Services for Monitoring of Local NGO's for Arsenic screening of Arsenic Risk Reduction Project for The Department of Public Health Engineering, The Local Government Division, The Ministry of Local Government, Rural Development and Co-operatives

Terms of Reference

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1.0 Context

By the end of the last century, Bangladesh achieved 97% water supply coverage using tubewell technology based on the ground water source, which was the highest in South East Asian region. But in early nineties identification of arsenic particularly in shallow ground water overshadowed the commendable success especially in rural water supply.

Arsenic in tubewell water was first identified in 1993 in ChapaiNawabganj. After that prevalence of arsenic in drinking water has been identified in 61 out of 64 districts of the country (except hill tracts). This is one of the major causes which drops the coverage of safe water supply from 97% to 74%.

Various program have been undertaken to mitigate the arsenic contamination in Bangladesh. Despite various efforts, it is anticipated that a considerable number of people are still exposed to high arsenic in drinking water. Presently the water supply coverage is 87% after adjusted for Arsenic contamination. (JMP Report 2015).

This proposed project is based on Situation Analysis of Arsenic Mitigation 2009, Multiple Indicator Cluster Survey (MISC) 2012-13 and past experience of another DPHE project. The main target of this project is to provide safe water to the arsenic affected population in upazilas having union(s) more than 60% arsenic contaminated areas as identified by the assessment and to identify the present situation if arsenic contamination of 70 percentage areas of Bangladesh.

Finally, 1290 union under 31 districts from the study area of Situation Analysis selected as proposed project intervention areas. The proposed project considered to serve 75 people per water point. Around 192945 no's of different water supply technologies (Safe Water Device– SWD) will be allocated dependent on the requirement of the area.

Arsenic prone area in the country will be covered under the screening program (**3200 nos. of unions of 335 Upazilas under 54 districts**) of the proposed project. On the basis of the existing data and records available, it was suggested by DPHE experts to consider around 70% areas of the country (UNION/Pouroshovas) for screening. The screening program will be planned in **Twelve months** throughout the project period to have the clear picture of arsenic concentration throughout the country. An organization will be recruited for the monitoring of Arsenic Screening and training program for ensuring the quality as well as Analyse the data and report the same as prescribed format (sample will be provided by the project director office).

2.0 Rationale for Monitoring Organization of the ARRP

Monitoring Organization will provide the monitoring Guidelines/Systems that will enable the monitoring and evaluation of the ARRP's arsenic screening key activities in order to ensure the quality of the screening activities, provide Training manual, guideline for the Training of the Implementing Agencies (Local NGOs').

3.0 Monitoring Organization's Goal and Objectives

The overall goal of the assignment is ensuring of the training activities and enhance the capacity of the LOCAL NGO's and stakeholders on "Arsenic Screening activity by the field test kit and make the stakeholders familiar with the project activity to mark the Tube well by painting with the colour", finally proper monitoring the activities and prepare the overall survey report in a prescribed booklet format (sample will be provided by the project director office – **Appendix-C**)

The objective of the Monitoring Program is to provide the resources and expertise that are required to ensure necessary institutional arrangements for implementation, monitoring and evaluation of the

activities. This appropriately resources Monitoring program will ensure efficiency, transparency, and accountability in the implementation of Arsenic Screening activities.

4.0 Requirements for the Monitoring Consultancy Services

4.1 General Requirements

1) The Monitoring Consultancy Services has five broad tasks:
   a. Carry out independent monitoring of Arsenic screening progress of the Local NGOs', including inputs, outputs, processes, outcomes (Total validation of 3200 union's water point survey data in prescribed format submit (sample will be provided by the project director office – **Appendix-C**) and impacts;
   b. Carry out independent monitoring of Arsenic screening activities specific operational risks and mitigation measures;
   c. Provide independent and regular feedback to the Project Director Office; and,
   d. Provide assistance to Project Director Office in the review and supervision of Arsenic Screening activities.
   e. Provide Training Manual, Guideline for the Training of the Implementing Agencies (Local NGOs')

The Monitoring Organization will establish an office space at 18 Concerned districts (Dhaka, Jamalpur, Tangail, Mymensingh, Chittagong, Noakhali, Comilla, Sylhet, Barisal, Faridpur, Rajshahi, Pabna, Bogura, Rangpur, Dinajpur, Khulna, Jassore, Kustia) for Training program (workshop) that will support staff, office equipment, vehicles, land telephone, e-mail and internet facilities. The operations and maintenance cost of these facilities thereof will be part of their consultancy. Only one or two key persons will be facilitated with logistic support and sitting arrangement in the Project Director Office.

