

Request for Expression of Interest for Individual Consultants (National)

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH			
1	Ministry/Division	Ministry of Housing and Public Works (MoHPW)	
2	Agency	Urban Development Directorate (UDD)	
3	Procuring Entity Name	Director	
4	Procuring Entity code	1320401	
5	Procuring Entity District	Dhaka	
6	Expression of Interest for Selection of	Individual Consultant	Time based/ Fixed Budget
7	EOI Ref No	25.45.0000.002.14.009.21.49	
8	Date	24/03/2022	
KEY INFORMATION			
9	Procurement Method	Selection under a Fixed Budget (SFB)	
FUNDING INFORMATION			
10	Budget and Source of Funds	Development Budget	GoB
11	Development Partners	N/A	
PARTICULAR INFORMATION			
12	Project/Programme Code	222012000	
13	Project/Programme Name	A Pilot Project on Preparation of Comprehensive Development Plan for Nine Upazilas (9UpzCP)	
14	EOI Closing Date and Time	21 /04/2022 at Clouse 20 sl no- 1 to 4; 11:00am, Clouse 20 sl no- 5 to 8 1.00 pm, Clouse 20 sl no- 9 to 13; 2.30 pm	
INFORMATION FOR APPLICANT			
16	Brief Description of Assignment	<p>1. GIS/RS Expert–1Person (1x20=20mm.) Responsibility: (i) Assist Project management team in preparing data structure and also with GIS analysis (ii) Review of mapping and prepare manuals for project (iii) Conduct GIS training for UDD staff and other as per project Requirement (iv) Provide training on functionaries for map interpretation. (v) Coordinate the systematic reproduction and archiving of all the GIS Database in the project, including georeferencing, geo-coding, land-use planning maps as per requirement of project. (vi) Quality control and accuracy assessment of spatial dataset (vii) design and management of project database and creation of a common GIS data sharing platform for project management team, (viii) Integration of non-spatial information with spatial data and incorporating relevant information in GIS system, (ix) Assigning Geographic and Projected coordinate system for all GIS dataset (x) Geo-processing of spatial data and include necessary analytical features (xi) Evaluate and ensure the quality of all spatial database including mapping and related work done by the project team as well as out-sourced team/company, (xii) Supervision and monitoring the activities of Junior GIS Experts, (xiii) Ensure the quality of the database, mapping and related work of all party. (xiv) To work with a multi-disciplinary team and synchronize the multi-sectoral data into GIS database for the Project areas. (xv) Prepare working papers, and reports on the assigned tasks; and (xvi) any other related job assigned by the PD.</p> <p>2. Junior GIS/RS Expert–3 Persons (3x20=60 mm.) Responsibility: As a Junior GIS Expert, assist the GIS Expert (i) To prepare topographic, physical feature, land use and other related thematic map of the area, (ii) To prepare and manage digital database (Spatial and attribute) and analyze data of the project. (iii) Installation and troubleshooting of GIS in UDD project office and head office; (iv) Ensure the quality of the GIS Database, map and related work. (v) Preparation of working paper, reports and plan of the project as assigned by the PD; (vi) Any other related jobs as assigned by the PD.</p> <p>3. Junior Urban Planner-4 persons (4x20=80 mm): Responsibility: (i) To act as an overall in-charge of the project site office and also required to work at head office as and when necessary. (ii) To prepare work program in consultation with Project Director; (iii) To coordinate, supervise and monitor the field level survey activities among the different survey teams under direct supervision of the Project Director; (iv) To check and validate the surveyed data gathered and data entry by different survey firms. (v) Submit periodical report to the Project Director on progress of the field levels activities. (vi) Spatial translation of relevant national level plans, policies and strategies and develop structure plan policies with the support from GIS Database in association with Urban Planner, RS/GIS Expert and Physical Feature Survey firm (vii) Coordinate and liaison with the district and upazila level government officers', municipal authority, union parishad and other related stakeholders concerning project activities. (viii) Assist the UDD Project Team members in organizing Participatory Rapid Appraisal (PRA), consultation meeting and workshops etc. (ix) Prepare report on the PRA, consultation meeting and workshops etc. (x) Assist the PD and PMs in preparing planning package and reports. (xi) Any other related Jobs as assigned by the PD.</p>	

