

Draft Terms of Reference for
**“Project Implementation Consultant for Establishment
of Physical Modelling Centre at Birpur”**

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Abbreviation

1.	GoI	Government of India
2.	BKBDP	Bihar Kosi Basin Development Project
3.	IDA	International Development Association
4.	FMISC	Flood Management Improvement Support Centre
5.	GoB	Government of Bihar
6.	WRD	Water Resources Department
7.	BAPEPS	Bihar Aapda Punarwas Evam Punarnirman Society
8.	PMC	Physical Modelling Centre
9.	PIC	Project Implementation Consultants
10.	DPR	Detailed Project Report
11.	MSC	Managing Support Consultant
12.	ToR	Terms of Reference

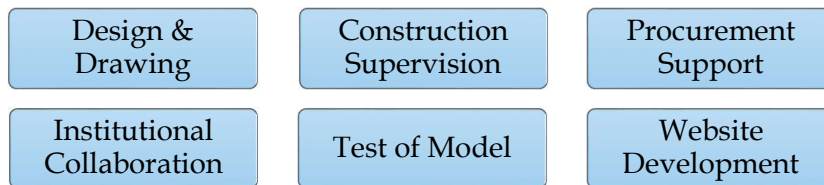
Chapter- 1: Background Information

- 1.1. The Government of India (GoI) has received, on behalf of the Government of Bihar (GoB), a credit of US\$ 250 million equivalent from the International Development Association (IDA) towards the cost of Bihar Kosi Basin Development Project (BKBDP - Project ID No. P127725) with project development objective is to enhance resilience to floods and increase agricultural production and productivity in the targeted districts in the Kosi River Basin, and to enhance Bihar's capacity to respond promptly and effectively to an eligible crisis or emergency.
- 1.2. For the implementation of the Project, GoB has constituted a Society known as Bihar Aapda Punarwas Evam Punarnirman Society (BAPEPS) under the Societies Registration Act 1860 as a separate legal entity to implement the BKBDP. Water Resources Department (WRD), GoB is a sub-implementing agency for implementing the component for Improving Flood Risk Management (having an outlay of IDA finance US\$ 100 million) with the support of Flood Management Improvement Support Centre (FMISC), WRD, Bihar.
- 1.3. To enhance the resilience to flood WRD, GoB has signed a contract agreement with "Chevrox Construction Private Limited, C3/802, Anushruti Tower, S.G. Highway, Ahmedabad - 380059, Gujarat, India" to apply part of the proceeds for "Establishment of Physical Modelling Centre (PMC) at Birpur" in the region of Supaul, Bihar, India. The project duration has 30 (thirty) months effective from 24/06/2020.
- 1.4. For Implementation of Construction, Supervision and Initial demo-operation of "Establishment of Physical Modelling Centre at Birpur" GoB intends to apply part of the proceeds for "Hiring of Project Implementation Consultants (PIC) support for Construction, Supervision and Initial demo-operation of Establishment of Physical Modelling Centre at Birpur".

- 1.5.** The Physical Modelling Centre will use the state-of-art technologies for integrated planning for better Flood Management, River Basin Management, River Erosion, Sediment Management, and Climate Change, Water Resources Planning for new project(s), planning, Instrumental and software. This Centre will also provide training services to WRD officials that will support the management of natural resources in the state of Bihar using modern tools like modelling technology, integrated environmental analysis, Geographic Information System, Remote Sensing and Information Technology for sectors like water, land, agriculture and environment in addition to Research and development.
- 1.6.** A Detailed Project Report (DPR) has been prepared for development of the Physical Modelling Centre to be established at Birpur. The initial designs/plans for the PMC documented in the DPR include the following.
- a.)** Identification of the plot of land for construction of PMC.
 - b.)** Conceptual layout of the PMC Campus.
 - c.)** Detailed designs (including specifications and bills of quantities) for the following:
 - (i) Layout of model basins
 - (ii) Layout of water circulation, pumping and water storage systems
 - (iii) Administrative and office buildings
 - (iv) Laboratories and Workshops
 - (v) Electrical power distribution system within the Campus
 - (vi) Stores, Security and ancillary facilities
 - (vii) Internal road network
 - d.)** IT requirements & equipment for labs and workshops.
 - e.)** Initial drafts of bid documents for IT procurement & installation, Lab and workshop equipment procurement installation.

