

**PRE-QUALIFICATION DOCUMENT (PQD)**  
**FOR**  
**SHORT LISTING OF PROJECT CONSULTING (PCS) FIRMS**  
**FOR**  
**IMPLEMENTATION ASSISTANCE, EXECUTION SUPERVISION**  
**AND THIRD-PARTY VALIDATION IN ALL PROVINCES AND**  
**INCLUDING GB, AJK & ICT**  
**UNDER THE PROJECT**  
**NATIONAL PROGRAM FOR IMPROVEMENT OF**  
**WATERCOURSES IN PAKISTAN: PHASE-II**



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**ISLAMABAD**

**November, 2019**

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# NATIONAL PROGRAM FOR IMPROVEMENT OF WATERCOURSES IN PAKISTAN: PHASE-II

## 1. BACKGROUND

Water is the scarce input in the irrigated agriculture system of Pakistan. Irrigated agriculture revolves around the efficient use of water at all levels: farm, canal, provincial, regional and national. In recent years' stagnation in yields along with inability to meet food security targets, thus forcing food grain imports, have been viewed seriously by policy planners. The unabated supply of irrigation water to the farmers' fields with minimal losses is long been recognized as a prudent strategy by irrigation engineers and water managers. All out efforts have been made by the Government of Pakistan to minimize the seepage and percolation losses in tertiary irrigation system through implementation of water conservation projects under On Farm Water Management departments both at federal and provincial levels. Several programs and projects have been launched to improve water situation through channel lining, PVC pipes for conveyance, concrete structures and more recently use of farm level storage reservoirs/tanks and application of modern irrigation technologies to curtail water losses.

Agriculture is the backbone of Pakistan's economy, contributing around 18.9% to the national GDP. A Task Force on Agriculture was constituted in order to formulate strategy for the Government's 100 days agenda to realize the true potential of agriculture sector. The Task Force in consultation with all the provincial and relevant stakeholders, prepared presentation for the Prime Minister of Pakistan. The Prime Minister was pleased to chair a meeting on the subject "Conserve & Increase Productivity of Water" held on 31<sup>st</sup> October, 2018 in the Prime Minister's office, Islamabad. Ministry of National Food Security & Research (M/o NFS&R) apprised the Prime Minister that about 95% of the available fresh water is being used for agriculture in Pakistan with dismally low irrigation water use efficiency, i.e., 40%. About 47 MAF of water is lost in conveyance in canals, distributaries and watercourses. To sensitize the provincial governments with regard to PM National Agriculture Emergency Program, M/o NFS&R held meetings with the Provincial Planning and Development Departments including Agriculture Departments at respective provincial headquarters. The Provincial Governments were requested to submit their component PC-Is, duly approved by the competent forum, to the Ministry of NFS&R for formulation of Umbrella PC-I. Accordingly, an Umbrella PC-I titled "**National Program for Improvement of watercourses in Pakistan – Phase-II**" has been prepared to implement Prime Minister's directive that pertains to conserve and increase productivity of water through improvement/reconstruction of watercourses, construction of Water Storage Tanks and provision of Laser Land Levelers.

The proposed project is in line with both, the mandate of the government and objectives of National Water Policy-2018. **The Prime Minister's 100 days agenda** stresses on massively expanding water conservation efforts through smart interventions to reduce water losses. Similarly, **National Water Policy** of the country aims at: (i) reduction of 33% in 46 MAF river flows that are lost during conveyance - watercourses lining especially in saline and semi-saline areas; and (ii) increase at least 30% in efficiency of water use by producing "more crop per drop of water".

## 2. PROJECT DESCRIPTION

The National Program for Improvement of Watercourses in Pakistan, Phase-II has been envisaged to improve **59,427** Nos. watercourses, **16,932** Nos. of water storage tanks, and provision of **16,610** Nos. of laser land levelers in Punjab, Sindh, KP, Balochistan, AJ&K,

Gilgit Baltistan, and Islamabad Capital Territory. The quantum of works in all the above provinces/areas are given in the following Table.