2) The Monitoring Organization will ensure that Monitoring & Evaluation liaisons from the implementing agencies (Local NGO) are directly involved in data collection along with the various arsenic screening activities.

3) The Monitoring Organization will provide all reports in English.

4) The Monitoring Organization will submit One Hundred (100) hard copies of the final Implementation Summary Report (ISR) and One Hundred (100) copies of the other reports at the time of their submission (as per prescribed format). Ten (10) copies of all data sets and reports will also be submitted electronically on individual USB memory keys. Reports should be provided in both Word and PDF formats.

4.2 Requirements for ARRP-screening Component Progress Monitoring and Evaluation

The overall Results Framework for the ARRP-screening includes the outcome indicators for monitoring Project Development Objectives, intermediate output indicators for all project components, and tentative baseline conditions for each indicator, year wise achievement of targets against each outcome/output indicator. The Local NGO's are expected to use this as the base document for the development of project specific Monitoring & Evaluation framework, if necessary, by adjusting and fine-tuning the indicators and targets. Any adjustments need to be done in consultation with the Project Director, ARRP and the project implementing agencies (Local NGO).

4.3 Requirements for ARRP-screening Risk Monitoring and Evaluation

In order to achieve **"The arsenic screening and training program'** objectives, the Monitoring Organization will assess, monitor, and analyse known and emergent risks throughout the screening activities timeframe. The Monitoring Organization will also recommend any corrective actions or mitigation required to address these risks and their real or potential impacts on screening activities and other related activities. As well, when emergent risks are discovered, the Monitoring Organization will ensure that the Project Director Offices are informed as a priority.

4.4 Requirements for Provision of Feedback

For the identified tasks and deliverables, the Monitoring Organization will develop appropriate reporting formats in consultation with the PCMU (project Co-ordination and Monitoring Unit), ARRP and guide and provide training to the officials and staff of the implementing agencies (Local NGOs') for timely preparation of the monthly, quarterly and annual work plans and progress reports. The Monitoring Organization will provide coaching and guide to the officials and staff of the project implementing agencies (Local NGO) on the timely preparation of arsenic screening progress reports, prepare and submit consolidated progress reports (including data, analysis, surveys, interviews, photographs, description, and easy-to-read visuals) for the project and submit to the Project Director, ARRP on agreed dates.

5.0 Scope of Work

The Scope of Work provides the critical activities and the sequencing of activities, and the expected deliverables of each activity. Scope of works are given below:

- Develop a monitoring plan for the screening program.
- Provide Training Manual, Guideline for the Training of the Local NGOs'.
- Develop and maintain a computerized Project Monitoring Information System (PMIS) as well as a comprehensive project information website (web-based data-based system with dashboard containing all information) that would be linked to DPHE.
- Assess the quality of the field worker/staff recruited for the screening program by Upazila Parishad (UP).
- Assess the quality of orientation/training program organized by the Implementing Agencies (Local NGOs').
- Assess the field worker data collection quality in all the steps.
- Assess the supervision activities of the screening program through Questionnaire.
- Assess the quality of data entry (by field tester) and data sharing with MIS-GIS, DPHE.
- Reporting of the screening activities as well as Submit the same in prescribed form (Total validation of 3200 union's water point survey data in prescribed format submit (sample will be provided by the project director office –**Appendix-C**);
- Development frame work for future.
- Others monitoring related works assigned by The Project Director.

