

Office of the Chief Engineer
Public Health Engineering Department
Raipur Zone Raipur

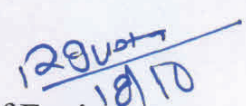
Notice for Expression of Interest

EOI No. 13/18-10-2022

Name of work :- Request for Proposal for Standardization of Rates for Consultancy Services- Development of Comprehensive Water Security Action Plan at village level to ensure water sustainability of ground water based sources using scientific approach for identification of site specific recharge structures including baseline survey & studies, data collection as per requirement of project, geo-referencing of maps, development of thematic maps, decision making maps, project performance studies, hydraulic designs & drawings of artificial recharge structure, cost estimation and project report preparation based on watershed approach using Remote sensing & GIS tools for proposed various planning area of district Durg and Raipur.

The details EOI Document will be available in the portal <https://phed.cg.gov.in> on **28-10-2022 from 11:00 AM** onwards. Bid are to be submitted by post/speed post/courier services in address The Chief Engineer, Public Health Engineering Department, Raipur Zone, Neer Bhawan Civil Line, Raipur (C.G.) on or **before 17:30pm hrs of 24-11-2022**.

The pre Bid discussion of the interested manufacturer will be on **03-11-2022 at 11:00AM** at Chief Engineer, Public Health Engineering Department, Neer Bhawan (meeting hall), Raipur.


Chief Engineer
Public Health Engineering Department
Raipur Zone Raipur

OFFICE OF THE CHIEF ENGINEER
PUBLIC HEALTH ENGINEERING DEPARTMENT
RAIPUR ZONE RAIPUR
Request for Proposal

Notice : Request for Proposal for Standardization of Rates for Consultancy Services- Development of Comprehensive Water Security Action Plan at village level to ensure water sustainability of ground water based sources using scientific approach for identification of site specific recharge structures including baseline survey & studies, data collection as per requirement of project, geo-referencing of maps, development of thematic maps, decision making maps, project performance studies, hydraulic designs & drawings of artificial recharge structure, cost estimation and project report preparation based on watershed approach using Remote sensing & GIS tools for proposed various planning area of district Durg and Raipur.

Jal Jeevan Mission is a time bound mission mode national programme to ensure every rural household has a functional household tap connection (FHTC) by 2024 to provide drinking water in adequate quantity (minimum 55 LPCD) of prescribed water quality BIS : 10500 with adequate pressure (minimum 7 m ferrule terminal pressure in household premises) in all situations at all times on regular basis with affordable service delivery.

Operational Guidelines for implementation of Jal Jeevan Mission (HarGhar Jal) has conceived that in-village water supply system is to be planned, implemented, managed, operated and maintained by local communities through an appropriate institutional arrangement at village level. A sense of ownership has to be instilled in the village community as they are at the centre of this mission.

Most of the rural water supply scheme in the country are based on ground water sources. With time and space due to over abstraction of ground water has resulted in depletion of ground water table / yield to the larger extent as well as deterioration of water quality too on account of increasing water demands for various needs. Hence putting ground water based sources are under stress now. The felt need is to ensure sufficient ground water availability of prescribed water quality in an around the village.

To ensure ground water sustainability an appropriate solution is to adopt water conservation and ground water recharge practices. In order to improve the ground water situation it is necessary to artificially recharge the depleted ground water aquifers. The available techniques are easy, cost-effective and sustainable in the long term. Many of these can be

adopted by the individuals and village communities with locally available materials and manpower. Accordingly Operational Guidelines for implementation of Jal Jeevan Mission has envisaged the strategy “ to develop Comprehensive Water Security Action Plan at village level”. Comprehensive Water Security action plan at village level is required to be developed on the theory of watershed (with the planning principal of whole to part), adopting scientific approach and using innovative technology tools remote sensing & GIS etc in conjunction with Operational Guidelines for implementation of Jal Jeevan Mission (HarGhar Jal), National Rural Drinking Water Programme (NRDWP), Handbook Rainwater Harvesting – RGNDWM, Jal Shakti Abhiyan, DDWS, MoJS, GoI, Ground Water Prospects Maps User Manual, Ministry of Drinking Water and Sanitation, GoI, Handbook – Preparation of Gram Panchayat INRM Plan for Mission Water Conservation under MGNREGA, Technical Guidelines, NRSA, Department of Space, GoI, BIS-15792-Artificial Recharge.