4. Photogrammetric Expert – 1 Person (1x10 = 10 mm.)

Responsibility: (i) To study project area and review policy documents and plans to prepare policy guidelines and strategies for Nine Upazilas and development plan for this Project; (ii) To process Georeferencing, radiometric correction, Aerial/Satellite triangulation of Stereo pair satellite/airborne digital imagery (iii) Multi-photo measurement techniques and batch processing; (iii) To perform Tie point measurement, refine RPC and quality control of stereo project (iv) To generate stereo imagery project file for 3D plotting of physical features; (v) Adjustment of Stereo photogrammetric environment with existing Digital Photogrammetric software and hardware of UDD; (vi) data extraction and digitization of all the existing visible physical features from the stereo image; (vii) DTM collection and editing of ground elevation; (viii) To generate bare earth digital elevation model (DEM) in raster format from the collected ground DTM points, (ix) To process geometric and orthometric correction and produce orthorectified photo from stereo satellite/airborne digital image , (x) To manage, store and design dataset to be collected from photogrammetric process, (xi) conduct necessary photogrammetric analysis and prepare relevant report as required for project activities. (xii)To work closely with the GIS and RS Experts, Urban Planner, and Physical Feature Survey firm to translate the policies and strategies for the Project into the spatial plan; (xiii) Any other related job assigned by the PD.

5. Disaster Risk Reduction Expert-1 Person (1x5 =5 mm.)

Responsibility: (i) Identify the potential threats of disasters and impact of climate change in the project area including flood, drought, lightening, river bank erosion including cyclone, storm/tidal surge, coastal erosion, saline water intrusion, sea level rise, tsunami in coastal areas as well; and any other potential disasters in the project area, (ii) Assess the impact of such disasters on bio-physical and socio-economic systems in the project area; (iii) Assess the risks and vulnerabilities (of different bio-physical and socio-economic systems) to such disasters in the project area; (iv) To provide landuse-based interpretations of risk and vulnerability to such disasters; (v) To set forth recommendations on disaster risk reduction and adverse impact of climate change including adequacy of existing physical infrastructure and possible measures for improvements in the project area and also develop disaster-oriented land use planning guidelines for building disaster resilience; (vi) Prepare working papers, and reports on the assigned tasks; and (vii) Any other related job assigned by the PD.

6. Transport Planning Expert-1 Person (1x5 =5 mm.)

Responsibility: (i) To study existing transportation system of seasonal variation and disaster; (ii) To analyze the capacity of roads and also prepare information for a traffic impact study of land use proposals on the street corner. (iii) To forecast the land value and land use as impacted by changes in transportation accessibility and policies; and develop integrated land use and transportation model.(iv) To determine the levels of goods movement and their mode of shipment to forecast regional and long-distance commodity flow and truck demand to develop alternative pricing strategies and freight specific facilities. (v) To simulate transportation operations in details at the project area including automobile, motorcycle, bicycle and pedestrians etc. to increase safety and improve overall operations; and also evaluate the effects, if changes in roadway geometry, operating characteristics, land use and travel demand. (vi) To simulate vehicular traffic flow to analyze and solve traffic bottlenecks that might occur under ordinary or even extreme conditions, such as special events and evacuations from natural or man-made disasters; and also compare policies for alleviating peak-period congestion and examine the effectiveness of emergency evacuation plan. (vii) To prepare guidelines for improved transport system, affordable to the Project area's people; (viii) To work closely with the GIS and RS expert to find out new transportation network in the area from Satellite Image and also relating the findings into transportation studies and also in the GIS database (ix) To develop upazila wise multi-modal transportation system in the project area; (x) To prepare a 20-year Transport model with Arc GIS compatible Transportation Modeling Software; (xi) Provide on job training to the Project Team Members; and preparation of working paper, reports and transport plan of the project as assigned by the PD;