The scope of work consists of the following three phases with related tasks, to be delivered in a sequential phased approach. The Consultant should manage development of all three phases for the entire program period. A representative timeline of the phases, tasks and their associated outputs and deliverables can be found in Appendix A:

5.1.1 Phase 1 – Task List

The following tasks are required:

Task 1.1 – Create a comprehensive ARRP-screening monitoring and evaluation framework.
The Monitoring Organization is expected to develop appropriate methods, workshops (training of the Local NGO), surveys, tools, data collection formats, and analytical procedures to track and monitor arsenic screening inputs, evaluate outputs and outcomes generated due to project interventions throughout implementation. The Monitoring activities may include periodic as well as generated regular field observations through interviews, focus group discussions, participatory monitoring, and social and technical auditing. The Monitoring Organization is expected to suggest broad based outline of the methodologies for tracking of key indicators in their technical proposal which will be used as one of the criterions for proposal evaluation.

The Monitoring framework should include indicators to monitor and evaluate project specific operational risks and risk mitigation measures. The major objective of this dimension of monitoring is to ensure governance aspects of the project and minimize risks of misappropriation of project resources. However, more operational indicators need to be developed and systems, procedures and record keeping arrangements have to be established on the ground to monitor compliance with the proposed broader remedial measures. These measures need to be maintained efficiently to identify fraud and corruption risks of the project in respect of each project component and to monitor and evaluate the levels of risk, compliance with and impact of the designed risk mitigation measures in the project.

Following publication and approval of the Inception Report after mobilization, the Monitoring Organization is expected to finalize the M&E framework covering those dimensions as early as possible preferably through a consultative workshop with the participation of relevant official of the above-mentioned stakeholder agencies.

Task 1.2 – Develop baseline information for the established key project indicators.
The Monitoring Organization is responsible for the establishment of baseline status against all project indicators reflected in the final M&E framework to be able to monitor inputs, outputs, outcomes and impacts. Generic baseline status should be established to measure the improvements in disaster risk management and emergency response capability. The Monitoring Organization is expected to start the baseline surveys/discussions and establish the baseline status soon after approval of M&E Framework **(Deliverable 1.1)**. The Monitoring Organization is expected to suggest its proposed methodology for establishing indicator baselines in their proposal to the Project Director, ARRP, which will be used as one of the criterions for proposal evaluation.

Task 1.3 – Develop and maintain a computerized Project Monitoring Information System (PMIS).
A centralized comprehensive **web-based data-based system with dashboard** containing all information on the planned and ongoing related activities will provide a useful tool to the PD, ARRP, Project. The system will monitor all essential ARRP-screening activities and facilitate coordination and project integration. At the same time, it would serve as a useful tool to monitor ARRP-screening specific interventions. This system is aimed at allowing collation of inputs from various implementing agencies (Local NGO); produce standard reports; enable trouble shooting, tracking delays and identifying shortfalls in progress against physical and financial targets; allow specialized queries to track all aspects of ARRP-screening progress (including physical and financial progress and project impacts) at any time. As a part of the assignment, the Monitoring Organization is expected to orient and guide the staff of the implementing

agencies (Local NGO) that are responsible for M&E of their agency specific project activities, including the development of a PMIS User Guide and a means to install the PMIS on additional computers.

Task 1.4 – Establish and maintain a comprehensive project information website (window) that linked to DPHE.

Based on available project information, the Monitoring Organization will establish and maintain a comprehensive website (window) that provides all project-related information, including outputs and impacts which will be linked to DPHE.. The website (window) content should be available in both Bangla and English with content that is written using clear language principles. The website (window) content may be organized in a variety of ways and should include pages dedicated to each ARRP Component and sub-component. The website (window) should be updated at least quarterly following the release of the most recent Consolidate ARRP-screening Progress Report. Contact information should be provided as well as appropriate links to the various Implementing Agencies (Local NGO).

5.1.2 Phase 1 – Outputs and Deliverables

The following outputs and deliverables are required:

Deliverable 1.1 – Monitoring Program Inception Report

The report shall describe the understanding of the objectives and tasks, the approach, schedule, staffing plan, project management practices and control processes to ensure the project reaches its goals. The report is due within One (1) month of the Consultant being hired.

Deliverable 1.2 – ARRP-screening Monitoring Framework Report.

The report shall detail and comprehensively address all elements of the ARRP-screening monitoring and evaluation framework discussed in Task 1.1, including **methodology, indicators and the processes and practices that will be utilized.** The report is due within one (1) month of the Consultant being hired.