The scope of artificial recharge depends on the available sub surface space for recharge, water required for recharge and surplus water available for recharge. Key Requirement for Planning of Comprehensive Water Security Action Plan at village level

- Identification of rechargeable project area using geo-referenced drainage map as a base map and other supported analytical thematic maps.
- Baseline Survey and studies, collection of data / details with reference to the project area (department shall provide necessary support for procurement of data and details from various authorities / department.
- Existing Water Supply Geo-Tagged Sources details and its water quality data to be provided by the department.
- Analysis of data / details required for identification of project area and site specific structures.
- Development of supporting various analytical thematic maps.
- Identification of suitable rechargeable project area based on analysis of soil, geology, geomorphology etc.
- Water Use and Water Budgeting.
- Identification of site specific structures in consideration with various thematic maps.
- Development of action plan showing location of site specific recharge structures in the project area.
- Development of village level action plan showing site specific suitable & type of recharge structures based on techno-economic feasibility studies in consideration with various thematic maps. The types of structures are decided by the terrain conditions, geology, soil studies and geomorphology with the use of thematic maps.

- Development of preliminary designs & drawings for recharge structures.
- Action Plan is to be technically validated by CGCOST Chhattisgarh
- Pre and Post project performance of ground water table need to be proposed through measurement & monitoring tools – IoT application
- Preliminary cost estimates and project report.

The present request for proposal (RFP) is limited to planning of Comprehensive Water Security Action Plan at village level for the areas of district Durg & Raipur shown below in the maps in the 1st Phase. District wise details are shown below fig 1, 2 & 3

