

RFP/2020/14: UN-Habitat for Developing a Preliminary Design for Flood mitigation measures and performing a Flood Risk Assessment and Flood Hazard Mapping for Downtown Amman

Minutes of Pre-Bid Meeting RFP/2020/14

Hosted By: UNDP Country Office - JORDAN	Date: July 26, 2020
Location: https://undp.zoom.us/j/93070667025	Time: 12:00PM-2:00PM – Jordan
Subject: Pre-bid meeting for RFP/2020/14	Reference Number: 67765

Attendees

(the following were invited to attend)

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A pre-bid meeting was held on July 26, 2020 at 12:00 PM (Jordan time) to answer inquiries regarding the Request for Proposals (RFP /2020/14) **UN-Habitat: Developing a Preliminary Design for Flood mitigation measures and performing a Flood Risk Assessment and Flood Hazard Mapping for Downtown Amman**. Any item that was discussed and not mentioned in these Minutes of meeting (MoM) may be covered in the replies to the inquiries send by the consultants via e-mail and posted on the Procurement Notices site. The consultants should feel free to email any question or clarification request not covered by these minutes of meeting or the posted responses.

The following items were discussed in the meeting:

#	Inquiry Topic	UN Response
1.	Clarification on when to submit the financial proposal	The Financial Proposal should be submitted only after the technical evaluation; the consulting firm will be contacted to provide the financial offer only if their proposal has passed the score of 70% in the technical evaluation. After being contacted to provide the financial proposal the consulting firm shall include the cost information as per the forms, instructions and tables of the UNDP Request for Proposals form.
2.	Clarification on the deadline for submitting the technical proposals	The deadline for submitting the technical proposal on August 3, 2020 at 12:00 PM
3.	Clarification on method to deliver the proposal	The proposals shall be submitted electronically via email to the address below: United Nations Development Programme Jordan Country Office Offers.jo@undp.org

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		The receiving email address can receive an email up to a limit of 25 MB in size. If the proposal file exceeds or approaches this limit it is acceptable to upload the proposal file to a secure site and provide a link and access information to the uploaded proposal file.
4.	Rainfall data availability and cost	The rainfall data required to conduct the analysis falls in two categories: 1. Rainfall data needed for the frequency analysis. This data consists of daily records over the record period of each station. This data is usually free of charge and can be obtained from various sources including the Ministry of Water and Irrigation. 2. Rainfall data needed for the temporal and spatial distribution analysis of the return period events. This data consists of hourly records of the recorded rainfall events at each station. This data may be available for free of at a charge from different sources including the Department of meteorology. Please note that the hourly data needed to conduct the required analysis is a statistically representative sample of the data record. Not all rainfall events with hourly records are needed to conduct the analysis. It may be sufficient to gather a sample of events that occurred over the watershed, were significant in terms of rainfall accumulation and were hourly recorded. If a representative sample of such hourly recorded events are available. The fees for obtaining the records of those events are not expected to be very high. Obtaining that data including the fees and cost for obtaining the data is the consultant's responsibility and the consultant should include it in his cost when preparing the financial proposal. It is reasonable to assume that the fees should not exceed or be in the range of 400 USD. If the fees significantly exceed that amount, then other sources of data including determination methods based on established and published applicable temporal and spatial distribution patterns coupled with hourly data