7. Geologist – 1 Person (1x5 = 5 mm.)

Responsibility: (i) To review engineering geological characteristics and DRR of the Project area to recommend policy guidelines and formulation of strategies for land use planning to develop the Project areas. (ii) Supervise and monitor the activities of Geological survey firm, which would be engaged by UDD for conducting earthquake hazard of the project area, (iii) Review data, information and reports submitted by the Geological Survey firm and ensure the technical issues and quality of the work (iv) To review Bangladesh National Building Code (BNBC) and synchronize the provisions made on seismic risk with the land use planning in Bangladesh and make recommendation on seismic risk. (v) To supervise and monitor the activities, field wok, quality of data and report of the Sub-surface Geo-Technical and Geo-Physical Firm, (vi) To integrate the engineering geological and DRR data with urban and regional planning database to prepare risk sensitive landuse plan for the region, (vii) Any other related jobs assigned by PD

8. Hydro Geologist – 1 Person (1x5 = 5 mm.)

Responsibility: (i) To conduct, and monitor, supervise hydro-geological surveys and studies; (ii) To analyze hydro-geological data and information collection from primary and secondary sources. (iii) To conduct lab test of the collected samples and interpretation of the results of lab test; (iv) To prepare seismic hazard, vulnerability, damage and risk assessment map for the area, (v) To identify the areas