Province/ Area	Watercourses (Nos)	Water Storage Tanks (Nos)	Laser Land Levelers (Nos)
Punjab	10,000	3,000	9,500
Sindh	12,149	2,000	5,000
Khyber Pakhtunkhwa	13,000	5,000	600
Balochistan	20,389	5,507	1,500
Azad Jammu & Kashmir	1,165	600	5
Gilgit-Baltistan	2,500	825	5
ICT	224	-	-
<b>Total</b>	<b>59,427</b>	<b>16,932</b>	<b>16,610</b>

### 3. PROJECT ACTIVITIES

The activities to be carried out under the proposed Project are summarized as under:

- i) Mobilization through capacity building of Water Users Associations /Farmers Organizations in improved water management techniques and their registration under On-Farm Water Management and Water User Associations Ordinance [Act] 1981 and organization of **76,359** WUAs.
- ii) Reconstruction/renovation and improvement of **59,427** watercourses involving complete earthen renovation, partial lining of critical reaches (50% of the total watercourse length as decided in the high-level meeting), and installation of water control structures, construction of **16,932** Water Storage Tanks. It is expected to save around **9.3 MAF per annum** (approx. saving of 123 acre-feet (AF) per watercourse per annum).
- iii) Provision of **16,610** Laser Land Levelers at 50% cost sharing, with the expectation to save about 50% irrigation water for wheat and about 68% of irrigation water for paddy.

### 4. PROJECT OBJECTIVES

- i. Social mobilization through capacity building of WUAs/ FOs
- ii. Minimization of conveyance and field application losses
- iii. Reduction in water logging and salinity
- iv. Equity in water distribution
- v. Reduction in water disputes/thefts/litigation
- vi. Motivation/participation of farmers
- vii. Poverty reduction through employment generation
- viii. Increase in crops yield/sufficiency in food

### 5. PROJECT OUTCOMES

- a) Reduction in water logging and salinity in project areas to the extent of 10%.
- b) Cropping intensity is expected to increase by 5-20%
- c) Crops yield is estimated to increase by 10-15%.
- d) Equity in water distribution increased by about 30%.

- e) Reduction in water disputes/thefts litigation amongst the farmers over water distribution by about 80%.
- f) Help poverty reduction through generation of employment.
- g) Self-sufficiency in food through utilization of water saved for edible oilseed production
- h) Cement industry, bricks Killen, Precast Structures Industry and other related industries production will pick up.
- i) Motivating farmers through awareness campaign for watercourse improvement.
- j) Providing technical material to farmers for optimal utilization of water resources in the shape of technical manual and operational guidelines

## **6. OBJECTIVES OF CONSULTANCY SERVICES**

The objectives of the consultancy services under the project would be to facilitate smooth implementation of the Project and provide supervision support in carrying out the project activities in all provinces including AJ&K, GB, and ICT. The consultants would provide support through design review/approval, construction supervision, quality assurance, technical assistance, third party validation and overall coordination of project execution. Moreover, the consultants would assist in overall project management activities including monthly, quarterly and annual progress reports as required by the project management.

## **7. SCOPE OF CONSULTANCY SERVICES**

Project Consultants (PCs) under the proposed project will be hired for implementation assistance, execution supervision and third-party validation of project interventions. The consultants' team will primarily report to the National Projects Coordinator (NPsC), Federal Project Management Unit (FPMU), M/o NFS&R, Islamabad and will coordinate with the concerned Provincial Director Generals (OFWM)/ Director of concerned department of other federating agencies for smooth execution of project activities.

The selection of PCs will largely depend on their technical expertise and experience in providing consultancy services under similar projects. The Consultants Selection Committee (CSC) at Federal level would recruit the consultants in accordance with relevant PPRA rules and procedures.

The PCs' scope of work would include but not limited to the following tasks:

1. Prepare standards, parameters and specifications for civil works, LASER land leveling units and on farm water storage tanks etc.
2. Inspect and advise on standards, specifications, and criteria for the construction materials/equipment etc.
3. Provide project management support services to NPC, provincial DGs/ Directors and District Offices on need basis.
4. Review and validate plans, designs, cost estimates of watercourse, water storage tanks and Laser land levelers
5. Validate quality, construction and certify quantities of watercourses, water storage tanks and Laser land levelers as per approved design and specifications prior to all payments
6. Reporting to provincial DGs, Directors and NPC on compliance/non-compliance of works with agreed criteria and specifications.
7. Submit monthly, quarterly, and annual progress reports for of proposed project activities besides other periodic reports as per requirements of project management.