Deliverable 1.3 – ARRP-screening Indicators Baseline Report.

Building on the processes, practices and information noted in the ARRP-screening Monitoring Framework Report, this report shall provide a list of all project indicators and establish a baseline for each of those indicators upon which project progress will be measured through the duration of the ARRP-screening. The report is due within 1 (one) month of the Consultant being hired.

Deliverable 1.4 – Project Monitoring Information System (PMIS) Technical Report (Web based data system with dashboard)

The report shall detail the development of new or technical specifications of software to be utilized for the PMIS. The report must include a PMIS User Guide and instructions on how the system can be installed. The report is due within Two (2) months of the Consultant being hired. Successful implementation of the PMIS must be demonstrated within one (1) month after delivery of this report.

Deliverable 1.5 – ARRP-screening Website Report.

The report shall detail the website site map, content, contact approach, maintenance schedule and other appropriate information related to the ARRP website. The report is due within Two (2) months of the Consultant being hired. Successful activation of the website must be demonstrated within one (1) months after delivery of the report.

5.2.1 Phase 2 – Task List

The following tasks are required:

Task 2.1 – Process and progress monitoring for implementation.

The Monitoring Organization is responsible for the conduct of all process and progress monitoring for the project components. The Monitoring Organization is also responsible for all of the associated staffing, resourcing, coordination and supervision required for the process and progress monitoring.

The Monitoring Organization is expected to report on its evaluation of overall ARRP-screening implementation in addition to the regular reporting of project progress, inputs, outputs, and outcomes to the PD, ARRP. Process and progress monitoring must also include ongoing evaluation of operational risks and governance aspects. As well, process and progress monitoring should address the review and supervision of implementation.

5.2.2 Phase 2 – Outputs and Deliverables

The following outputs and deliverables are required:

Deliverable 2.1 – Consolidated ARRP-screening Progress Reports

Beginning one (1) month after the Monitoring Organization is hired and due every single month from that time until the end of the ARRP-Screening 11 monthly and 1 annual (at the end of 12th month) progress report in each financial year and these reports will detail ARRP implementation progress as described in the ARRP M&E Framework. To ensure ARRP-screening implementation progress continues, the Monitoring Organization shall also provide recommendations for any necessary corrective actions to all implementing agencies (Local NGO) maintain satisfactory implementation progress. The Monitoring Organization will also recommend necessary changes in the project scope, interventions and implementation processes to ensure timely and satisfactory achievement of the expected outcomes of all Arsenic Screening components and the overall development objective of the project. The report shall also identify all ARRP-screening works completed in the last months, provide a rolling cumulative list of ARRP-screening works completed and provide an outlook of works expected to be completed in the next month.

5.3.1 Phase 3 – Task List

The following tasks are required:

Task 3.1 – Support the ARRP Implementation review.

The Project Director, ARRP will carry out a comprehensive Implementation review at the completion of project implementation. The Monitoring Organization may be expected to carry out analytical work directly related to the monitoring and evaluation conducted during the ARRP-screening implementation period for this purpose.

Task 3.2 – Strengthen the M&E capacity of the project Implementing Agencies (Local NGOs')

The Monitoring Organization will work with the Project Co-ordination and Monitoring Unit (PCMU), ARRP office and Local NGO's (IAs) to improve understanding of key approaches and best practices regarding project monitoring and evaluation. The Monitoring Organization will provide on-the-job training to Implementing Agencies (Local NGOs') and PCMU (Project co-ordination and monitoring unit) using demonstrable examples of ARRP-screening project indicators to highlight how M&E can improve project management and enhance the positive response to the project by all involved parties as well as provide Training Manual, Guideline for the Training of the Local NGOs'.

Deliverable 3.1 – ARRP-screening M&E Implementation Summary Report (ISR).
Due 9 (nine) months after the Monitoring Organization is hired, the report shall provide a summary of all progress history, inputs, outputs and outcomes (**Total validation of 3200 union's water point survey data in prescribed format** - sample will be provided by the project director office – **Appendix-C**) and impacts; The report shall also track recommended corrective actions, how those actions were considered and implemented by Local NGO's or Implementing Agencies (IAs), and their resulting outcomes. The report will provide a comparative analysis of indicator baselines and final indicator status.

