

**Terms of Reference/Guidelines  
for submission of Proposal**

**for**

**“CONSTRUCTION OF SMALL DAMS IN WANA SOUTH  
WAZIRISTAN (ADP NO. 2339/210590)”**

**Sub Work;**

**FEASIBILITY STUDY OF DELAY ACTION / DETENTION /  
RECHARGE DAMS IN WANA SOUTH WAZIRISTAN**

## **DETAIL DESCRIPTION OF PROJECT**

The South Waziristan District is one of the Merged District having total geographical area of 6620 Sq. KM and population of 679,185 and consists of Wana Sub Division, Mehsud Area and Wazir Area. Total cultivable area of the district is 19580 Hectare (48,363 acres) out of which 6965 Hectare (17,204 acres) is irrigated while 12615 Hectare (31,159 acres) is un-irrigated as per published data by the Agriculture Bureau of Statistics. The district is water scarce and falls in the category of arid areas, with annual average rainfall of around 152 mm.

The district comprises on different zones of agricultural land. Wana is one of the zones where adequate potential for water storage, bringing more area under Irrigation and providing drinking water to the populace is an issue. After demand of locals at various fora, the main problem identified is abnormal / less rain fall and depleting water table. To find ways for resolving the problem a scheme, **“Construction of Small Dams in Wana South Waziristan (ADP No. 2339/210590)”** was included in the ADP 2021-22. For the purpose of initiating physical works on the scheme, it was concluded that before physical execution of the project, pre-investment study to find out appropriate solution shall be made for sustainable resolution of the problem.

In order to identify and construct delay action / detention / recharge dams, identification of sites and feasibility study at potential sites is required. A tentative list of sites where possibility of construction of such storages exist has been prepared which can further be amended during the field surveys / investigations. For this purpose, consultants of repute are to be engaged as a sub work of the above-mentioned scheme.

## **INSTRUCTION REGARDING SUBMISSION OF PROPOSALS**

1. Three copies of the technical and one copy of financial proposals in bound form are required to be submitted. Proposal should be in a sealed envelope indicating original or copy on each enclosure, as appropriate.
2. The proposals shall be valid for a period of 180-days after the last date of submission, which is extendable on the expiry of above period through mutual agreement.
3. The technical and financial proposals of the consultants will be evaluated according to criteria for procurement of consultancy services of the Government of Khyber Pakhtunkhwa, applying weight-age formula of 80:20 for technical and financial proposals respectively.
4. Financial proposals of "Technically Qualified" consulting firms will be considered and opened by competent forum in presence of the competitive firms' representatives.

5. Any observation on the TORs / LOI must be brought into the notice of the department before last date of submission of proposals. No objection will be entertained after the submission of Technical and Financial proposals.
6. Consultants shall be responsible for payment of all taxes levied from time to time by Govt in respect of personnel and other activities with no liability to the client.
7. Originally signed CVs of the proposed personnel having contact number and postal address along with availability certificate of the personnel for the Project shall be annexed in the technical proposal.
8. The consultants shall quote the fee including detailed breakup cost and unit cost of all type of studies, topographic surveys, Hydrological, Geological, Geo-Physical, Environmental, Social and all other surveys/ studies required for the assignment.
9. Payment to the consultants shall be made as per schedule.
10. Payment to the consultants for the survey and Geo-Physical investigation and other investigation will be made as per proposal.
11. On the satisfactory performance of the services, the payment to the consultants shall be made as per payment schedule, while in case of incomplete assignment; the payment will be made for the work done in accordance with the breakup of the services submitted by the consultants.
12. The employer reserves the right for any addition alteration of amendment in the ToR(s) of the Project
13. The contract agreement will be governed by laws and regulations of the Govt. of Khyber Pakhtunkhwa.

**Other Conditions: -**

- 1) Security deposit and income tax/sales tax/services tax etc. will be deducted as per prevailing Government rules notified from time to time.
- 2) Consultants shall appear in Project meetings and site visits and shall also make presentation(s), if so, directed by the department, for which no TA/DA, boarding, lodging and claim for incidental charges etc., shall be entertained.
- 3) The consultant except with prior approval of the department shall not sublet the study or any part thereof.
- 4) The consultants will provide undertaking to the effect that the key staff would not be employed on other projects during the currency of this agreement. Any violation will make the contract liable to termination.
- 5) If the consultants fail to complete any activity or part of activity, the client reserve the right to execute the same at the consultant's risk & cost.

- 6) If a project or part of project is dropped due to any reason, man months of the consultant key staff and logistics will be curtailed proportionally.