		<p>potential for drawing fresh ground water, and also areas of interruption including probable change in the hydrological cycle due to human intervention. (vi) To interlink the attribute and spatial data of hydrogeology with that of other components of the project (vii) To supervise and monitor the activities, field work, quality of data and report of the Hydro-Geological Survey Firm and also to prepare an inter active model for interfacing surface water and groundwater in association with the Hydro-Geological Survey Firm, (viii) To recommend possible mitigation measures for interruption in the system due to human intervention, and (ix) To prepare report on the assigned task. (xi) Any other related jobs assigned by PD.</p> <p>9. Hydrology Expert – 1 Person (1x5=5 mm.) Responsibility: (i) Detailed hydro-morphological study at the <i>Upazila</i> level and connecting rivers; (ii) Assess the efficiency of regional drainage/hydrology and infrastructure; (iii) Prepare a GIS-based drainage inventory following the local datum of BTM; (iv) Rainfall-runoff analysis with the consideration of future climate change effects; (v) Estimate inundation area within the project area; (vi) Prepare flood hazard maps for different return periods, and also urban and rural drainage plan for the project area; (vii) Integrate drainage plan into landuse planning; (viii) Investigate possible mitigation measures (including creation of buffer zones, channel improvement, retention areas, embankment, pumping station, etc.); (ix) Coordinate with comprehensive/spatial planning teams to integrate the drainage plan and formulate mitigation measures; and (x) Any other related job assigned by the PD.</p> <p>10. Associate Hydrology Expert -1 persons (1x5=5 mm) Responsibility: To assist the Hydrology Expert to (i) study the efficiency of existing drainage system and water control structures; (ii) study water use and water requirement with seasonal variation (iii) integrate drainage plan into land use planning. (iv) To review the surface and ground water characteristics of the project Region for developing hydrological strategies for the human settlements in the regions to identify the land by buildable and non-buildable considering the above criteria. (v) Study over environmental hazards of the area and prepare guidelines for hazard mitigation; (vi) Hydrological study on the <i>Upazila</i> and connecting rivers (Hydrodynamic characteristics, Morphological characteristics, Geomorphologic development, Dominant Hydrodynamic and Morphologic process, Conceptual Model of Dominant Hydro morphologic process, Impact of FCD in the area (viii) Assess the regional hydrology and infrastructure. (ix) Prepare a GIS Based drainage inventory (x) Rainfall-runoff analysis and consider future climate change effect. (xi) Estimate inundation area within the project area. (xii) Prepare flood hazard map for different return periods. (xiii) Investigate possible mitigation measures (including creation of buffer zone, channel improvement, retention areas, embankment, pump’s station etc.) (xiv) Coordinate with comprehensive/ spatial planning team in developing the drainage plan and formulate mitigation measure. (xv) Any other related jobs assigned by PD and/or the Hydrology Expert.</p> <p>11. Architect- 1 Person (1x 5= 5 mm) Responsibility: (i) Review and analyze relevant policies, design criteria of modern cities, and exclusive foreign tourist zones of different countries; (ii) Examine the traditional architecture, urban form and pattern within the region; (iii) Develop standard for design of related project areas; (ii) Design of Nine <i>Upazilas</i> as a modern green city on the basis of the standard; (iii) Design of modern tourism spots at the potential tourist spots using indigenous building materials; (iv) Design of exclusive tourist zone in Nine <i>Upazilas</i>. (v) Prepare working paper, report along with maps and graphs on the assigned task; (vi) Any other related task as assigned by PD.</p> <p>12. Junior Architect- 1 Person (1x 5= 5 mm) Responsibility: (i) Review and analyze relevant policies, design criteria of modern cities, and exclusive foreign tourist zones of different countries; (ii) Examine the traditional architecture, urban form and pattern within the region; (iii) Develop standard for design of related project areas; (ii) Design of Nine <i>Upazilas</i> as a modern green city on the basis of the standard; (iii) Design of modern tourism spots at the potential tourist spots using indigenous building materials; (iv) Prepare working paper, report along with maps and graphs on the assigned task; (vi) Any other related task as assigned by Architect or PD.</p> <p>13. Web GIS Expert-1 Person (1x 6= 6 mm) Responsibility: (i) Develop, Troubleshoot and maintain software ,web site and databases to ensure strong optimization and functionality; (ii) Contribute in all phases of the software development life cycle; (iii) Networking, programming and management with server computer based working PC; (iv) Installation and trouble shooting of hardware and software of the Server and computer at GIS Lab and other PC of the project personnel; (iv) Capacity building of the project personnel on the developed programs, networking and troubleshooting of hardware and software; (v) To attain all telephone calls, give online support; (vi) Maintain Service Register and update & store all service documents / file I manual / installation software / user guide & others if necessary. (vi) Keep knowledge of all new models of products & ensure spares in advance; (vii) Any other related job as assigned by PD.</p>
17	Experience, Resources and Delivery	<p>1. GIS/RS Expert – 1 Person (1x20=20mm.) Qualification: Bachelor of Urban and Rural/Regional Planning or a Relevant Discipline, Geoinformatics, Information Technology, Geography or a relevant combination of education.</p>