Deliverable 3.2 – Monitoring and Evaluation Advisory Report for Implementing Agencies.
Due nine (9) months after the Monitoring Organization is hired, the report shall provide high-level advice on the design and implementation of project monitoring and evaluation programs. The report shall also include an updated PMIS User Guide that reflects improvements to the system during the ARRP-screening implementation period and make recommendations for further strengthening the M&E capacity of the LOCAL NGO's or Implementing Agencies (IAs).

6.0 Additional Considerations

There are a large number of Local Government Organization's involved in the ARRP-screening activities, is to establish an independent monitoring system in place. This system will enable a well-coordinated response strategy at all levels of government authorities.

7.0 Implementation Arrangements

The Project Director, ARRP intends to hire services of a competent Monitoring Organization to assist PCMU (Project Coordination and Monitoring Unit) in monitoring and evaluating all aspect of the ARRP (Arsenic Screening). The PCMU will be responsible for the Organization (Monitoring Organization) contract management, including tracking the implementation and success of the Monitoring Organization in delivering the identified outputs/deliverables and achieving the expected outcomes within anticipated timeframes.

A focal point will be identified at inception that will be the lead representative of the Monitoring Organization (Consultant). This person will be responsible for coordination and all interfaces with the PCMU and Implementing Agencies (IAs). The Team Leader of the Monitoring Organization will be the principal contact and will be expected to be readily available during project implementation. The Monitoring Organization shall be responsible for all aspects of performance of services as set forth in the preceding sections of this ToR.

8.0 Selection Procedure and Form of Contract

The firm will be selected following Quality and Cost Based Selection (QCBS) as described in the PPR-2008 Guidelines:
Minimum qualifications of the firm to be selected for the required assignment include:

- More than 20 years of experience in the field, including experience with governments, including at least 10 years of experience in large, multi-year project (at least five (5) assignment successfully done) monitoring and evaluation
- Demonstrated competency in conceptualization, formulation, and execution of large-scale

institutional capacity development programs of similar nature as the one specified here.

- Monitoring Organization should bring among its team demonstrated expertise in the following fields: project management; monitoring and evaluation; training and capacity building, information management; quality control/quality assurance; data management systems, risk monitoring and evaluation and social impact monitoring and evaluation.
- Competency in organizational analysis, business administration, management consulting or equivalent.
- Transparent and auditable procurement and documentation tracking system.
- Internal competency (or commitment to acquire competency) for provision of all materials in English. The need for the Consultant to provide translators during face-to-face interactions and other M&E related activities will be determined through discussion with the IAs.

The Monitoring Organization shall have experience with developing and obtaining specific performance data (both quantitative and qualitative) to establish benchmarks at the onset of the project and to measure progress. The Monitoring Organization shall demonstrate full awareness of scope of all ARRP Component TOR's.

9.0 Duration of Assignment

Duration of the contract is Twelve (12) months from the date of hire (or at the end of the project period, which comes earlier). During this time, the phased approach, as outlined in the defined tasks above will be followed.

10.0 Staffing Requirements

The Monitoring Organization is encouraged to use the expertise available in Bangladesh to the extent possible. The Monitoring Organization is free to propose a staffing plan and skill mix necessary to meet the objectives and scope of the services. However, a strong competency in project management applications is expected. Below is an indicative list of posts where the firms will propose their required person-months/position numbers to carry out the assignment.

1: Team leader,
2: Data Analyst,
3: Software Developer,
4: Training Officer
5: Hydro-geologist,
6: Data Entry Operator,
7: Field Monitoring Officer (Total 18*3 = 54 no's)

In addition, field team will have to be mobilized to collect information and responsible for training of Implementing Agencies (Local NGO). Bidding firms are requested to propose the field team arrangements as the nature and composition of the field teams would depend on the M&E methodology proposed by the bidding firms.

An indicative table of roles and duration can be found in Appendix B.