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		that can be obtained within the above range maybe used in the analysis.
4.	Time schedule for completing the tasks in the project and reasoning for the time schedule	It is the consulting firm's responsibility to allocate and commit adequate resources including experienced technical personnel and staffing needs to achieve the project requirements and deliverables in the scope within the duration specified in the ToR. UN-Habitat Project: "Strengthening the Social Stability and Resilience of Vulnerable Jordanian Communities and Syrian Refugees in Amman against Flash Floods" includes several goals to be achieved within a specific time and cost limit. One of these goals is to construct a physical flood innervation measure or measures. Developing a detailed design, tender documents and constructing the intervention measure(s) are all goals within this mother project in which specific budget and time is allocated for. The work associated with the RFP for "Developing a Preliminary Design for Flood Mitigation Measures and Performing a Flood Risk Assessment and Flood Hazard Mapping for Downtown Amman" (the current RFP) includes the Preliminary Design which is the first step to achieve the goal of constructing the intervention measure(s). The preliminary design should consider the cost and time limitations for achieving the construction goal. The details of which will be made available at the beginning of the project. However, the cost of implementing the immediate measure which this RFP seeks to develop a preliminary design for is in the range of approximately 400,000 USD including detailed design and supervision and the preliminary design should consider an intervention that will take approximately 4 months to construct
5.	Hydrologic and hydraulic modeling standards	The standards for developing the hydrologic and hydraulic models and conducting the analysis are included in the task table in the TOR. There is no code adopted in Jordan for performing hydrologic and hydraulic studies. In the absence of a nationally adopted code that governs the analysis required, UN-Habitat developed the hydraulic and hydrologic modeling standards based on internationally applied and accepted codes and guidelines, the size and significance of

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		the targeted area and watershed, the type and properties of the flood flow in the targeted area, the availability of data and the significance of the potential harm and damage flooding may cause in the targeted area. These standards are consistent with industry standards and suitable for the intended application of this project.
6.	Mapping Standards	The mapping required in the project falls under two categories: 1. Hazard Mapping in the targeted area. This applies to the floodplain zone defined by the 1000-year flood inundation as simulated by the hydraulic modeling. The detailed mapping required for this area includes the <u>digitized footprint of the buildings and significant structures</u> in this zone, the significant infrastructure features in the zone and the other information needed described in Task 10.3. 2. Mapping in the watershed. This second category of the mapping requirements includes the mapping requirements in the watershed in general. To the extent of: a. the availability of the as built drawings, and plans of the projects being conducted to manage the stormwater runoff in the watershed, b. the required infrastructure data information that should be collected from the field to develop the hydrologic modeling, c. the input and output of the hydrological modeling, d. the findings of the hydrological analysis in terms of storage areas and significant features and areas affecting the output of the hydrologic modeling The above information should be included in the mapping requirements and developing the database for of the watershed. Other baseline information such as roads and other infrastructure information should be included in the

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		GIS features and coverage is available for them and easily obtained. Secondary or low flow drainage features in the upper reaches of the watershed if not significantly affecting the hydrological model and if obtaining their feature information is not critical may not necessarily need to be included. It is in practical and impossible to account for the information needed in the watershed mapping component at this stage of the project, as determining that information relies on the data collection effort and on the findings of the hydrological modeling. To the extent reasonable under the project conditions an effort should be made by the consultant to include as much relevant data and features in the mapping of the watershed. the 8km waterpath features and hydraulic structures and the features of the lateral flow conduits that drain into the waterpath from point D1 to point E1 in Figure (4) shall be included as a survey of that waterpath will be made available to the consultant at the start of the project.
7.	Survey and DEM data availability	The following topographic data will be made available to the consultant at the start of the project: 1. 10mx10 m DEM that covers the watershed 2. a topographic survey that covers 14 km of the waterpath from point D1 to the end of the targeted area 3. a topographic survey consisting of approximately 47 cross sections crossing the waterpath in the targeted area. <u>Conducting a topographic survey is not part of the consultant's scope of work.</u> However collecting needed as built drawings and existing topographic information required for the modeling effort is part of the scope of work. This may require field visits and field measurements to supplement the provided and gathered data and may require scientific and approved interpolation and kringing techniques.