8. Development of GIS based information system of all the interventions, updation on weekly basis and its management.
9. Develop a website containing information on facilities and services, applications, procedures, watercourses, water storage tanks and Laser levelers database etc.
10. Provide technical support for the development of a custom-designed mobile application (Android) to capture on-site project progress, geo-tagged photos; should be synchronized with the central MIS/GIS database and application for instant reporting and feedback to the management. The said requirement will be based on the following functional features:
  - i. *Development of a GIS database with all spatial layers related to activities being under taken under the project.*
  - ii. *Provide technical assistance for updation/upgradation of Water Management GIS database.*
  - iii. *Development of web-based GIS application as a Dashboard interface for comprehensive representation of all spatial and tabular information; Custom designed web GIS application be developed for large LED screens, should be self-operative and represent project data on multiple layouts of application interface.*
  - iv. *Development of a MIS application as an integral part of web GIS to maintain information on facilities and services, applications, procedures, water courses database etc.*
  - v. *Application should generate custom-designed reports and analysis as per user defined requirements*
  - vi. *Application should generate alerts (SMS, email, web notifications) to the user on the non-conformance of project's key performance indicators; application should have the provision to custom define Alert levels and desired notifications.*
11. Validation of implementation of project interventions before making final payments.
12. Preparation of Monthly, Quarterly and Annual Validation Reports of the project activities.

## **8. ELIGIBILITY/ EVALUATION CRITERIA**

Any firm or consortium of companies expressing interest will need to demonstrate significant experience of managing Projects of similar nature and magnitude. Interested consulting firms/ consortia must provide information indicating that they are qualified to perform the envisaged services (e.g. brochures, descriptions of similar assignments, value of previous assignments; if the firm was in JV/association, then the role of the firm in that assignment and value of the respective services); experience under similar conditions, availability of appropriate skills among staff, etc.

### **A) Pre-Requisite/ Mandatory Requirements**

Following information must be accompanied with the application. Not providing/meeting/responding to any of these requirements may lead to non-responsiveness of the Firm/JV. In case of JV, the Lead firm must fulfill the pre-requisite:

- (i) Firm(s)/joint venture(s) name, address, copy of the Registration Certificate with relevant professional bodies, supported by latest / updated renewal. The firms/Lead Firm in JV must have their offices in all four provinces (Punjab, Sindh, KP and Balochistan).
- (ii) Registration with Securities & Exchange Commission or Registrar of Firms whichever is applicable.

- (iii) Audited account statements for the last three years with annual average turnover of Rs.450 million or above.
- (iv) Registration with Income Tax and Sales Tax Department.
- (v) Detailed description of the Firm Profile by providing its organizational structure, list of permanent staff, quality management systems and list of projects undertaken.
- (vi) Copies “Memorandum of understanding (MoU) or Joint Venture (JV) agreement” among the Joint Venture partners (as the case may be) indicating role and share of each JV partner or sub consultant. PEC Standard Forms of Joint Venture/Consortium Agreements and Memorandum of Understanding shall be used for the purpose.
- (vii) Affidavit confirming that (a) applicant firm(s)/joint venture(s) have never been blacklisted by any government department and/or by any government owned company/ foundation/ authority (If ever black listed, then provide the case history and current status of the firm regarding this decision) and nor in any litigation (b) all the information provided by the applicant firm/joint venture are correct. History of litigation (if any) in courts or any arbitration proceedings.
- (viii) Provision of all the data on prescribed formats/forms attached as Annex-A along with documentary evidences.

**B) Firm Experience**

- (i) General experience by providing the list of total number of projects/assignments performed so far.
- (ii) Relevant experience and past performance of firm(s)/joint venture(s); by submitting the detail of most relevant projects undertaken in the past (10 years).
- (iii) List of similar works currently in progress, with total cost of consultancy services, date of start and expected date of completion.

**C) Human Resource Capacity**

- (i) List of permanent professional staff along with
- (ii) CVs (resume) of relevant core staff having expertise in relevant field and indicating project wise experience with exact time duration for each project and their current commitments;
- (iii) CVs of the firm directors or partners
- (iv) Any additional document to support relevant experience of firm(s)/Joint Venture(s)

**9. PQD EVALUATION**

The evaluation of Expression of Interests will be carried out on the basis of applicant firm(s)/joint venture(s) responsiveness to the evaluation criteria based on following allocated scores to each broad category. The minimum qualifying score will be **75%**.

