski and Goricki Creek is 9 months from the date of signing the contract for performing these activities. The schedule of these activities is given below:

* Hydrological data collection and hydrological calculations/modelling, as a base for preparation of the design, total 3 months
* Geodetic survey of terrain/cross sections on the rivers and dykes, total 4 months
* Condition survey of existing embankment, total 3 months
* Excavation of geological pits on existing dyke on the rivers and reports preparation, total 2 months
* Hydraulic analysis/modelling of the rivers, for a total 3 months
* Preparation of Detailed design for the reconstruction of river dykes, for a total 5 months.

**The planned project activities are shown in the following table:**

Table No. 2 Deadlines of project design preparation

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Activities | Time (months) | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|
| **Component 1: Hydraulic analysis of Bojana river with its tributaries (Gorički i Vladimirski creek)** |  | | | | | | | | | |
| Condition survey study, total 3 months |  |  |  |  |  |  |  |  |  |
| Hydrological data collection and hydrological calculations, total 3 months |  |  |  |  |  |  |  |  |  |
| Geodetic survey of terrain/cross sections of the rivers and dykes, total 4 months |  |  |  |  |  |  |  |  |  |
| Hydraulic analysis/modelling of the rivers, total 3 months |  |  |  |  |  |  |  |  |  |
| **Component 2: Preparation of Detailed design for the reconstruction of dykes on Bojana river with its tributaries (Gorički i Vladimirski creek)** |  | | | | | | | | | |
| Excavation of geological pits on existing dyke on the right bank of the Bojana river and reports preparation, total 2 months |  |  |  |  |  |  |  |  |  |
| Preparation of the Detailed design for the reconstruction of the river dykes, for a total 5 months |  |  |  |  |  |  |  |  |  |

# DELIVERABLES OF PROJECT DOCUMENTATION AND PAYMENTS TO COMPANY

It is obligatory to submit reports with completed parts of the project in the following order, also showing the percentage of payment to Company:

**Table No.3 Deliverables of project documents and payments to the Contractor**

|  |  |  |  |
| --- | --- | --- | --- |
| **Activities** | **Date of project documentation delivery** | **Percentage of payment to Company** | **Type of payment to Company** |
|
|
| **Component 1: Hydraulic analysis of Bojana river with its tributaries (Gorički i Vladimirski creek)** | | | |
| 1.1. Deliverable of condition survey study | 1-August-20 | 10% | payment after document accepted |
| 1.2. Deliverable of hydrological data and hydrological calculations | 1-August-20 | 10% | payment after document accepted |
| 1.3. Deliverable of geodetic survey of the rivers and dykes - of Bojana river with its tributaries (Gorički i Vladimirski creek) | 1-September-20 | 10% | payment after document accepted |
| 1.4. Deliverable of hydraulic analysis/modelling of the rivers | 1-November-20 | 25% | payment after document accepted |
| **Component 2: Preparation of Detailed design for the reconstruction of dykes on Bojana river with its tributaries (Gorički i Vladimirski creek)** | | | |
| 2.1. Completion of excavation of geological pits on the rivers and deliverable of reports prepared | 1-July-20 | 15% | payment after document accepted |
| 2.2. Deliverable of Detailed design for the reconstruction of the river dykes with environmental and social safeguards and operating and maintenance plan | 25-January-21 | 30% | upon completion of revision of detailed design |

**The subject documentation must be submitted to the UNDP Montenegro in printed form (5 hard copies - 3 in Montenegrin language, 2 in English) and in electronic form - CD (2 copies - 1 in the language of Montenegro and 1 in English).**

**Every part of document delivered to UNDP Montenegro will be reviewed and accepted or not accepted/given back on corrections to Company. Reviewing of documents will be completed within 10 days after documents submission.**

**All documentation developed will be subject of audit by a licensed company.**

Other obligations of the Company:

* Site visit of key team/ mandatory activity - once as a minimum, as agreed with UNDP Montenegro and Ministry of Agriculture and Rural Development
* Presentation of project design progress and results/ mandatory activity - presentation after each activity completed, described in Table No. 3