11.0 Reporting and Management of the Assignment

The assignment has been commissioned by the Project Director, ARRP. The Monitoring Organization will report to the lead of the PCMU (Project Coordination and monitoring Unit) through Local Executive Engineer, DPHE.

Appendix A. Implementation Schedule for the Monitoring Program

PHASE	ACTIVITY	12 months											
		1	2	3	4	5	6	7	8	9	10	11	12
Phase 1	**Task List**												
1.1	Create a comprehensive ARRP- screening monitoring framework.												
1.2	Develop baseline information for the established key project indicators.												
1.3	Develop and maintain a computerized Project Monitoring Information System (PMIS).												
1.4	Establish and maintain a comprehensive project information website linked with DPHE												
Phase 1	**Outputs and Deliverables**												
1.1	Monitoring Program Inception Report.												
1.2	ARRP-Screening Monitoring Framework Report.												
1.3	ARRP-Screening Indicators Baseline Report.												
1.4	Project Monitoring Information System (PMIS) Technical Report.												
1.5	ARRP-Screening Website Report linked with DPHE.												
Phase 2	**Task List**												
2.1	Process and progress monitoring for project components and ARRP-Screening implementation.												
Phase 2	**Outputs and Deliverables**												
2.1	Consolidated Project Progress Reports (Monthly).												
Phase 3	**Task List**												

PHASE	ACTIVITY	12 months											
		1	2	3	4	5	6	7	8	9	10	11	12
3.1	Support the ARRP-Screening Implementation Review												
3.2	Strengthen the Monitoring capacity of the project Implementing Agencies (Local NGO).												
Phase 3	**Outputs and Deliverables**												
3.1	ARRP-Screening Monitoring Implementation Summary Report (ISR)												
3.2	Monitoring Advisory Report for Implementing Agencies												
Mode of Payment													
	Mode of payment will be based on Deliverables, Subjected to acceptance from the PCMU, ARRP.	25 % of The Contract Price						30 % of The Contract Price				45 % of The Contract Price	

Appendix B. Key Staffs in Monitoring Team (Monitoring Organization):

Sl. No	Position	Number of Person	Person Month (approx)	Job Description	Qualification	Experience
1	Team leader (TL)	1	12	Overall management of the Monitoring task and responsible for delivery of the expected outputs. Develop monitoring indicators and standard formats. Supervise and involve in base line, Mid-Term and End of Project survey. Periodic assessment and other specific studies and in final impact evaluation. Also responsible for Training related activities, etc. Must visit 3 district each month and report to PMU. Spend at least 10 days in the FIELD	Masters in any disciplinary including (Civil Engineering / Water Resource Engineering / or any branch of Science/ Engineering	18 years' total experience including 12 years' specific working experience in relevant field. Maximum age limit 45 years.
2	Data Analyst	1	12	Analyse Baseline, Mid-Term and End of Project survey data with Statistical Software. Preparation of Reports and documentations. Also responsible for Training related activities, etc. Spend more than 30% time in the FIELD	Masters in Statistics / Relevant Subject or any branch.	10 years' experience in Data analysis, Data Interpretation and Reporting. Maximum age limit 40 years.
3	Training officer	1	12	Arrange various training at different tire such as Field monitoring officers, NGO staff. Prepare Training manual, Training Report and Training outline as well as Preserve all documents related to Training. Spend more than 70% time in the FIELD.	Masters in Social Science / Relevant Subject or any branch.	10 years' experience as Training officer. Maximum age limit 40 years.
4	Software Developer	1	6	Responsible for PMIS and Website. Analyse Baseline, Mid-Term and End of Project survey data with Statistical Software.	Masters in Computer Science / Relevant Subject or	5 years' experience in developing Website and PMIS, Data analysis, Data