Sr. No.	Evaluation Criterion	Maximum Marks	Marking Criteria
<b>A.</b>	<b>Company Profile</b>	<b>20</b>	
i).	Quality Management Structure	5	ISO Certification = 5 marks
ii).	Permanent Staffing Strength	5	1-50 staff = 3 marks 51-100 staff = 4 marks > 100 staff = 5 marks
iii).	Total number of projects	5	1-50 projects = 3 marks

	undertaken by the firm(s)/ joint venture(s)		50-100 projects = 4 marks > 100 projects = 5 marks														
iv).	Offices	5	Office in four Provinces = 5 marks (Punjab, Sindh, Balochistan, KP)														
<b>B.</b>	<b>Relevancy with the Envisaged Works</b>	<b>40</b>															
i).	Number of similar/ relevant assignments completed during Last 10 years	10	5 mark per one project														
ii).	Magnitude (project cost) of similar assignments completed during last 10 year's	10	Cost Rs.1,500-3,000 million= 3 marks Cost Rs.3,000-6,000 million=5 marks Cost > Rs. 6,000 million = 10 marks														
iii).	Magnitude (Project Cost) Similar/ relevant assignments in-progress	20	Cost Rs.5,000-9,000 million = 5 marks Cost Rs.10,000-19,000 million =10 marks Cost Rs.20,000-29,000 million = 15 marks Cost Rs.30,000 or above = 20 marks														
<b>C.</b>	<b>Core Team</b>	<b>30</b>															
	1. Project Manager/Team Leader 2. Deputy Team Leader (4 CV) 3. Design Engineer 4. GIS Specialist 5. Senior Engineer (10 CV)	30	<p>Weightage given to each position:</p> <table border="1"> <thead> <tr> <th>Position</th> <th>Percentage of Marks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>40%</td> </tr> <tr> <td>2</td> <td>20%</td> </tr> <tr> <td>3</td> <td>5%</td> </tr> <tr> <td>4</td> <td>5%</td> </tr> <tr> <td>5</td> <td>30%</td> </tr> <tr> <td>Total</td> <td>100%</td> </tr> </tbody> </table> <p>The number of points to be assigned to each of the above positions shall be determined considering the following sub- criteria and percentage weight.</p> <p><b>a) General qualification (general education, training and experience) (20%)</b></p> <p>General / Overall Experience: 20 years for position 1 20 years for position 2 15 years for positions 3 to 4 7 years for position 5</p>	Position	Percentage of Marks	1	40%	2	20%	3	5%	4	5%	5	30%	Total	100%
Position	Percentage of Marks																
1	40%																
2	20%																
3	5%																
4	5%																
5	30%																
Total	100%																



			<p><b>b) Relevant background (relevant education, training, experience equal weightage) (70%)</b>  <b>Position Wise Qualification:</b>  1) Ph.D. Degree in Agri. Engg. / Water Resources Engg./ Management, Hydraulics with M.Sc./M.Phil. in Agri. Engg./ Water Resources Engg./ Management/ Hydraulics after B.Sc. in Agri. Engg.  2) M.Sc./M.Phil. in Agri. Engg. / Water Resources Engg /Management after B.Sc. in Agri. Engg.  3) M.Sc./M.Phil. in Agri. Engg, Water Resources Management/ Engg after B.Sc. in Agri. Engg.  4) M.Sc./M.Phil., GIS/ Space Science/ Computer Sciences  5) B.Sc. Agri. Engg.</p> <p><b>Job Specific Experience:</b></p> <ul style="list-style-type: none"> <li>• 10 Years for positions 1 to 4</li> <li>• 3 years for position 5</li> </ul> <p><b>c) Fluency in local languages etc. (10%)</b></p>
<b>D.</b>	<b>Financial Capacity</b>	<b>10</b>	
	<b>Average three years Annual Turn Over</b>	10	Not less than 450 million

## 10. EOI SUBMISSION

A consulting firm/consortium will purely be shortlisted on merit in accordance with the evaluation criteria and procedure laid down in this PQD and relevant PPRA Rules. However, pre-qualification/shortlisting of any firm/consortium does not guarantee award of work as it would depend on evaluation of the proposals on **Quality Based Selection (QBS) method** submitted subsequently only by the pre-qualified/shortlisted firms. **One (01) Original and Seven (07) copies** of the Expressions of Interest shall be delivered by hand or dispatched by post at the address given below not later than the advertised date and time during office hours. Electronic copies shall not be entertained in any case. In case of any discrepancy, the documents furnished in original shall prevail. An EOI will be determined as non-responsive in case required documents are not submitted in accordance with the guidelines provided in this document.