Fig No. 1

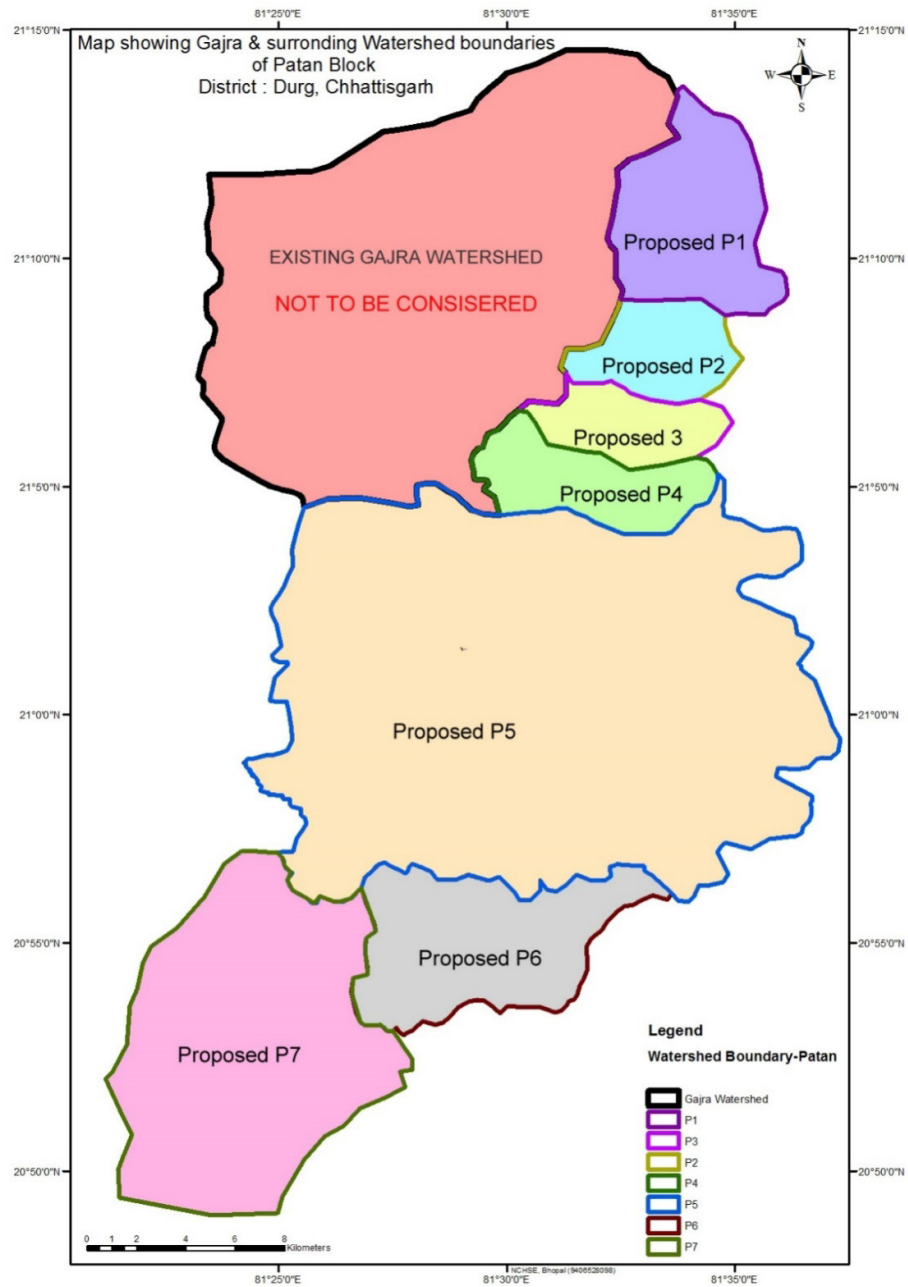


Fig No. 2

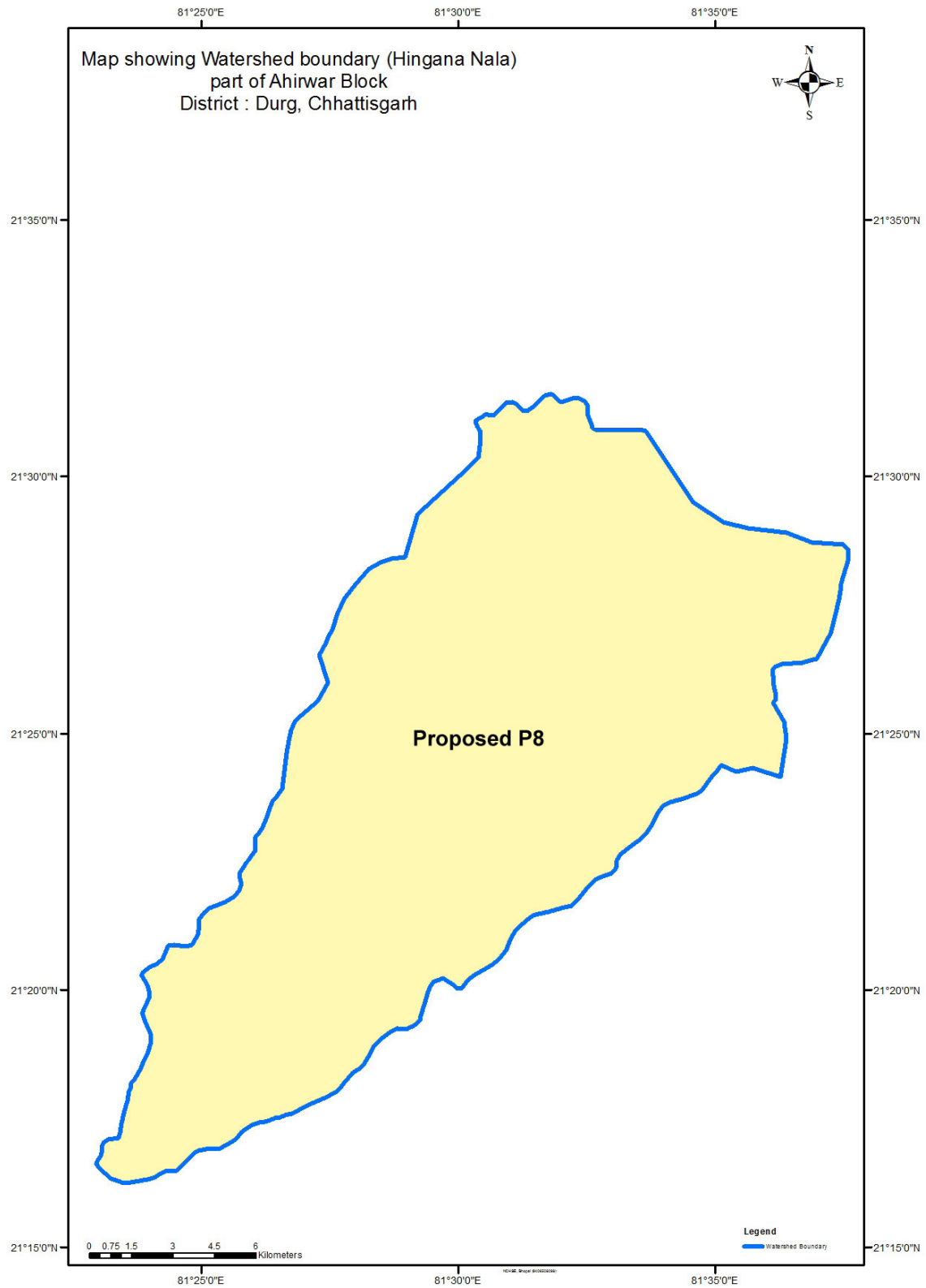


Fig No. 3

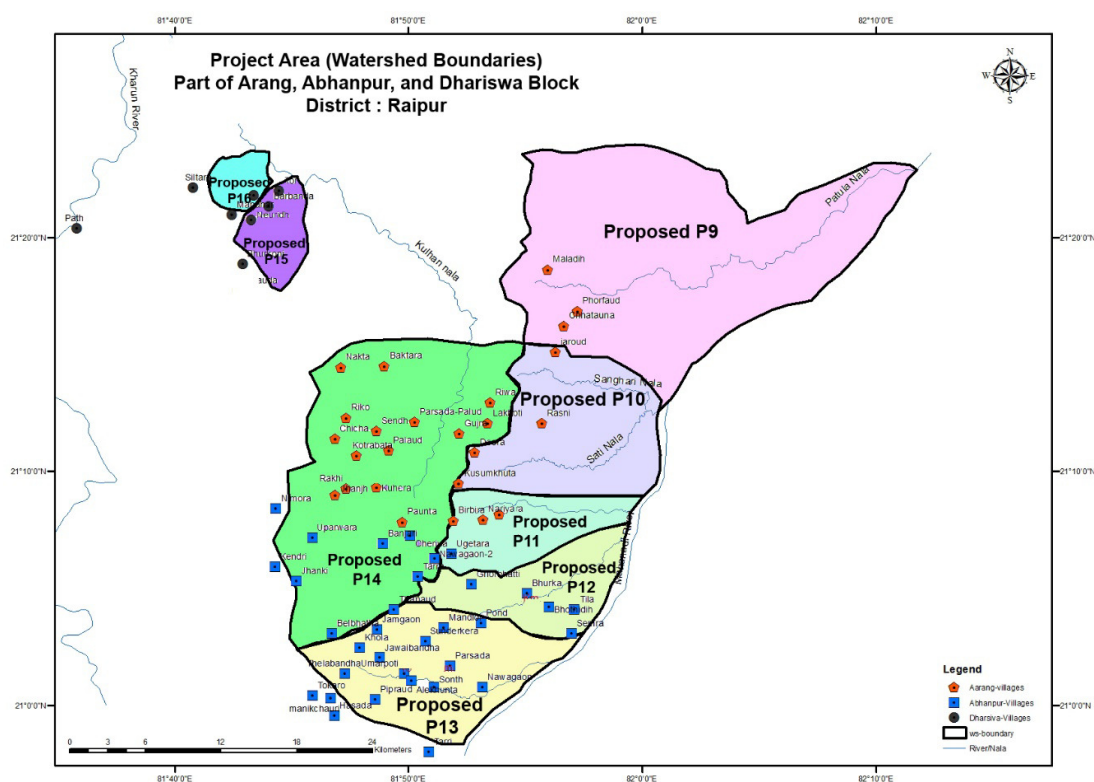


Table No. 1 : Table showing planning area of various groups

SN	Proposed Project*	District	Area in Hectare	Group Planning Area	Group area in hectare
01	P1	Durg	4027.97	G1	10278.82
02	P2	Durg	1973.32		
03	P3	Durg	1782.92		
04	P4	Durg	2494.61		
05	P5	Durg	29460.76	G2	29460.76
06	P6	Durg	5079.04	G3	16221.04
07	P7	Durg	11142.00		
08	P8	Durg	30880.91	G4	30880.91
09	P9	Raipur	34800	G5	34800
10	P10	Raipur	13000	G6	26800
11	P11	Raipur	6500		
12	P12	Raipur	7300		
13	P13	Raipur	13100	G7	13100
14	P14	Raipur	28400	G8	28400
15	P15	Raipur	3100	G9	4800
16	P16	Raipur	1700		

Note : The above proposed project are tentative and may vary as per demarcated watershed boundary.