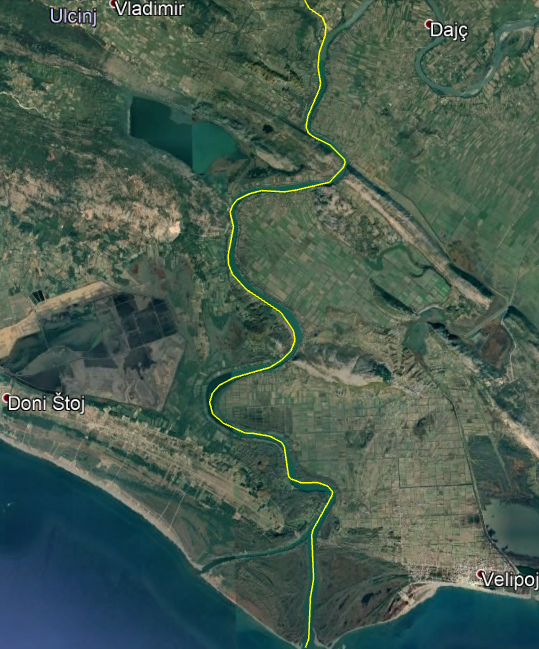
**Note: The Company must submit separate finance offer for planned safeguards activity.**

# ANNEXES

**Annex 1\_Layout of Bojana river basin (Thematic report on socio-economics of the extended Drin River Basin\_Global Water Partnership 2017)**



**Annex 2\_ Overview map of planned activities for development of hydraulic analysis and Detailed design of dyke reconstruction on the right bank of Bojana river**

****

MAIN DESIGN SECTION /CONDITION SURVEY STUDY L=13 km

HYDRAULIC ANALYSIS SECTION, L=26 km

Bojana river

**Annex 3\_ Overview map of planned activities for preparation of hydraulic analysis and Detailed design of dyke reconstruction on tributaries Goricki and Vladimirski creek**

****

MAIN DESIGN SECTION/CONDITION SURVEY STUDY L=5,0 km

HYDRAULIC ANALYSIS SECTION, L=11,5 km

Gorički creek

Vladimirski creek

# Section 6: Returnable Bidding Forms / Checklist

This form serves as a checklist for preparation of your Proposal. Please complete the Returnable Bidding Forms in accordance with the instructions in the forms and return them as part of your Proposal submission. No alteration to format of forms shall be permitted and no substitution shall be accepted.

Before submitting your Proposal, please ensure compliance with the Proposal Submission instructions of the BDS 22.

**Technical Proposal Envelope:**

|  |  |
| --- | --- |
| **Have you duly completed all the Returnable Bidding Forms?** |  |
| * Form A: Technical Proposal Submission Form |  |
| * Form B: Bidder Information Form |  |
| * Form C: Joint Venture/Consortium/ Association Information Form |  |
| * Form D: Qualification Form |  |
| * Form E: Format of Technical Proposal |  |
| * Form H: Proposal Security Form |  |
| [Add other forms as necessary] |  |
| **Have you provided the required documents to establish compliance with the evaluation criteria in Section 4?** |  |

**Financial Proposal Envelope**

**(Must be submitted in a separate sealed envelope/password protected email)**

|  |  |
| --- | --- |
| * Form F: Financial Proposal Submission Form |  |
| * Form G: Financial Proposal Form |  |

## **Form A:** Technical Proposal Submission Form

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Bidder: | [Insert Name of Bidder] | Date: | Select date |
| RFP reference: | [Insert RFP Reference Number] | | |

We, the undersigned, offer to provide the services for [Insert Title of services] in accordance with your Request for Proposal No. [Insert RFP Reference Number] and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal and our Financial Proposal sealed under a separate envelope.

We hereby declare that our firm, its affiliates or subsidiaries or employees, including any JV/Consortium /Association members or subcontractors or suppliers for any part of the contract:

1. is not under procurement prohibition by the United Nations, including but not limited to prohibitions derived from the Compendium of United Nations Security Council Sanctions Lists;
2. have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization;
3. have no conflict of interest in accordance with Instruction to Bidders Clause 4;
4. do not employ, or anticipate employing, any person(s) who is, or has been a UN staff member within the last year, if said UN staff member has or had prior professional dealings with our firm in his/her capacity as UN staff member within the last three years of service with the UN (in accordance with UN post-employment restrictions published in ST/SGB/2006/15);
5. have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against them that could impair their operations in the foreseeable future;
6. undertake not to engage in proscribed practices, including but not limited to corruption, fraud, coercion, collusion, obstruction, or any other unethical practice, with the UN or any other party, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the UN and we embrace the principles of the United Nations Supplier Code of Conduct and adhere to the principles of the United Nations Global Compact.