				Preparation of Reports, etc	any branch.	Interpretation and Reporting. Maximum age limit 40 years.
5	Hydro-geologist	1	6	Analyze bore log, Report the same and Mapping. Data analysis, Data Interpretation, etc Spend more than 40% time in the FIELD.	Masters in Geology / Relevant Subject or any branch. Expertise in GIS related software and Hydro-logger.	5 years' experience in Analysing bore log, Mapping and Reporting. Maximum age limit 40 years.
6	Data Entry Operator (2 nos @ 6 months)	2	12	Responsible for entry of Baseline, Mid-Term and End of Project survey data. Preparation of all reports, etc	Bachelor in Statistics / Relevant Subject or any branch.	5 years' experience in Data analysis and Reporting. Maximum age limit 35 years.
7	Field Monitoring Officer (Total 18*3 = 54 nos @ 8 months)	54	432	Training of the Implementing Agencies (Local NGO), Monitoring and Reporting of the Arsenic Screening Activities, Ensuring the similarities between Hard copy data and Apps data of the screened Tube-well etc. Spend more than 80% time in the FIELD.	Bachelor / Masters in Social Science/ Relevant Subject or any branch of Social Management/ Science.	05 years' experience in capacity/ management development. . Working experience as a trainer for arsenic screening will be preferred. Maximum age limit 40 years.

Appendix C. Prescribed Booklet format of the Report:

Table of Contents should be included: 1.1 Background of the Survey, 1.2 Objectives of the Survey, 1.3 Survey Area, Organization and Schedule, 1
Survey area, 1.3.2. Relevant Organization surveyed, 1.3.3 Survey schedule, 2. Water Resources Potential as Drinking Water Source, 2.1 Groundw
Resource Potential, 2.1.1 Data and Method for Evaluation, 2.1.2 Evaluation results for Groundwater Resources Development, 2.1.3 Data Preparat
Conversion and Data Validation, 2.1.4 GIS Layer Creation, 2.1.5 GIS Analysis 2.1.6 Data Conversion 3. Water Quality for Drinking Water Supply,
Water Quality Monitoring, 3.1.1 Water Quality Guidelines, 3.1.2 Challenges to Water Quality monitoring, 3.2 3200 no's Union level's water qua
Database, 3.2.1 Introduction, 3.2.2 Arsenic Contamination, 3.2.2.1 Arsenic Contamination in Water source 3.2.2.2 Arsenic Contamination and Surf
Geology, 3.2.2.3 Safe water Availability, 3.2.2.4 Safe Water options, 3.2.2.5 Safe water option condition, 3.2.2.6 Map Generation (Union le
Upazila Level, District Level, Division, National Level) 3.3 Summary of union-wise Water quality Problems (Arsenic, Iron, Salinity, Manganese
and water quality of groundwater exceeding Bangladesh Guidelines value) in 3200 no's Union, 3.4 Surface water quality in each union, 4. Results
Survey (Questionnaire, focus group etc.), 4.1 Individual General Information of 3200 unions, 4.1.1 Summary, 4.1.2 Organization, Finance a
Management 4.2 Individual General Information on water supply in 3200 union's, 4.2.1 Summary, 4.2.2 General Information on water supply, 4.
Water supply facilities, 4.2.4 Challenges and needs for water supply, 4.2.5 Water usages in Non-piped water supply systems area 4.2.6 Potential Wa
Supply sources, 5. Survey Findings for Union's 5.1 Summary, 5.2 Observation and recommendation, 5.3 Present Status of Safe water supply wa
Technology, 5.4 Prepare Master Plan (In terms of Water Source, Water Supply Demand, Financial, environmental, Social Aspects), , 6. Discussions a
Conclusions 6.1 Data Quality, Limitations, Gaps, 6.2 Mitigation Situation Analysis, 6.3 Future Invention, 7. Recommendation for Future Actions a
others

05/08/2020
(Nazia Tasmin)
Executive Engineer
Training Division
DPHE, Mohakhali, Dhaka.

9.8.20

9/8/2020
(Mohammed Anwar Eusuf)
Superintending Engineer
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6. **Qualifications and Experience:**

- Must have a proven track record of on monitoringactivitiesand training experiences as well as data analysis, reporting of minimum BDT **3,00,00,000.00**(Three Crore) in last five years.
- Must have sound turn over, minimum 2 (Two) croreper year for a period of 3 consecutive years to be proven by Audit Report and Bank Statement.
- Extensive knowledge and experience on 'training on social mobilization, Screening and behavioral pattern of mass community.
- Extensive knowledge and experience in working with local government Institution (LGIs)
- Experience in capacity enhancement of local stakeholders

Note: Preference will be given on social mobilization and LGIs intervention on the scheduled working areas under the package:

I. List only previous similar assignment successfully completed in the last five (5) years.
II. List only those assignments for which the Officer was legally contracted by the client as a company or was one of the joint venture partners. Assignments completed by the Officer's individual experts working privately or through other consulting firmscannot be claimed as the relevant experience of the Officer, or that of the Officer's partners or sub-Officers but can be claimed by the experts themselves in their CV's. The Officer should be prepared to substantiate the claimed experience by presenting copies or relevant documents and references if so, requested by the client.