Chapter- 2: Objective& Scope of Work

- 2.1. The Project Implementation Consultant (PIC) is to represent the Client as the principal consultant responsible to the client for delivering the different activities of for establishing PMC while coordinating the different activities for the establishment of PMC from the concepts outlined to through all the stages of development, beginning with land preparation, to design, to construct and eventually to full fill operational capability.
- 2.2. The PIC must ensure that all the necessities which are brought to bear in the setup process for the PMC and ensure that the objectives are reached.
- 2.3. The objectives would be to do the following up to the satisfaction of client: -



- 2.1. Design & Drawing:
 - a.) Reviewing, updating and detailing of all prepared initial designs& drawings (for Building Work, Physical Models & their water recirculation system, for Civil-Architectural-PHE-landscaping-electrical and other such requirements for the PMC campus) in consultation with client;
 - b.) To support Client as well as contractor in layout for Building Work, Physical Models & their water recirculation system, for Civil-Architectural-PHE-landscaping-electrical and other such requirements for the PMC campus. Any layout for entire civil work should be vetted by PIC w.r.t design & drawing;
 - c.) To support Client as well as contractor for better understanding of drawings for Building Work, Physical Models & their water recirculation system, for Civil-Architectural-PHE-landscaping-electrical and other such requirements for the PMC campus after reviewing the above.
- 2.2. Construction Supervision:

(Consultant will be responsible for the supervision of all construction work related to PMC)

- a.) Supervision and assistance with responsibility for quality checks of construction activities;
- b.) To assist in high standards of quality assurance during execution of work and completion of work following contract management.
- c.) Comprehensive supervision of each and every activity for completion of work to be/being carried out by the Contractor inconsistent with the drawings, technical specifications and others in accordance with contractor document.
- d.) Efficient construction supervision by personnel who have experience in modern technique of construction supervision and contract management;
- e.) To review all activities associated with Construction to ensure compliance of requirements of Contract Agreement in order to have a successful Project;
- f.) Report to Client on the financial and technical aspects of the project based on update/latest methodology.
- g.) Assist client in arriving at an amicable settlement of dispute;
- h.) To assist client for effective system of monitoring by providing contract management and monitoring support.

2.3. Procurement Support:

- a.) Prepare and/or update bid document, technical specification & estimate, bid process, contract management/ preparation for IT infrastructure, Lab Equipment (Mechanical, Hydraulic, Geo-technical, sediment), Electronics & Instrumentation Equipment, etc. as necessary and explained in DPR available with client.
- b.) Prepare bid document, terms of reference & estimate, bid process, contract management/ preparation for Managing Support Consultant (MSC)¹ to PMC as per direction of client.

¹The Management Support Consultant will be required to manage the PMC and help in its operational and functional activities and will be fully responsible for the immediate.

2.4. Institutional Collaboration:

- a.)** Collect review and analyse the different type of institutional setup similar to PMC.
- b.)** Assist client in preparation of draft and pursue initial phase Institutional Collaborations of PMC with similar type of Institute.

2.5. Test of Model:

- a.)** Identify at least 4 (four) trial runs for Physical Model such that 100% operation of Models can be checked.
- b.)** Prepare the Model for identified trial run in Consultant with Client and Contractor and run the model with standard and quality as per International norms.
- c.)** Prepare reports on above trial runs and analyse the outcomes.