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8.	Hydraulic modeling and simulations	The ToR requires the development of a 1-D hydraulic model and simulations, as this type of modeling is suitable for the targeted area which is a relatively narrow valley with flow mainly in one direction. Both the flows in the culvert and on the surface and in the same direction along the valley. Additionally the data available for the geometry input of the model supports the use of a 1-D model. Both steady state and unsteady state simulations are required. The steady state simulations with the peak flows as the flow input are the main simulations needed for the hazard assessment and mapping required. The unsteady state simulations are needed to create animations of the flow in the targeted area. Focus of the efforts should be on the steady state simulations as the main output of phase 2 depends on them. Occasionally, instability of the simulations is associated with unsteady state simulations. The consultant is required to put an effort to perform the unsteady state simulations provide the models for the unsteady state simulations including all the input required and report on the results even if the simulations are unstable. Serious effort to a reasonable degree should be made to adjust the input in the unsteady state simulations to stabilize the simulations, and these efforts should be reported.
9.	Reporting and Deliverable schedule	The deliverable schedule includes 2 main reports to be submitted at the ends of Phase 1 and Phase 2 respectively. These two main reports should be submitted in both English and Arabic. It is acceptable to submit the Arabic version of the report within 10 days after finalizing the English version. The deliverable schedule also includes 9 interim reports. These interim reports are to be delivered as per the schedule in the ToR. These interim reports are not as formal as the Main reports and may be submitted in English only. The purpose of the interim reports is the means for the consultant to communicate with UN-Habitat weekly on the progress of the work. To provide the data and information gathered and required for the work. To monitor the progress of the work and to provide feedback to the consultant in a timely manner minimizing wasted

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		efforts. The interim reports and reporting requirements are intended to facilitate communication in the spirit of the team work, joint efforts and communication with the stakeholders needed to complete this project within the schedule
10.	Proposal Evaluation	The proposals will be evaluated technically based on point scoring system as shown in the technical criteria table in the TOR. For the proposals provided by the firms that meet the eligibility criteria, the proposal will be evaluated based on a 700 point scoring system where only information provided in the proposal submitted by the deadline will be evaluated based on the following Experience of the firm (150 points) Quality of technical proposal, methodology and work plan (300 points) Personnel (200 points) Item c under 2. Quality of technical proposal, methodology and work plan “Approach and methodologies proposed to conduct the design process based on the outcomes of the model developed, the studies and the survey. It will be positively evaluated the consistent offer that will propose the effective number and quality of solutions to address the criticalities identified” carries a weight of 100 points. This includes the methodologies for the design and ideas the proposal might present on what interventions can be applied to mitigate the flooding and reduce the risk and hazard of flooding. Genuine ideas that consider space availability and suitability, time and budget constraints for constructing these interventions, proper engineering design requirements, consideration of the surrounding environment, consideration of the significance and preventability of the measures, consideration of the use and safety of these measures, consideration of the effectiveness and practicality of these interventions, consideration of control and advanced warning these mitigations might offer and other factors are considered in evaluating this criterion. This criterion allows the consultant to present his own ideas and vision for the mitigation measures and his own view on how to

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		evaluate these measures and quantify their effect on the risk and hazard of the flooding events.
11.	The Preliminary Design, Specifications and Cost Estimate	The TOR requires development of preliminary designs for cost effective intervention measures. This preliminary design exceeds the level of a conceptual design and is below the level of a detailed design. Preparing tender documents are not part of the scope of work. Developing a preliminary design for flood intervention measures is part of the work required to be performed by the consultant. The location and type of the measures are not currently determined, part of the work required in the RFP is to determine a site and type of intervention(s) then developing a preliminary design for that or those interventions. Therefore, all the engineering designs and tasks required to develop the preliminary design such the hydraulic and hydrologic calculations for the intervention, the dimensions, layout plans sections, profiles and details of proposed structures including spillways, the type and dimensions of the spillways, the materials to be used and general specifications of these materials, site clearing requirements, cut and fill requirements, engineering calculations for the structure stability, integrity anchoring requirements foundations...etc, details of the stability anchoring and foundation requirements, concrete work requirements, needed work to develop a detailed design and tender documents, should be part of the feasibility study and preliminary design of the proposed intervention. The cost of all the work required to implement the proposed intervention(s) including costs of detailed design work, geotechnical explorations, site surveys, detailed structural designs, preparing detailed designs, preparing detailed specifications, preparing tender document for construction, construction cost, including mobilization and demobilization, demolition (if required) site clearing, material quantities and cost, labor cost, construction management cost, contractor overhead and profit, testing and supervision cost...etc should be included in the BOQ and cost estimate. The cost estimate

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		should be based on market study of the current rates and material costs and should be reasonably accurate to within $\pm 20\%$ of the actual cost.
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