We declare that all the information and statements made in this Proposal are true and we accept that any misinterpretation or misrepresentation contained in this Proposal may lead to our disqualification and/or sanctioning by the UNDP.

We offer to provide services in conformity with the Bidding documents, including the UNDP General Conditions of Contract and in accordance with the Terms of Reference

Our Proposal shall be valid and remain binding upon us for the period of time specified in the Bid Data Sheet.

We understand and recognize that you are not bound to accept any Proposal you receive.

I, the undersigned, certify that I am duly authorized by [Insert Name of Bidder] to sign this Proposal and bind it should UNDP accept this Proposal.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[*Stamp with official stamp of the Bidder*]

## **Form B:** BidderInformation Form

|  |  |
| --- | --- |
| **Legal name of Bidder** | [Complete] |
| **Legal address** | [Complete] |
| **Year of registration** | [Complete] |
| **Bidder’s Authorized Representative Information** | Name and Title: [Complete]  Telephone numbers: [Complete]  Email: [Complete] |
| **Are you a UNGM registered vendor?** | Yes  No If yes, [insert UGNM vendor number] |
| **Are you a UNDP vendor?** | Yes  No If yes, [insert UNDP vendor number] |
| **Countries of operation** | [Complete] |
| **No. of full-time employees** | [Complete] |
| **Quality Assurance Certification (e.g. ISO 9000 or Equivalent) (***If yes, provide a Copy of the valid Certificate):* | [Complete] |
| **Does your Company hold any accreditation such as ISO 14001 related to the environment?** *(If yes, provide a Copy of the valid Certificate):* | [Complete] |
| **Does your Company have a written Statement of its Environmental Policy?** *(If yes, provide a Copy)* | [Complete] |
| **Contact person UNDP may contact for requests for clarification during Proposal evaluation** | Name and Title: [Complete]  Telephone numbers: [Complete]  Email: [Complete] |
| **Please attach the following documents:** | * Company Profile, which should not exceed fifteen (15) pages, including printed brochures and product catalogues relevant to the goods/services being procured * Certificate of Registration of the business, including Articles of Incorporation, or equivalent document if Bidder is not a corporation * Tax Registration/Payment Certificate issued by the Internal Revenue Authority evidencing that the Bidder is updated with its tax payment obligations, or Certificate of Tax exemption, if any such privilege is enjoyed by the Bidder * Agreement among the legal entities, if the Proposer is a group of legal entities that will form or have formed a joint venture, consortium or association at the time of the submission of the Proposal * Official Letter of Appointment as local representative, if Bidder is submitting a Bid in behalf of an entity located outside the country * Quality Certificate (e.g., ISO 9001, ISO 27001, ITIL) and/or other similar certificates, accreditations, awards and citations received by the Bidder, if any * CVs of Key Personnel * Latest audited Financial Statement (Income Statement and Balance Sheet) for the past *3 years* * Statement of Satisfactory Performance from the Top 3Clients in terms of Contract Value in the past 5 years, including contacts for reference * Local Government permit to locate and operate in assignment location, if applicable |

## 

## **Form C:** Joint Venture/Consortium/Association Information Form

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Bidder: | [Insert Name of Bidder] | Date: | Select date |
| RFP reference: | [Insert RFP Reference Number] | | |

To be completed and returned with your Proposal if the Proposal is submitted as a Joint Venture/Consortium/Association.

|  |  |  |
| --- | --- | --- |
| **No** | **Name of Partner and contact information** *(address, telephone numbers, fax numbers, e-mail address)* | **Proposed proportion of responsibilities (in %) and type of services to be performed** |
| 1 | [Complete] | [Complete] |
| 2 | [Complete] | [Complete] |
| 3 | [Complete] | [Complete] |

|  |  |
| --- | --- |
| **Name of leading partner**  (with authority to bind the JV, Consortium, Association during the RFP process and, in the event a Contract is awarded, during contract execution) | [Complete] |