2.6. Website Development:

- a.)** Develop a website for PMC including domain registration containing information, activates related to PMC, report publication, news circulation, feedback, provision for training, seminar, workshop and conference (online/ offline), public grievance, RTI, etc.

Chapter- 3: Tasks & Deliverables

3.1. Tasks& deliverables:

- a.) **Inception report:** Containing the methodology and work plan to achieve the objectives.
- b.) **Monthly Progress Report:** Routine report containing status of ongoing and completed jobs and report on adherence to set timelines. It should contain following:
 - (i) Current Status
 - (ii) Updated timeline
 - (iii) Update/ detailing in design/ drawing (if required)
 - (iv) Quality Report
 - (v) Environmental and Social Report
 - (vi) Technical Report/aspects (if required)
 - (vii) Financial Report/aspects (if required)
 - (viii) Dispute (if any)
 - (ix) Amendment in contract (if any)
 - (x) Safety Report & Healthy Programme
 - (xi) Training if necessary
- c.) **Interim Report:** Every 6th (sixth) Progress Report is called Interim Report.
- d.) **Trail Model** runs for Physical Model such that 100% operation of Models can be checked.
- e.) **Model Test Reports:** containing justification of selection of trial run, all operational needs, inputs and outputs, international standard and quality to run model, analysis of model outcomes.
- f.) **Procurement Documents:** containing updated bid document, technical specification & estimate, bid process, contract management/ preparation for IT infrastructure, Lab Equipment (Mechanical, Hydraulic, Geo-technical, sediment), Electronics & Instrumentation Equipment, etc. and bid document, terms of reference & estimate, bid

process, contract management/ preparation for Managing Support Consultant (MSC) to PMC as per direction of client.

- g.) Website Documentation:** Website of PMC with source code and flow diagram and necessary documentation.
- h.) Final Report:** containing future scope of PMC & comments on sustainability of PMC.

3.2. Approval committees and the review procedure: The Inception Report, Interim Reports and Final Report will be reviewed, accepted and approved by the Standing Review Committee (SRC) constituted by Water Resources Department, Government of Bihar within 15 days after their submission by the consultant. The Consultants shall be responsible to incorporate the suggestions advised by the SRC for modification of the Report.

3.3. Obligations of the Consultant:

- a.)** The consultant shall follow the tasks and activities defined in the Terms of Reference and also adhere to the concept outline for the PMC.
- b.)** The consultant shall carry out the study/ quality monitoring/ supervision in a professional manner in keeping with internationally accepted standards using qualified and appropriate staff. They will Endeavour to implement with diligence within the agreed time.
- c.)** The consultant shall look into matter raised by contractor and place before the client if required.
- d.)** There will be joint progress reviews of each task by the client and the consultant would ensure timely execution with quality or to give early warning of a deficit of resources, skills and/or manpower to control over time and quality of work.
- e.)** The consultant shall be responsible to review drawing and if any discrepancies it will be communicated in notice of client.
- f.)** The Consultant will ensure synchronization of the two viz. MMC and PMC for joint research & training programme.
- g.)** The consultant shall conduct and complete the consultancy assignment as per the requirements of terms of reference.

- h.)** The consultant shall set up a main office in Birpur and nodal office in Patna. Necessary infrastructure for office and technical work will be created in the main office and nodal office will be responsible to liaison with FMISC if required.
- i.)** Consultant shall make its arrangement for all the equipment, furniture, stationery, software, computers, laptops, printers, internet, vehicles for transportation of staff or any other tools/ facility required for execution of the work, at their own cost.
- j.)** Conduct and complete the consultancy as per the agreed ToR and scope of the consultancy, leading to delivery of agreed items of contract document.
- k.)** All the deliverables required in hard copy shall be submitted in 6(six) copies and those which are to be submitted in soft copy shall be submitted in two copies. The documentation done under this assignment shall be given in external hard disk of capacity (not less than 1TB) arranged by consultant. The PIC shall ensure that every submission made under this consultancy shall be copied on this external hard disk at the time of submission.