**National Projects Coordinator**  
**Federal Project Management Unit (FPMU)**  
**Federal Water Management Cell**  
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## **ANNEX-A LIST OF FORMS MANDATORY TO USE**

<b>FORM TITLES</b>	<b>FORM NUMBER</b>
<b>INFORMATION FORM</b>	<b>I</b>
<b>FIRM'S REFERENCE RELEVANT SERVICES CARRIED OUT IN THE LAST TEN YEARS WHICH BEST ILLUSTRATE QUALIFICATIONS</b>	<b>II</b>
<b>FORMAT OF CURRICULUM VITAE</b>	<b>III</b>
<b>LIST OF PROJECTS COMPLETED IN LAST 10 YEARS</b>	<b>IV</b>
<b>LIST OF PRINCIPAL/PERMANENT STAFF</b>	<b>V</b>
<b>FINANCIAL CAPABILITIES</b>	<b>VI</b>

**INFORMATION FORM**

**[Name of Firm/Entity Lead]**

**Assignment :**

**Project:**

1. Name of consultant [Lead partner if joint venture]
  - Address
  - Telephone No(s)
  - Fax Number
  - E-mail Address
  - Registration No. with PEC along with Registered Office Address.
2. Description of consulting firm (ownership/organization)
3. Experience (Number of Years)
  - Local/national
  - International
  - Regional (within the country-details)
4. Name(s) and Address (es) of firms, if a JV; their short description and description of their role in the JV/ Association.
5. Experience of the Consultants (on appended forms in Annex –A list of Forms) during the last 10 years:

General	(Maximum Projects) - (In all Fields but not completely relevant)
Specific	2 Projects of similar magnitude and complexity
6. Organization chart showing consultant's structure.
7. Capital of consultant (Financial Statements for the latest three years).
  - Subsidiaries and associates.
  - Annual fees in the last three years.
  - Financial reference [ name/address of bank(s)]

8. Professional staff available for the assignment on the appended format.
9. Additional information (if any but relevant).

Yours truly,

Name of Authorized Representative Position:

Date:

**FIRM'S REFERENCE**

**Relevant Services Carried Out in the Last Ten Years Which Best Illustrate Qualifications**

Assignment Name:

Country:

Location within Country:

Professional Staff Provided by Your Firm:

Name of Client:

No of Staff:

Address:

No of Staff Months:

Start Date (Month/Year):

Completion (Month/Year):

Date

Magnitude (Project Cost) :  
(Rs.)  
Value of Services  
(Rs.)

Name of Associated Firm (s), if any:

No. of Months of Professional Staff Provided by Associated Firm(s)

Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed:

Narrative Description of Project& salient Features of the components of Project:

Description of Actual Services (with salient features of component handled) Provided by Your Firm also showing percentage share and the position in joint venture / consortium, if applicable;

Firm / Consultants' Name: \_\_\_\_\_

**FORMAT OF CURRICULUM VITAE**

*(Against nominated positions as provided in evaluation criteria and other CV's )*

1. The Discipline/ Expertise :
2. Name of the Firm :
3. Name of Nominee :
4. Date of Birth :
5. Years with the Firm :
6. Nationality :
7. PEC Registration/  
Membership No. :
8. Key Qualifications : (Provide an outline of the nominee's  
experience)
9. Academic Qualification :
10. Employment Record :
11. Languages and Proficiency : (In speaking, reading and writing as Degree  
of Excellent-Good-Fair-Poor)
12. Certification

I, the undersigned, certify that, to the best of my knowledge and belief, these bio-data correctly describes myself, my qualifications and my experience.

**Signature:**

**Dated:            day/month**





**LIST OF PRINCIPAL STAFF**

*(To be filed by each firm in case of joint venture)*

1. Name :
2. Profession/Expertise :
3. Date of Birth :
4. Years with the Firm :
5. Nature of experience in this firm and others :
6. Membership of Professional Societies :
7. Education :
8. Other Training :
9. Knowledge of Languages :
11. Status with the firm i.e. Regular/Non regular and : Period/years working

**FORM -VI****FINANCIAL CAPABILITIES**

<b>Year<sup>1</sup></b>	<b>Annual turnover (Rs. Million)</b>	<b>Current Ratio (Rs. Million)</b>	<b>Net Worth (Rs. Million)</b>
<b>2015-2016</b>			
<b>2016-2017</b>			
<b>2017-2018</b>			

1. *Data provided under the head of financial capabilities must be supported by the Audited Annual Financial Statements.*