Capacity Required	<p>Experience: At least 10 years full time professional experience in relevant field. Advance knowledge in mapping by using GIS, remote sensing, relational database management and Geo-database modeling is essential. Experience in planning and implementation of field mapping logistics as well as advance knowledge in the use of Summit Evolution, ERDAS Imagine, Imagine–Objective, ArcGIS, ArcSDE, ArcGIS server, SQL Server/Oracle, Open Street Mapping, Geo-Tagging Photographs with information, RTK GPS for gathering field data in challenging work environments is essential. Experience in satellite image processing–expert classification/knowledge engineering/object-based image classification is a must. Experience in technical capacity building is also required.</p> <p>2. Junior GIS/RS Expert–3 Persons (3x20=60 mm.): Qualification: Bachelor of Geo-informatics, Urban and Rural/Regional Planning, Information Technology, Geography or a relevant combination of education. Experience: At least 05 (Five) years professional experience in relevant field. Advance knowledge in Mapping using GIS, remote sensing, relational database management and Geo-database modelling and experience in planning and implementation of field mapping logistics as well as use of ArcGIS, Arc SDE, RTK GPS for gathering field data is essential</p> <p>3. Junior Urban Planner-4 persons (4x20=80 mm): Qualification: Bachelor of Urban and Rural/Regional Planning (BURP) or equivalent. Experience: At least 5 (Five) years field level working experience in development planning particularly in urban environment.</p> <p>4. Photogrammetric Expert – 1 Person (1x10 = 10 mm.) Qualification: At least Bachelor Degree in Urban/Regional Planning, Geo-informatics, Information Technology, Geography or a relevant combination of education. Experience: At least 10 (Ten) years of working experience in satellite image processing, interpretation, extracting physical feature and generating digital elevation model particularly at least 3 (three) years’ experience in 3-D image processing, interpretation, extracting physical feature and generating digital elevation model.</p> <p>5. Disaster Risk Reduction Expert- 1 Person (1x5=5 mm.) Qualification: Ph.D/MSc. in Civil engineering / Disaster Management /Climate Change Studies/Water Resources Engineering/ or a related discipline. Experience: At least 15 (Fifteen) years of professional experience in managing the risk of disaster and adverse impact of climate change.</p> <p>6. Transport Planning Expert-1 Person (1x5 =5 mm.) Qualification: At least Master's Degree in Traffic Engineering/ Transportation Planning. Experience: 15 (Fifteen) years of professional experience in Transportation Planning/ Traffic Engineering with experience in using ARC GIS compatible Transport Planning Software.</p> <p>7. Geologist – 1 Person (1x5 = 5 mm.) Qualification: M. Sc. in Geology. Experience: Extensive national experience in geological analysis and land use planning. The candidate must have 10 (Ten) years working experience in geological land classification, DRR, land use planning and administration of multidisciplinary team and training.</p> <p>8. Hydro Geologist – 1 Person (1x5 = 5 mm.) Qualification: M. Sc. in Geology. Experience: At Least 10 (Ten) years working experience in hydro- geological survey, analysis and modeling.</p> <p>9. Hydrology Expert – 1 Person (1x5 = 5 mm.) Qualification: Ph.D/M.Sc. in Water Resources Engineering/ Water Resources Management/ Coastal Engineering/Coastal Zone Management or a related Discipline Experience: Extensive national experience in the design and implementation of Water Resources Planning Projects. The candidate should have at least 15 (Fifteen) years of professional experience in project design and supervision and urban processes, coastal zone management, urban drainage planning, flood risk management, hydrodynamic analysis, hydrological modeling, and leading multidisciplinary teams of experts.</p> <p>10. Associate Hydrology Expert -1 persons (1x5=5 mm) Qualification: Bachelor degree in Urban and Rural/Regional Planning/ Water Resources Engineering/ Water Resources Management or related Discipline Experience: At least 10 (Ten) years’ experience on urban drainage master plan, flood risk management, experience in hydrodynamic analysis, river hydraulics and hydraulic and hydrology modeling.</p> <p>Competencies</p> <ul style="list-style-type: none"> • The incumbent should have sound knowledge of climate modeling and downscaling. He/she should have also sound knowledge and experience in flood forecasting modeling. • He/she should be familiar with conventional and modern equipment and techniques for hydrological data collection, including up-to-date knowledge on remote sensing and data transmission technology. • The candidate should have good understanding of developments in flood hydrometric modeling and experience of River hydraulic. • The candidate should have good understanding of developments in flood hydrodynamic modeling and experience of River hydraulic and hydrological modeling; Flood risk