3.4. Client's Obligations: The Client will be expected to work as a team member with the PIC to realize the objective. It will be an obligation to create an enabling environment for the successful implementation of this assignment and to provide timely feedback and guidance, including timely approvals of (or comments to) the various progress reports and expense statements.

3.5. Contract management framework: Joint Director, FMISC, Patna on behalf of the Department will take responsibility for managing the Consultant's work and for ensuring delivery on the project. Frequent meetings with the Consultant at the employer's office are foreseen during the period of services. The project team will meet at least monthly and the Consultant will report minute of these meetings. During the entire period of services, the Consultant shall be in close interaction with the Employer and its team to receive input and provide information.

- 3.6. Consultant's Selection Method: The selection method will be Quality and Cost Based Selection (QCBS).
- 3.7. Duration of Consultancy = 30 (thirty) months
- 3.8. Payment Schedule: Payments to the consultants will be based on the monthly invoices each raised corresponding submissions of Reports made as listed above. The time-based remuneration costs of consultant staff will be invoiced on the basis of individual timesheets based on deployment of staff duly approved by the Client and reimbursement of expenditure and scheduled costs will be made on the submission of requisite supporting documents.

Chapter- 4: Consultancy Firm & Key Personnel's Requirements

- 4.1.** The PIC must have relevant international-standard experience and expertise, and be familiar with local conditions and laws.
- 4.2.** Staff nominated by the selected PIC must be confirmed as available to perform the scheduled work.
- 4.3.** The total indicative man-months requirement of key professional staff inputs is about:

1.	Full time	205.50 months	Intermittent as per need
2.	Part-Time	34.50 months	intermittent online, e-mail, telephonic or similar support as per need

- 4.4.** The Consultant will engage the minimum key experts/professionals of required qualification and experience as detailed below. Consultant shall make their assessment for the requirement of any additional key or non-key expert, which they assess that it is required for the successful and satisfactory completion of the work. Consultant shall quote accordingly. Consultant should allow providing additional qualification and experience.

The additional qualification and experience shall make extra marks in evaluation process.

- 4.5.** Minimum Key Professionals:

1. Team Leader (01 No.)	2. Deputy Team leader -cum- Construction Manager (01 No.)
3. Quality Manager (01 No.)	4. Structural Engineer (01 No.)
5. Architect (01 No.)	6. Electrical Engineer (01 No.)
7. Mechanical Engineer (01 No.)	8. Information Technology Engineer (01 No.)
9. Physical Modelling Expert (01 No.)	10. Hydraulic Engineering Expert (01 No.)
11. River Engineering Expert (01 No.)	12. Instrumentation Expert (01 No.)
13. Sediment Analysis Expert (01 No.)	14. Site Engineers (civil) (03 Nos)
15. Site Engineer (Electrical) (01 No.)	16. Safety Engineer (01 No.)
17. Environmental Engineer (01 No.)	18. Procurement Expert (01 No.)
19. Office Assistants (03 Nos)	

Position: Team Leader

(i) Estimated Man-Month:

- Full-time Man-month required 12 Months
- Part-Time Man-month required 6 Months

(ii) Minimum Educational Qualification:

- Graduate Civil Engineer with Post Graduation in Construction Management/Planning/Engineering/Business Administration

(iii) Added Advantage Qualification:

- Degree/ diploma/ certificate in Structural Engineering/ Hydraulic Engineering/ Quality Engineering

(iv) Minimum Preferable Experience:

- At least 10 years experience in multidisciplinary civil engineering projects, at least 3 years among them in management.
- Experience of managing/handling multidisciplinary teams in especially in Building Construction.
- At least 2 years experience in externally funded projects preference shall be given to those who have experience in construction of Model works.

(v) Primary Role:

- Overall responsible to co-ordinate all the work for providing deliverables in time.
- Responsible for quality & structural sound/ operational construction of structure including Physical Model.