We have attached a copy of the below document signed by every partner, which details the likely legal structure of and the confirmation of joint and severable liability of the members of the said joint venture:

Letter of intent to form a joint venture ***OR***  JV/Consortium/Association agreement

We hereby confirm that if the contract is awarded, all parties of the Joint Venture/Consortium/Association shall be jointly and severally liable to UNDP for the fulfillment of the provisions of the Contract.

|  |  |
| --- | --- |
| Name of partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Name of partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  |  |
| Name of partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Name of partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

## 

## **Form D:** QualificationForm

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Bidder: | [Insert Name of Bidder] | Date: | Select date |
| RFP reference: | [Insert RFP Reference Number] | | |

If JV/Consortium/Association, to be completed by each partner.

**Historical Contract Non-Performance**

|  |  |  |  |
| --- | --- | --- | --- |
| Contract non-performance did not occur for the last 3 years | | | |
| Contract(s) not performed for the last 3 years | | | |
| **Year** | **Non- performed portion of contract** | **Contract Identification** | **Total Contract Amount** (current value in US$) |
|  |  | Name of Client:  Address of Client:  Reason(s) for non-performance: |  |

**Litigation History** (including pending litigation)

|  |  |  |  |
| --- | --- | --- | --- |
| No litigation history for the last 3 years | | | |
| Litigation History as indicated below | | | |
| **Year of dispute** | **Amount in dispute** (in US$) | **Contract Identification** | **Total Contract Amount** (current value in US$) |
|  |  | Name of Client:  Address of Client:  Matter in dispute:  Party who initiated the dispute:  Status of dispute:  Party awarded if resolved: |  |

**Previous Relevant Experience**

Please list only previous similar assignments successfully completed in the last 10 years.

List only those assignments for which the Bidder was legally contracted or sub-contracted by the Client as a company or was one of the Consortium/JV partners. Assignments completed by the Bidder’s individual experts working privately or through other firms cannot be claimed as the relevant experience of the Bidder, or that of the Bidder’s partners or sub-consultants, but can be claimed by the Experts themselves in their CVs. The Bidder should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so requested by UNDP.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project name & Country of Assignment** | **Client & Reference Contact Details** | **Contract Value** | **Period of activity and status** | **Types of activities undertaken** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

*Bidders may also attach their own Project Data Sheets with more details for assignments above.*

  Attached are the Statements of Satisfactory Performance from the Top 3 (three) Clients or more.

**Financial Standing**

|  |  |
| --- | --- |
| **Annual Turnover for the last 3 years** | Year       EUR  Year       EUR  Year       EUR |
| **Latest Credit Rating (if any), indicate the source** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Financial information**  (EUR) | **Historic information for the last 3 years** | | |
|  | Year 1 | Year 2 | Year 3 |
|  | *Information from Balance Sheet* | | |
| Total Assets (TA) |  |  |  |
| Total Liabilities (TL) |  |  |  |
| Current Assets (CA) |  |  |  |
| Current Liabilities (CL) |  |  |  |
|  | *Information from Income Statement* | | |
| Total / Gross Revenue (TR) |  |  |  |
| Profits Before Taxes (PBT) |  |  |  |
| Net Profit |  |  |  |
| Current Ratio |  |  |  |

 Attached are copies of the audited financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following condition:

* 1. Must reflect the financial situation of the Bidder or party to a JV, and not sister or parent companies;
  2. Historic financial statements must be audited by a certified public accountant;
  3. Historic financial statements must correspond to accounting periods already completed and audited. No statements for partial periods shall be accepted.

## **Form E:** Format ofTechnical Proposal

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Bidder: | [Insert Name of Bidder] | Date: | Select date |
| RFP reference: | [Insert RFP Reference Number] | | |

The Bidder’s proposal should be organized to follow this format of Technical Proposal. Where the bidder is presented with a requirement or asked to use a specific approach, the bidder must not only state its acceptance, but also describe how it intends to comply with the requirements. Where a descriptive response is requested, failure to provide the same will be viewed as non-responsive.