Eligibility criteria for Consultants / Agencies –

Selection criteria shall be governed by Qualification based consultant selection

Submission of offers:-

- 1.0 All the consultant are required to submit Envelope “A” in the office of the Chief Engineer, PHED Raipur Zone Raipur. Envelope “A” physically containing the followings:
 - 1.1 The Consultant should have GST no. and proof of their GST no. shall be submitted.
 - 1.2 The Earnest Money in the form of FDR for Rs.2,00,000/- (Rs. Two Lakhs only) in favour of the Chief Engineer, PHED Raipur Zone Raipur. The Earnest Money of the qualified consultant will be retained till the fixation of the rates by the competent authority. The Earnest Money of the disqualified consultant will be returned immediately.
 - 1.3 Eol processing fee in the form of Demand Draft for Rs. 25,000/-(Rs Twenty Five Thousands only) in favour of Chief Engineer, PHED Raipur will be submitted by the consultant which is non refundable.
- 2.0 All the consultant are required to submit Envelope “B” in the office of the Chief Engineer, PHED Raipur Zone Raipur. Envelope “B” physically containing the following:
 1. Consultant should have experience preparation of minimum 2 projects of similar works i.e. development of water security action plan consist of planning and designing using scientific approach on the theory of watershed including identification of site specific ground water recharge structures. Attach copy of work order& work completion certificate.
 2. The Consultant should have the suitable Software's for planning of comprehensive security action plan, ARCGIS, MAPINFO, ERDAS IMAGINE etc.
 3. The annual turnover of the firm should be minimum of Rs. 3.0 crore per year and above during last 3 years.
 4. Lead bidder is allowed to take services of GIS expert / agencies for GIS work as sub-contractor having (MOU) Agreement. Credentials of GIS expert / agency will be considered in the PQ.

Short Listing Process

SN	Criteria for Selection	Marks
A	Work experience	40
B	Qualification of Team	20
C	Financial Strength	10
D	Process Presentation	30
	Total	100
	Note : Minimum shortlisting criteria – 75 Marks	

A. Work Experience Details

SN	Description	Marks
01	Consultant should have experience preparation of minimum 2 projects of similar works i.e. development of water security action plan consist of planning and designing using scientific approach on the theory of watershed including identification of site specific ground water recharge structures. Attach copy of work order & work completion certificate	
	a. Experience for 2 Projects (Minimum Required)	20
	b. Experience for 3 & more projects	30
02	The Consultant/ GIS sub-contractor should have the suitable Software's for planning of comprehensive security action plan, ARCGIS, MAPINFO, ERDAS IMAGINE etc.	10

B. Qualification Team Details (Attach CV)

Criteria				Maximum Marks
	Team Leader	Project Coordinator	GIS Expert	
Educational Qualification	<ul style="list-style-type: none"> Post Graduate Diploma / Degree – 04 Degree - 02 	<ul style="list-style-type: none"> Post Graduate Degree in Computer Management – 04 Degree - 02 	<ul style="list-style-type: none"> Post Graduate in MCA – 04 Degree - 02 	12
Work Experience	<ul style="list-style-type: none"> Experience in relevant sector – Drinking Water More than 20 years – 03 More than 10 - 20 years - 01 	<ul style="list-style-type: none"> Experience in relevant sector More than 15 years – 02 More than 10 - 15 years - 01 	<ul style="list-style-type: none"> Experience in GIS More than 15 years – 03 More than 10 - 15 years - 01 	8

C. Financial Strength

SN	Criteria	Maximum Marks
01	The annual turnover of the firm should be minimum of Rs. 3.0 crore per year and above during last 3 years (minimum required).	10

D. Process Presentation

SN	Criteria	Maximum Marks
01	Presentation on Methodology & Process for development of Ground Water Source Security & Sustainability Action Plan	30

Time Schedule

SN	Description	Time Period
01	Feasibility Study : - identification of project area in consideration with drainage basemap, soil, geology and morphology	Onemonth from the date of Award of the contract
02	Submission of Draft report	Two Months from the date of approval of Feasibility report
03	Technical Validation of Draft Report by CGCOST	One Month
04	Submission of Final Report	One month from the date of approval of Draft report

The terms of payment shall be as follows : -

Stage No.	Description	Payment Terms
01	Submission of Draft Report as per scope of work	On Submission of draft report 20% of fee payable of quoted tender rates based on PAC
02	Submission of Final Report as per scope of work	On Submission of final report based on validation of project by CGCOST i.e 40% of fee payable of quoted tender rates based on PAC
03	After Technical Approval by competent authority	40% of the fee payable of quoted tender rates based on PAC
	Note : Technical Validation fees to CGCOST shall be paid by the consultancy firm.	