Note: - Each page of the proposal must be numbered, sealed & signed by the owner of the firm.

## **EVALUATION CRITERIA OF PROPOSALS**

Proposals of the consultancy firms will be evaluated on the following criteria;

<b>S. No</b>	<b>Description</b>	<b>Maximum Marks</b>
A	Qualification & Experience of Technical Key Personnel	50
B	Experience of firm in undertaking Projects of dam & Hydraulic structures of similar nature & complexity	30
C	Work Plan/Manning Schedule & Methodology	20
	<b>Total</b>	<b>100</b>

Note :- Passing Marks in each category would be 50 % and overall 60%

### **A. Qualification & Experience of Technical Key Personnel**

#### ii. Marking criteria of Personnel

<b>S.No</b>	<b>Description</b>	<b>Marks</b>	<b>Criteria</b>
1	Qualification	20	B.Sc. Eng. or M.Sc. (as the case may be i.e. 16 Years Education=80%, MS or M.Phil.=90%, & Ph.D=100%)
2	Languages	05	Pashto=2 (R W S) Urdu=2 (R W S) English=1 (R W S)
3	Experience	30	
i.	General Experience	7.5	Experience after completion of 16 Years education (15 years of general experience will carry full marks while less than 8years experience shall carry zero marks)
ii.	Relevant Experience	15	Experience of particular discipline (8 years of experience will carry full marks while less than 5 years experience shall carry zero marks)
iii.	Similar Projects*	7.5	Full marks for 5 Projects while less than 3 projects shall carry zero marks)
4	Experience of Local Environment	05	In Merged Areas=03 Rest of KP Province=02
	<b>Total</b>	<b>60</b>	<b>Will be adjusted to 50</b>

\*Note: similar projects mean feasibility study of small, large, delay action and check dams (having more than Rs. 20.00 million cost of the project and not the services therefor)

iii. The following proforma must be available on top of each CV in addition to the information to be provided as per standard format.

1	2	3	4	5	6		
S#	Position	Proposed Personnel	Qualification	Knowledge of Languages	Experience		
					General	Relevant	Dam Projects
7	8	9					
Working Environment/ Location	Cell No	Duration with firm					

Note.

- The proposals must contain salary details, last degree, PEC registration certificates of the key staff
- Each CV must be signed in Original by the Personnel, countersigned and attested by owner of the firm.
- Personnel above the age of 65 will be in-eligible

#### B. EXPERIENCE OF FIRM.

S.No	Description	Maximum Marks
1	Relevant/Specific Experience of Firm (Completed feasibility of Dam Projects in last 10 Years)	18 Marks i. 60% marks for two number feasibility studies of dams having same or more cost for completed studies, 80% for 4 Nos. and 100% for 6 Nos.
2	Relevant/Specific Experience of Firm (In hand feasibility study of Dam Projects)	12 Marks i. 60% marks for one number Feasibility study of dam having same or more cost for in hand study, 80% for 2 Nos. and 100% for 5 Nos. or more.

Note

- Consultancy Services of the feasibility services with cost less than Rs. 20.00 million will not be considered.
- Award & completion documents must be available in support of projects claimed as experience.
- Only Certified copies of Client shall be considered.

#### C. APPROACH & METHODOLOGY AND MANNING SCHEDULE (20 MARKS)

The approach and methodology should cover the understanding of the study, identification approach and methodology towards solution in light of requirements of the ToRs. The schedule should be clear, explicit and understandable based on realistic series of activities including legends and other requirement.