**SECTION 1: Bidder’s qualification, capacity and expertise**

* 1. Brief description of the organization, including the year and country of incorporation, and types of activities undertaken.
  2. General organizational capability which is likely to affect implementation: management structure, financial stability and project financing capacity, project management controls, extent to which any work would be subcontracted (if so, provide details).
  3. Relevance of specialized knowledge and experience on similar engagements done in the region/country.
  4. Quality assurance procedures and risk mitigation measures.
  5. Organization’s commitment to sustainability.

**SECTION 2: Proposed Methodology, Approach and Implementation Plan**

This section should demonstrate the bidder’s responsiveness to the TOR by identifying the specific components proposed, addressing the requirements, providing a detailed description of the essential performance characteristics proposed and demonstrating how the proposed approach and methodology meets or exceeds the requirements. All important aspects should be addressed in sufficient detail and different components of the project should be adequately weighted relative to one another.

* 1. A detailed description of the approach and methodology for how the Bidder will achieve the Terms of Reference of the project, keeping in mind the appropriateness to local conditions and project environment. Details how the different service elements shall be organized, controlled and delivered.
  2. The methodology shall also include details of the Bidder’s internal technical and quality assurance review mechanisms.
  3. Explain whether any work would be subcontracted, to whom, how much percentage of the work, the rationale for such, and the roles of the proposed sub-contractors and how everyone will function as a team.
  4. Description of available performance monitoring and evaluation mechanisms and tools; how they shall be adopted and used for a specific requirement.
  5. Implementation plan including a Gantt Chart or Project Schedule indicating the detailed sequence of activities that will be undertaken and their corresponding timing.
  6. Demonstrate how you plan to integrate sustainability measures in the execution of the contract.
  7. Any other comments or information regarding the project approach and methodology that will be adopted.

**SECTION 2A: Bidder’s Comments and Suggestions on the Terms of Reference**

Provide comments and suggestions on the Terms of Reference, or additional services that will be rendered beyond the requirements of the TOR, if any.

**SECTION 3: Management Structure and Key Personnel**

* 1. Describe the overall management approach toward planning and implementing the project. Include an organization chart for the management of the project describing the relationship of key positions and designations. Provide a spreadsheet to show the activities of each personnel and the time allocated for his/her involvement.
  2. Provide CVs for key personnel that will be provided to support the implementation of this project using the format below. CVs should demonstrate qualifications in areas relevant to the Scope of Services.

**Format for CV of Proposed Key Personnel**

|  |  |
| --- | --- |
| Name of Personnel | [Insert] |
| Position for this assignment | [Insert] |
| Nationality | [Insert] |
| Language proficiency | [Insert] |
| Education/ Qualifications | *[Summarize college/university and other specialized education of personnel member, giving names of schools, dates attended, and degrees/qualifications obtained.]* |
| [Insert] |
| Professional certifications | *[Provide details of professional certifications relevant to the scope of services]* |
| * Name of institution: [Insert] * Date of certification: [Insert] |
| Employment Record/ Experience | *[List all positions held by personnel (starting with present position, list in reverse order), giving dates, names of employing organization, title of position held and location of employment. For experience in last five years, detail the type of activities performed, degree of responsibilities, location of assignments and any other information or professional experience considered pertinent for this assignment.]* |
| [Insert] |
| References | *[Provide names, addresses, phone and email contact information for two (2) references]* |
| Reference 1:  [Insert]  Reference 2:  [Insert] |

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe my qualifications, my experiences, and other relevant information about myself.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Personnel Date (Day/Month/Year)

## **Form F:** Financial Proposal Submission Form

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Bidder: | [Insert Name of Bidder] | Date: | Select date |
| RFP reference: | [Insert RFP Reference Number] | | |

We, the undersigned, offer to provide the services for [Insert Title of services] in accordance with your Request for Proposal No. [Insert RFP Reference Number] and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal and our Financial Proposal sealed under a separate envelope.

Our attached Financial Proposal is for the sum of [Insert amount in words and figures].

Our Proposal shall be valid and remain binding upon us for the period of time specified in the Bid Data Sheet.