Position: Deputy Team Leader-cum-Construction Manager

(i) Estimated Man-Month:

- Full-time Man-month required 24 Months
- Part Time/ Man-month required 3 Months

(ii) Minimum Educational Qualification:

- Graduate Civil Engineer

(iii) Added Advantage Qualification:

- Post-Graduation in Construction Management/ Planning/ Engineering/ Business Administration
- Degree/ diploma/ certificate in Structural Engineering/ Hydraulic Engineering or similar.

(iv) Minimum Desired Experience:

- At least 10 years experience in civil engineering projects, at least 5 years in Building Construction industry as Manager/ Supervisor. Preferably in Construction of Model works.

(v) Primary Role:

- Overall responsible for Supervision of work (Civil & Electrical Work).
- Overall responsible to co-ordinate all the work for providing deliverables in time.
- Responsible for quality & structural sound/ operational construction of structure including Physical Model.

Position: Quality Manager

- (i) Estimated Man-Month:
- Full-time Man-month required 30 Months
- (ii) Minimum Educational Qualification:
- Graduate Civil Engineer
- (iii) Added Advantage Qualification:
- Degree/ diploma/ certificate in Quality Engineering/ Management of Environmental & Social aspects in civil engineering/ Safety Engineering in construction industry or similar.
- (iv) Minimum Desired Experience:
- At least 10 years experience civil engineering projects, out of which 5 years as quality supervisor/ manager.
- (v) Primary Role:
- Overall responsible for Supervision of work (Civil & Electrical Work).
 - Responsible for quality & structural sound/ operational construction of structure including Physical Model.

Position: Structural Engineer

- (i) Estimated Man-Month:
- Full-time Man-month required 3 Months
 - Part Time/ Man-month required 5 Months
- (ii) Minimum Educational Qualification:
- Master's Degree in structural engineering
- (iii) Added Advantage Qualification:
- Degree/ diploma/ certificate in Hydraulic Engineering/ Model construction or similar nature of works.
- (iv) Minimum Desired Experience:
- At least 10 years of relevant experience as structural engineer with sufficient working knowledge of design of hydraulic & building structure.
- (v) Primary Role:
- Overall responsible for structural works.
 - Responsible for structural design and any change if required as per site conditions.

Position: Architect

(i) Estimated Man-Month:

- Full-time Man-month required 2 Months
- Part Time/ Man-month required 2 Months

(ii) Minimum Educational Qualification:

- Master's Degree in Architecture Engineering may be Degree/ diploma/ certificate in structural Engineering/Hydraulic Engineering or similar.

(iii) Minimum Desired Experience:

- At least 10 years of relevant experience as an architect.

(iv) Added Advantage Experience:

- Familiar with Hydraulic Structure works.

(v) Primary Role:

- Overall responsible for Architect of civil work as well as landscape development.
- Responsible for Architect design and any change if required as per site conditions.

Position: Electrical Engineer

(i) Estimated Man-Month:

- Part-time Man-month required 6 Months

(ii) Minimum Educational Qualification:

- Graduate degree in Electrical Engineering

(iii) Minimum Desired Experience:

- At least 10 years of experience as an electrical engineer and working experience with setting up electrical & electronics Labs and also extensive knowledge of building wiring system, pumps, other electronically controlled device, etc.

(iv) Primary Role:

- Overall responsible for supervision & quality of electrical work.