## **TORs FOR THE STUDIES**

1. Collection/evaluation of all available topographic, hydro-metrological, geological, geo-technical and agricultural data necessary for the feasibility study.
2. Carryout Desk studies for the identification of probable sites in Wana South Waziristan that may have potential of being developed into delay action/ detention / recharge/ check dams and prepare a list of such dam sites.
3. On the basis of preliminary surveys and investigations, shortlist the potential sites for further studies and obtain approval of the shortlisted sites for further studies.
4. Carrying out topographic / contour survey for the potential/identified and approved delay action/ detention / recharge/ check dam sites at the appropriate scale and contour interval as directed by the client.
5. Carrying out Hydrological studies, including water availability/ accumulation and water budgeting to assess water availability for the approved shortlisted sites.
6. Carryout Geo-Physical investigation of dam & reservoir periphery within 500-meter proximity of reservoir / Dam for exploring and reporting behavior of seepage through dam/ reservoir and prepare detail geological mapping for the approved sites. Also carry out sub-surface geo-physical investigation at dam sites and appurtenant structures (with approval/consultation of the client). The investigation will include excavation of test pits, trenches, collection of surface and sub-surface sampling, field and laboratory analysis & testing, complete in all respects.
7. On the basis of surveys, studies and available documents, carry out design for the dams & appurtenant structures and Irrigation system wherever applicable.
8. Carry out Agronomic study to assess the Cropping pattern, intensity, produce for the proposed command area and estimate crop water requirement, wherever applicable. Assess the existing agriculture benefits, potential benefits.
9. Carryout Assessment of social implication of the project and environmental impact studies (Direct & Indirect employment, benefits income, health, sanitation, forestation etc.) and recommended mitigation measures, if any, for the adverse impacts.
10. Determine capital cost, recurrent cost estimate of various components of the project using current Market Rate System (MRS Khyber Pakhtunkhwa) with allowable premium.
11. On the basis of cost estimates and benefits of the project assess economic indicators (B/C Ratio and EIRR etc.)
12. Prepare construction schedule and cash flow analysis.
13. Prepare review report.
14. Preparation of inception report.
15. Preparation of draft feasibility Report for the project including design drawings.
16. Preparation of final feasibility Report for the project incorporating suggestions / comments of the client.
17. Preparation of PC-I.

## **COMPLETION TIME**

Completion time for Study will be 9 Months

## **MODE OF PAYMENT**

The payment for the study shall be made on the following percentage basis and consultants are advised to give break down of the costs accordingly.

(Note that mode of payment is tentative and is not to be considered as the cost of any activity but is for the purpose of progressive payment for the facilitation of consultant).

1. Upon mobilization of consultants team.	15%
2. Upon submission of review report.	10%
3. Upon submission of the Inception Report.	10%
4. Upon submission of draft feasibility Report.	20%
5. Upon submission of final feasibility Report.	20%
6. Preparation of PC-I(s).	15%

## **REPORTING AND DOCUMENTATION**

1. Review report.	5 copies
2. Inception Report.	5 copies
3. Draft feasibility Report.	5 copies
4. Final feasibility Report.	5 copies
5. PC-I(s).	25 copies

## **PROFESSIONALS/ KEY PERSONNEL REQUIREMENTS**

Consultant Bid Cost will be sum of Key Personnel's & logistic requirements. Payment of survey, other investigation & vehicle (Running & maintenance) will be made as per actual inputs & will be adjusted at the end of study

## Bill of Quantities

S.#	Position	Unit	Nos	Man Months	Monthly Rate	Amount (Rs. in Millions)
A	<b>Direct Costs</b>					
	<b>i. Key Staff</b>					
1	Project Manager/Team leader	Month	1	9.0		
2	Hydrologist	Month	1	3.0		
3	Irrigation / Hydraulic Engineer	Month	1	2.0		
4	Geotechnical Engineer/Dam Engineer	Month	1	2.0		
5	Geologist	Month	1	2.0		
	<b>Total (A-i)</b>			<b>18.0</b>		
	<b>ii. Non-Key/Supporting Staff</b>					
1	Structure Engineer	Month	1	6.0		
2	Material Engineer	Month	1	1.0		
4	Junior Engineers	Month	2	9.0		
5	Economist	Month	1	2.0		
6	Cad Operator	Month	1	9.0		
7	Surveyor	Month	1	3.0		
8	Survey Helper	Month	1	3.0		
9	Computer operator	Month	2	9.0		
10	Naib Qasid/office Boy/Chowkidar	Month	3	9.0		
	<b>Total (A-ii)</b>					
	<b>Total (A)</b>					
B)	<b>Indirect Costs (Commodities and Services)</b>					
1	Telephone with internet and postage	Month	1	9		
2	Hire charges of computer and printers	Month	1	9		
3	Utility charges of computer and printer	Month	1	9		
4	Office rent, supplies and stationery	Month	1	9		
5	Hire charges of vehicles along with driver	Month	2	9		
6	POL and lubricants	Month	2	9		
7	Miscellaneous	Month	1	9		
	<b>Total (B)</b>					
C)	<b>Physical work &amp; Investigation</b>					
1	Topographic/ Contour Survey	Lum Sum	1			
2	Provision for tests / laboratory investigation	Lum Sum	1			
3	EPA Clearance Fees	Per No	1			
4	Preparation & Printing of Final Feasibility Report & PC-I (Color Prints)	Lum Sum	2			
	<b>Sub-Total-C</b>					
D	<b>Provision for advertisement</b>	Lum Sum				
	<b>Total (A+B+C+D)</b>					
	Provision for taxes and overheads	Lum Sum	1	1		
	<b>Grand Total</b>					



### **Qualifications and Experience of Consultant's Key Personnel.**

Consultants will assign adequately qualified key personnel to carry out the implementation of the Project as described in TORs, man-month inputs which are indicated above. The key personnel should possess the qualifications and experience as indicated against each position narrated below.