We understand you are not bound to accept any Proposal you receive.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[*Stamp with official stamp of the Bidder*]

## **Form G:** Financial ProposalForm

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Bidder: | [Insert Name of Bidder] | Date: | Select date |
| RFP reference: | [Insert RFP Reference Number] | | |

The Bidder is required to prepare the Financial Proposal following the below format and submit it in an envelope separate from the Technical Proposal as indicated in the Instruction to Bidders. Any Financial information provided in the Technical Proposal shall lead to Bidder’s disqualification.

The Financial Proposal should align with the requirements in the Terms of Reference and the Bidder’s Technical Proposal.

**Currency of the proposal:** [Insert Currency]

**Table 1: Summary of Overall Prices**

|  |  |
| --- | --- |
|  | **Amount(s)** |
| **Professional Fees** (from Table 2) |  |
| **Other Costs** (from Table 3) |  |
| **Total Amount of Financial Proposal** |  |

**Table 2: Breakdown of Professional Fees**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Position** | **Fee Rate** | **No. of Days/months/ hours** | **Total Amount** |
| *A* | *B* | *C=A+B* |
| In-Country |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Home Based |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **Subtotal Professional Fees:** | | | |  |

**Table 3: Breakdown of Other Costs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Description** | **UOM** | **Quantity** | **Unit Price** | **Total Amount** |
| International flights | Trip |  |  |  |
| Subsistence allowance | Day |  |  |  |
| Miscellaneous travel expenses | Trip |  |  |  |
| Local transportation costs | Lump Sum |  |  |  |
| Out-of-Pocket Expenses |  |  |  |  |
| Other Costs: (please specify) |  |  |  |  |
| **Subtotal Other Costs:** | | | |  |

**Table 4: Breakdown of Price per Deliverable/Activity**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Deliverable/**  **Activity description** | **Time**  (person days) | **Professional Fees** | **Other Costs** | **Total** |
| Deliverable 1 |  |  |  |  |
| Deliverable 2 |  |  |  |  |
| Deliverable 3 |  |  |  |  |
| ….. |  |  |  |  |

## **Form H:** Form ofProposal Security

Proposal Security must be issued using the official letterhead of the Issuing Bank.

Except for indicated fields, no changes may be made on this template.

To: UNDP

*[Insert contact information as provided in Data Sheet]*

WHEREAS [Name and address of Bidder] (hereinafter called “the Bidder”) has submitted a Proposal to UNDP dated Click here to enter a date. to execute Services [Insert Title of Services] (hereinafter called “the Proposal”):

AND WHEREAS it has been stipulated by you that the Bidder shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security in the event that the Bidder:

1. Fails to sign the Contract after UNDP has awarded it;
2. Withdraws its Proposal after the date of the opening of the Proposals;
3. Fails to comply with UNDP’s variation of requirement, as per RFP instructions; or
4. Fails to furnish Performance Security, insurances, or other documents that UNDP may require as a condition to rendering the contract effective.

AND WHEREAS we have agreed to give the Bidder such this Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Bidder, up to a total of [*amount of guarantee*] [*in words and numbers*], such sum being payable in the types and proportions of currencies in which the Price Proposal is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of *[amount of guarantee as aforesaid*] without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

This guarantee shall be valid up to 30 days after the final date of validity of bids.

**SIGNATURE AND SEAL OF THE GUARANTOR BANK**

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of Bank \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*[Stamp with official stamp of the Bank]*

1. Non-performance, as decided by UNDP, shall include all contracts where (a) non-performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non-performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Non-performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted. [↑](#footnote-ref-1)
2. **Under GIZ project “Adaptation to Climate Change in transboundary Flood Risk Management”, – hydrological (rainfall- runoff) model was calibrated and validated for the entire Drin/Bojana river basin and is in use at the national Hydrometeorological Services of Montenegro and the other Drin riparian countries.** [↑](#footnote-ref-2)
3. Municipal Plan for Flood Protection and Rescue - Ulcinj Municipality, 2017 [↑](#footnote-ref-3)
4. **Hydrological data collected should be assessed in terms of quality and availability and the strategy for undertaking hydrological assessment should be developed. This should include a review of the GIZ hydrological model available for the entire Drin/Bojana basin to identify any adjustments that may be required to model, and to use (to the extent possible) the existing Drin basin hydrological modelling in detailed design.** [↑](#footnote-ref-4)