Position: Mechanical Engineer

- (i) Estimated Man-Month:
- Part-time Man-month required 6 Months
- (ii) Minimum Educational Qualification:
- Graduate degree in Mechanical Engineering having Degree/ diploma/ certificate in plumbing/ Hydraulic Model or similar.
- (iii) Minimum Desired Experience:
- At least 10 years of experience as a mechanical engineer and work experience with setting up carpentry and mechanical workshops/ Labs.
- (iv) Added Advantage Experience:
- Knowledge of hydraulic and its operation pumps and other devices in water circulation systems.
 - Experience in construction of Physical Model of any discipline.
- (v) Primary Role:
- Overall responsible for supervision of mechanical work.
 - Responsible for setting up the labs and finalising the equipment required

Position: Information Technology Engineer

(i) Estimated Man-Month:

- Full-time Man-month required 3 Months
- Part-Time Man-month required 1 Months

(ii) Minimum Educational Qualification:

- Graduate degree in Information Technology/Computer Science relevant fields or equivalent degrees having Degree/ diploma/ certificate in CCNA or equivalent.

(iii) Minimum Desired Experience:

- At least 5 years of experience in I.T. infrastructure development.
with experience of development of Website.

(iv) Primary Role:

- Overall responsible for supervision & quality of IT work.
- Responsible for IT specification and estimate preparation.
- Responsible for website development.

Position: Physical Modelling Expert

(i) Estimated Man-Month:

- Full-time Man-month required 4 Months
- Part-Time Man-month required 2 Months

(ii) Minimum Educational Qualification:

- Master's degree in Water Resource Engineering/ River Engineering/ Hydraulic Engineering or equivalent.

(iii) Minimum Desired Experience:

- Minimum of 10 years of relevant experience as a water resources/ river/ hydraulic engineer.
- Experience of setting up, calibrating and running Physical Modelling/ Hydraulic Modelling.

(iv) Primary Role:

- Overall responsible for trial operation of Physical Model and report preparation.
- Responsible for construction, supervision, accuracy, quality of Physical Model-alias- Water Circulatory System work.
- Responsible for labs set-up.

Position: River Engineering Expert

(i) Estimated Man-Month:

- Full-time Man-month required 1.5 Months
- Part-time Man-month required 0.5 Months

(ii) Minimum Educational Qualification:

- Master's degree in Water Resource Engineering/ River Engineering/ Hydraulic Engineering or similar.

(iii) Added Advantage Qualification:

(iv) Minimum Desired Experience:

- Minimum of 10 years of relevant experience as a water resources/ river/ hydraulic engineer.
- Must have knowledge and exposure in sediment-laden rivers.

Position: Hydraulic Engineering Expert

(i) Estimated Man-Month:

- Full-time Man-month required 1.5 Months
- Part-time Man-month required 0.5 Months

(ii) Minimum Educational Qualification:

- Master's degree in Water Resource Engineering/ River Engineering/ Hydraulic Engineering or similar.

(iii) Minimum Desired Experience:

- Minimum of 10 years of relevant experience as a water resources/ river/ hydraulic engineer.
- Must have experience as a hydraulic and knowledge of setting up hydraulic Labs.
- Must have extensive knowledge and exposure in sediment-laden rivers.

(iv) Primary Role:

- Responsible for Hydraulic labs set-up.
- Responsible for quality & structural sound/ operational construction of structure including Physical Model.

Position: Instrumentation Expert

(i) Estimated Man-Month:

- Full-time Man-month required 2 Months
- Part-Time Man-month required 1 Months

(ii) Minimum Educational Qualification:

- Graduate degree in Instrumentation Engineering or similar.

(iii) Minimum Desired Experience:

- Minimum of 3 years of relevant experience in field of instrumentation Engineering & also have knowledge of Water circulatory system.

(iv) Primary Role:

- Responsible for trial operation of Physical Model.
- Responsible for Instrumentation labs set-up.
- Responsible for water circulatory system instrumentation parts.

Position: Sediment Analysis Expert

(i) Estimated Man-Month:

- Full-time Man-month required 1.5 Months
- Part-time Man-month required 0.5 Months

(ii) Minimum Educational Qualification:

- Master's degree in Water Resource Engineering/ River Engineering/ Hydraulic Engineering or similar.

(iii) Added Advantage Qualification:

- Degree/ diploma/ certificate in Hydraulic Engineering/ Hydrology Engineering/ River Engineering/ Modelling or similar.