#### **Project Manager/Team Leader**

- ❖ Should have at least a Bachelor Degree in Civil Engineering from a recognized university. Additional qualification will carry extra marks.
- ❖ Should be able to lead the team of consultants and assist the client in timely completion of the services with quality output.
- ❖ Overall experience should be 15-years with relevant experience of 08-years as Team Leader for the Projects.

#### **Hydrologist**

- ❖ Should have Master degree in Hydrology / WRE from recognized university.
- ❖ Post Master qualification in related discipline will be given additional weight age.
- ❖ He should have at least overall experience of 15-years with 08years experience in exposure to the relevant activities.

#### **Irrigation / Hydraulic Engineer**

- ❖ Should have Master degree in Hydraulics/WRE from recognized university.
- ❖ Post Master qualification in related discipline will be given additional weight age.
- ❖ Should have at least overall experience of 15-years with 08-years' experience in exposure to the feasibility / design related activities.

#### **Geotechnical Engineer / Dam Engineer**

- ❖ Should have Master degree in Dam Engineering/Geo-Technical Engineering from recognized university.
- ❖ Post Master qualification in related discipline will be given additional weight age.
- ❖ He should have at least overall experience of 15-years with 08-years' experience in exposure to the design related activities.

#### **Geologist**

- ❖ Should have Master degree in Geology from recognized university.

- ❖ Post Master qualification in related discipline will be given additional weight age.
- ❖ He should have at least overall experience of 15-years with 08-years' experience in exposure to the design related activities.

**Qualifications and Experience of Consultant's Non-Key Personnel.**

**Structure Engineer**

- ❖ Should have Master degree Structure Engineering from recognized university.
- ❖ Post Master qualification in related discipline will be given additional weight age.
- ❖ Should have at least overall experience of 15-years with 08-years' experience in exposure to the design related activities.

**Material Engineer**

- ❖ Should have B.Sc. Degree in Material Engineering from recognized university.
- ❖ Post Master qualification in related discipline will be given additional weight age.
- ❖ Should have at least overall experience of 15-years with 8-years' experience in exposure to the related activities.

**Junior Engineer**

- ❖ Should have BSC degree in Civil Engineering from recognized university.
- ❖ Post Master qualification in related discipline will be given additional weight age.
- ❖ Should have at least overall experience of 10-years with 05-years' experience in exposure to the related activities

**Economist**

- ❖ Should have Master degree in Economics from recognized university.
- ❖ Post Master qualification in related discipline will be given additional weight age.
- ❖ Should have at least overall experience of 10-years with 05-years' experience in exposure to the related activities.