Duration	Assignment name & brief description of main deliverables/ outputs	Name of client & Country of Assignment	Approx. Contract value (inBDT/ Amount paid to your firm	Role on the Assignment
{e.g. Jan 2009- Apr. 2010}	{e.g. "Improvement quality of .....". Designed master plan for rationalization of .....; }	{e.g., Ministry of ....., country}	{e.g., BDT}	{e.g., Lead partner in a JVA&B&C}
{e.g., Jan-May}	{e.g., "support to sub-national government ....." drafter secondary level regulations on .....}	{ e.g., municipality of ....., country	{e.g., BDT}	{ e.g., sole Officer}

CURRICULAM VITAE (CV)

Position Title and No.	**{e.g., k-1 TEAM LEADER}**
Name Of Expert	**{Insert full name}**

...positions, date attend, degree(s)/diploma(s) obtained}

Employment record relevant to the assignment: {Starting with present position, list in reverse order. Please provide dates, name of employing organization, titles of positions held, types of activities performed and location of the assignment, and contact information of previous clients and employing organizations who can be contacted for re.ferences. Past employment that is not relevant to the assignment does not need to be included.}

Period	Employing organization and title/position. Contact info for references	Country	activities relevant to the Assignment
{e.g., May 2005- present}	{e.g., Ministry of ....., advisor Officer to..... For reference: Tel ...../ e-mail .....; Mr. ....., deputy minister}		

Membership in Professional Associations and Publications:

Language Skills (indicate only languages in which you can work:

(Project will provide test kits, Tube well's data will be collected/generated through both in smart phone & hard copy, painting the tube wells (Arsenic testing kits, color& brush will be provided by the project,prepare all relevant training manual & guidelines of arsenic test)

Adequacy for the Assignment:

Detailed Tasks Assigned on Officer's team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
{List all deliverables/tasks as in TECH-5 in which the Expert will be involved}	

Certification: I. the undersigned, certify that to the best to my knowledge and my belief, this CV correctly describes myself, my qualifications, my experience and I am available to undertake the assignment in case of an award. I understand that that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the bank.

{day/month/year}

Name of Expert	Signature	Date

{day/month/year}

Name of authorized	Signature	Date

Representative of the Officer

(the same who signs the Proposal)

Nazia Tasmin
09/08/2020
(Nazia Tasmin)
Executive Engineer
Training Division
DPHE, Mohakhali, Dhaka.

09.08.20
এ,এইচ,এম খালেকুর রহমান
নির্বাহী প্রকৌশলী
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
সহকারী প্রধান প্রকৌশলীর কার্যালয়
ঢাকা।

09/08
(Md. Saifur Rahman)
Superintending Engineer, DPHE
Ground Water Circle, Dhaka.

9/8/2020
(Mohammed Anwar Eusuf)
Superintending Engineer
DPHE, Planning Circle
Dhaka.

(তাসনিম তামান্না)
নির্বাহী প্রকৌশলী
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
ডিজাইন বিভাগ, ঢাকা।

9/8/2020
(MD. SARWAR HOSSAIN)
Additional Chief Engineer (Works)
Department of Public Health Engineering
Govt. of Bangladesh, Dhaka

CE, DPHE

proposed ToR may be approved.

12/8/2020
প্রকৌঃ শান্তনু বড়ুয়া
সহকারী প্রকৌশলী
প্রধান প্রকৌশলীর কার্যালয়
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর, ঢাকা।

Approved.

12/8
মোঃ সাইফুর রহমান
প্রধান প্রকৌশলী
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
বাংলাদেশ সরকার, ঢাকা।