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		assessment; integrated river basin modeling and management. Experience in ARC GIS compatible hydraulic modeling software (e.g. PCSWMM, GeoSWMM etc.) 11. Architect- 1 Person (1x 5= 5 mm) Qualification: Bachelor of Architecture with Ph.D/Master's in Architecture/Urban Design/Urban Planning or a related Discipline Experience: At least 15 (Fifteen) years working experience in urban design. 12. Junior Architect- 1 Person (1x 5= 5 mm) Qualification: Ph.D/Master's in Architecture/Urban Design/Urban Planning or a related Discipline Experience: At least 5 (Five) years working experience in urban design. 13. Web GIS Expert-1 Person (1x 6= 6 mm) Qualification: B.Sc./M.Sc/Masters in Information and Communication Technology/ Engineering or Computer Science or a related discipline. Experience: At least 10 (Ten) years working experience in XHTML, HTML 5 & CSS3, JS, jQuery, AJAX, other JS/CSS libraries. Clear understanding of Bootstrap. Good understanding of design concept and front-end/ back-end development for web based application. Candidate should have firm knowledge on PHP 5, Angular JS, MySQL, Java Script, third party APIs such as Google API. Experience in analyzing, designing, testing, developing and debugging web-based software and networking. Proficiency in writing and optimizing standard and complex mySQL/SQL statements for creating reports as required. Proficiency in English, both oral and written is essential. Must have experience in any GIS mapping and related field.			
18	Other Details	Interested consultants are hereby invited to submit EoI to undersigned containing CV, NID & all necessary documents (according to PPA 2006 and PPR 2008), confirming the capabilities to provide the required services. Individual consultants with experience of project site will be given preference. She / he will have to travel and stay at project site frequently. Selected Individual Consultant shall assist UDD Project Team to implement or prepare planning package.			
19	Association with foreign is	Not Applicable			
20	Ref no	Phasing of Services	Location	Indicative start date	Indicative completion date
	1	GIS/RS Expert	Hajiganj & Shahrasti Upazila, District- Chandpur, Bakshiganj & Dewanganj Upazila, District- Jamalpur, Jagannathpur & Daskhain Sunamganj Upazila, District- Sunamganj, Lalmonirhat Sadar Upazila, District- Lalmonirhat, Mohammadpur & Shalikhha Upazila, District- Magura.	May, 2022	December, 2023
	2	Junior GIS/RS Expert		May, 2022	December, 2023
	3	Junior Urban Planner		May, 2022	December, 2023
	4	Photogrammetric Expert		September-2022	Augst-2023
	5	Disaster Risk Reduction Expert		September-2022	January-2023
	6	Transport Planning Expert		September-2022	January-2023
	7	Geologist		September-2022	January-2023
	8	Hydro Geologist		September-2022	January-2023
	9	Hydrology Expert		September-2022	January-2023
	10	Associate Hydrology Expert		September-2022	January-2023
	11	Architect		May-2022	September-2022
	12	Junior Architect		May-2022	September-2022
	13	Web GIS Expert		July-2023	Decmbar-2023
Duration of work shall be splitted through negotiation for the post mentioned clause no 20 and sl no from 5 to 13.					
PROCURING ENTITY DETAILS					
21	Name of Official Inviting EoI	Quazi Md. Fazlul Haque			
22	Designation of Official Inviting EoI	Project Director, "A Pilot Project on Preparation of Comprehensive Development Plan for Nine Upazilas (9UpzCP)"			
23	Address of Official Inviting EoI	Room # 502, 4 th Floor, Urban Development Directorate, 82, Segunbagicha, Dhaka - 1000			
24	Contact details of Official Inviting EoI	Phone no: +88-02-9572281; Fax no: +88-02-9557868			
25	The Procuring entity reserves the right to accept or reject all EOI's without assigning any reason whatsoever. If project duration extended, the duration of post (clause no 20, SI no 1, 2 & 3) might be increased under same condition as per PPA-2006 and PPR-2008.				

(Quazi Md. Fazlul Haque)

Senior Planner & Project Director
"A Pilot Project on Preparation of Comprehensive Development Plan for Nine Upazilas (9UpzCP)"
on behalf of the Head of Procuring Entity (HoPE)
Urban Development Directorate
82, Segunbagicha, Dhaka-1000.