(iv) Minimum Desired Experience:

- Minimum of 10 years of relevant experience as a morphologist and knowledge of setting up Sedimentation and material testing Labs.
- Must have extensive knowledge and exposure in sediment-laden rivers such as Kosi in terms of setting up, calibrating and running Physical Models.

(v) Added Advantage Experience:

- Experience in Mathematical Hydraulic modelling.
- Must have experience as a hydraulic and knowledge of setting up hydraulic Labs.

(vi) Primary Role:

- Overall responsible for trial operation of Physical Model and report preparation.
- Responsible for labs set-up.
- Responsible for quality & structural sound/ operational construction of structure including Physical Model.

Position:	<u>Site Engineers (civil)</u>
Total Nos.	<u>3 (three)</u>
(i)	<u>Estimated Man-Month:</u>
	• Full-time Man-month required 30 Months
(ii)	<u>Minimum Educational Qualification:</u>
	• Graduate in Civil Engineering
(iii)	<u>Added Advantage Qualification:</u>
	• Degree/ diploma/ certificate in Structural Engineering/ Hydraulic Engineering/ Quality Engineering/ Safety Engineering in construction industry or equivalent with
	• 5 years of experience in Civil Engineering projects.
	• At least 3 years of experience in Building works is essential.
(iv)	<u>Primary Role:</u>
	• Responsible for supervision & quality of work (Civil Work).
	• Responsible to report team leader, deputy team leader and quality manager.
	• Responsible for quality & structural sound/ operational construction of structure including Physical Model.

Position: Site Engineer (Electrical)

- (i) Estimated Man-Month:
- Full-time Man-month required 30 Months
- (ii) Minimum Educational Qualification:
- Graduate in Electrical Engineering
- (iii) Added Advantage Qualification:
- Degree/ diploma/ certificate in wiring in Building or equivalent with at least.
 - 5 years of experience in Civil Engineering works.
 - 3 years' experience in Electrical work of Building.
- (iv) Primary Role:
- Responsible for supervision & quality of work (Electrical Work).
 - Responsible to report team leader, deputy team leader and quality manager.
 - Responsible for quality & structural sound/ operational construction of structure including Physical Model.

Position: Safety Engineer

- (i) Estimated Man-Month:
- Full-time Man-month required 30 Months
- (ii) Minimum Educational Qualification:
- Graduate safety Engineering
- (iii) Added Advantage Experience:
- 3 years' experience in relevant field.
 - Experience in working in similar areas.
- (iv) Primary Role:
- Responsible for safety at site.
 - Responsible to report team leader, deputy team leader and quality manager.
 - Responsible for quality & structural sound/ operational construction of structure including Physical Model.

Position: Environmental Engineer

(i) Estimated Man-Month:

- Full-time Man-month required 30 Months

(ii) Minimum Educational Qualification:

- Graduate Environmental Engineering

(iii) Added Advantage Experience:

- 3 years' experience in relevant field.
- Experience in working in similar areas.

(iv) Primary Role:

- Responsible for maintaining environmental aspects at site.
- Responsible to report team leader, deputy team leader and quality manager.
- Responsible for quality & structural sound/ operational construction of structure including Physical Model.

Position: Procurement Expert

(i) Estimated Man-Month:

- Full-time Man-month required 1 Months
- Part-Time Man-month required 1 Months

(ii) Minimum Educational Qualification:

- Graduate in Civil Engineering or Post Graduation in Construction Management/ Planning/ Engineering/ Business Administration

(iii) Added Advantage Qualification:

- Procurement Procedure/contract management or equivalent.

(iv) Minimum Desired Experience:

- At least 10 years experience in relevant fields with experience of externally funded projects.

(v) Primary Role:

- Responsible for bid preparation, contract management, disputes or similar.
- Responsible for preparation of necessary bid document as explained in ToR.