**Annexure-II****List of Tentative Sites for Delay Action/ Detention/ Recharge/ Check Dams in Wana South Waziristan**

<b>S#</b>	<b>Name of Proposed Site</b>
1	Delay Action/ Detention/ Recharge/ Check Dams at Suliman Khel Itehad Pakistan Tehsil Toi Khulla South Waziristan
2	Delay Action/ Detention/ Recharge/ Check Dams Salam Ud Din Landi Doag Tehsil Birmal
3	Delay Action/ Detention/ Recharge/ Check Dams for the Land of Mustafa KK tehsil Wana
4	Delay Action/ Detention/ Recharge/ Check Dams for The Land of Afaq kk at Tehsil Wana
5	Delay Action/ Detention/ Recharge/ Check Dams Gund Gei nana Khel the Wana
6	Delay Action/ Detention/ Recharge/ Check Dams at GurGory Shalam Kot Area
7	Delay Action/ Detention/ Recharge/ Check Dams for The Land of Fazal Kaka Khel Kot Wacha Khura Area
8	Delay Action/ Detention/ Recharge/ Check Dams for The Land of Haroon Kot Kaka Khel Wacha Khura Area
9	Delay Action/ Detention/ Recharge/ Check Dams at Rauf Spin Area
10	Delay Action/ Detention/ Recharge/ Check Dams Fazal Kaki Khel the Wana
11	Delay Action/ Detention/ Recharge/ Check Dams for the Land of Zia Ur Rehman Zali Khel Wana
12	Delay Action/ Detention/ Recharge/ Check Dams for The Land of Umar Hayat Ghowa Khawa Tehsil Wana
13	Delay Action/ Detention/ Recharge/ Check Dams at Mati Ullah Shobi Khel Tehsil Tiarza.
14	Delay Action/ Detention/ Recharge/ Check Damsat Momen zalai Area Teh Birmil
15	Delay Action/ Detention/ Recharge/ Check Dams for the Land of Saif ur Rehman Zangi Khel Kot Tehsil Birmil
16	Delay Action/ Detention/ Recharge/ Check Dams Habib Kach Sholam area
17	Delay Action/ Detention/ Recharge/ Check Dams for the Land of Bomai kalay Zalai Area
18	Delay Action/ Detention/ Recharge/ Check Dams for the Land of Pir Muhammad Kot Shishanai Paal warsakai Area the Birmil
19	Delay Action/ Detention/ Recharge/ Check Dams for the Land of Aرسال Jana Sarki Khel Kot Kaza Panga Area
20	Delay Action/ Detention/ Recharge/ Check Dams at Bazid Kot Zalai Area Tehsil Birmal
21	Delay Action/ Detention/ Recharge/ Check Dams at Utman Khel Kot OSpana Raghzai Spin Area Tehsil Wana
22	Delay Action/ Detention/ Recharge/ Check Damsat Rouf Kot Tangarai Spin Area Tehsil Wana
23	Delay Action/ Detention/ Recharge/ Check Dams at Jamshed Barat Khel Kaka Khel Kot Karab Kot Area Tehsil Wana
24	Delay Action/ Detention/ Recharge/ Check Dams at Naveed Kaka Khel Kot Woucha Khwarra Area Tehsil Wana

25	Delay Action/ Detention/ Recharge/ Check Dams at Woucha Bai Rabia Khel Aslam Khandy Khel Kot Sholam Area Tehsil Birmal
26	Delay Action/ Detention/ Recharge/ Check Dams at Iqbal Nana Khel Kot Leman Area Tehsil Wana
27	Delay Action/ Detention/ Recharge/ Check Dams at Fazal Kaka Khel Kot Woucha Khwarra Area Tehsil Wana
28	Delay Action/ Detention/ Recharge/ Check Dams Talbar Ghondai
29	Delay Action/ Detention/ Recharge/ Check Dams at Agree Park Nala
30	Delay Action/ Detention/ Recharge/ Check Dams at Shna Pal
31	Delay Action/ Detention/ Recharge/ Check Dams at Khamat Ghondai
32	Delay Action/ Detention/ Recharge/ Check Dams at Shna Taka
33	Delay Action/ Detention/ Recharge/ Check Dams at Mangora China
34	Delay Action/ Detention/ Recharge/ Check Dams at Patnai Nala
35	Delay Action/ Detention/ Recharge/ Check Dams at Sholam Nala
36	Delay Action/ Detention/ Recharge/ Check Dams at Manra Nala
37	Delay Action/ Detention/ Recharge/ Check Dams at Sheshankai Sholam
38	Delay Action/ Detention/ Recharge/ Check Dams at Sheshankai 2
39	Delay Action/ Detention/ Recharge/ Check Dams at Nargasai 1
40	Delay Action/ Detention/ Recharge/ Check Dams at Nargasai 2
41	Delay Action/ Detention/ Recharge/ Check Dams at Nargasai Plan
42	Delay Action/ Detention/ Recharge/ Check Dams at Khezaina Khullah
43	Delay Action/ Detention/ Recharge/ Check Dams Sheen Raghzai
44	Delay Action/ Detention/ Recharge/ Check Dams at Wachobai
45	Delay Action/ Detention/ Recharge/ Check Dams at Drablai Nala
46	Delay Action/ Detention/ Recharge/ Check Dams at Kaza Pangha Right Side
47	Delay Action/ Detention/ Recharge/ Check Dams at Kaza Pangha Left Side
48	Delay Action/ Detention/ Recharge/ Check Dams at Ghondaka 1
49	Delay Action/ Detention/ Recharge/ Check Dams at Ghondaka 2
50	Delay Action/ Detention/ Recharge/ Check Dams at Kalothai 1
51	Delay Action/ Detention/ Recharge/ Check Dams at Kalothai 2
52	Delay Action/ Detention/ Recharge/ Check Dams at Ghawa Khawa
53	Delay Action/ Detention/ Recharge/ Check Dams at Ghawa Khawa Laman.
54	Delay Action/ Detention/ Recharge/ Check Dams at Dawood kot Spin Wana.
55	Delay Action/ Detention/ Recharge/ Check Dams at Israr kot Spin Wana.
56	Any other site to be identified by the Consultants in Wana Sub Division.