Approval of stage 1 i.e. Feasibility study shall be given in 1 week time from date submission by the consultant.

Approval of Stage 3 shall be given with 1 month from the date submission by the consultant including technical validation by CGCOST

Consultant must keep regular contact with Engineer-in-Charge and submit fortnightly progress of work done. A technical person must attend the Engineer-in-Charge office monthly to discuss issues/ provisions being taken in the DPR

Bid offer shall include the GST and other taxes, levied if any. Taxes may be deducted at source as per applicable rules of Govt. of India.

All other deductions e.g. Income Tax, Security Deposit etc. as per rules and terms of NIT shall be deducted from the running bills of the consultants.

Taxes and duties paid by the consultant for this work, for which consultant was not responsible on the day of submission of his financial bid, will be reimbursed on production of proof of deposit of such claim.

Bid Price

- a) The contract shall be for the complete services as described in drawings and scope of work. Corrections, if any, can be carried out by editing the information before electronic submission on e-procurement portal.
- b) All duties, taxes and other levies payable by the consultant under the contract shall be included and the total price GST should be included in bid offer.
- c) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- d) The Bidder shall fill in the prices for the Works in conformity with the Bidding Documents, both in figures and words.
- e) **Payments shall be made based on actual consultancy rates quoted on per hectare basis & the actual group planning area in hectares for Development of Comprehensive Water Security Action Plan at village level to ensure water sustainability of ground water based sources.**
- f) The bidder is advised to visit the site of works at his own expense and obtain all information that may be necessary for preparing the bid.

Validity of Bid

Bid shall remain valid for a period not less than 120 days after the deadline date specified for submission. The bids valid for a shorter period shall be rejected by the Employer as non-responsive. If a bidder withdraws/modifies/substitutes its bid during the period of bid validity specified by the Bidder on the Letter of Bid - Technical Part and repeated in the Letter of Bid - Financial Part, the Bid Security may be forfeited.

Performance Security

Within **15** days of receiving letter of acceptance, the successful bidder shall deliver to the Executive Engineer, PHE Department the performance security (either a bank guarantee or **FDR**) in favor of Executive Engineer, PHE Division, Raipur for an amount equivalent of 5% of the contract price. The Performance Security shall be valid until a date 60 days after the date of issue of the Certificate of Completion. Failure of the successful Bidder to furnish performance security and signing the agreement within the period stipulated shall constitute sufficient grounds for annulment of award and forfeiture of the Bid Security, in which case the Employer may make the award to the next lowest evaluated bidder or call for new bids.

Liquidated damages:

Any wilful delay on the part of the second party in submitting the DPR within the stipulated period will render him liable to pay liquidated damages @ 0.1% value of contract per day which will be deducted from payments due to him. The first party may cancel the contract and take recourse to such other action as deemed appropriate once the total amount of liquidated damages exceeds 5 % of the contract amount. In addition, if the bidder delays the works, or the work is not satisfactory, the client may execute the work at the risk & at the cost of the bidder from any other service providing agency after serving him a final written notice of 7 days.

Corrupt and Fraudulent Practices

The Department requires compliance with its policy in regard to corrupt and fraudulent practices. In further pursuance of this policy, Bidders shall permit and shall cause its agents (whether declared or not), sub-consultants, sub-consultants, service providers, or suppliers and any personnel thereof, to permit the PHE to inspect all accounts, records and other documents relating to any prequalification process, bid submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Department.

Conditional Offers are liable to be rejected.

DISCLAIMER : The issue of this document does not in any way commit or otherwise obliges _____ to proceed with all or any part of the empanelment process. The Request For Proposal is not the subject of any process contract or contractual obligations between _____ and consultants or potential

consultants. _____ may, at its absolute discretion, elect to abandon any part or whole of the process without giving prior notice to the consultants. _____ reserves the to consider or reject any offer/ RFP at any point of time without assigning any reasons whatsoever.

CHIEF ENGINEER

PHEDRAIPUR ZONE RAIPUR

Draft Agreement form for hiring of consultancy services for preparation of Detailed Project Report

ARTICLES OF AGREEMENT

1. This deed of agreement is made in the form of agreement on _____ day _____ month _____ 20 ____, between the Executive Engineer, PHE Division, _____, District _____ or his authorized representative (hereinafter referred to as the first party) and _____ (Name of the Consultant), S/o _____ resident of _____ (hereinafter referred to as the second party), to provide the consultancy services for preparation & submission of DPR for **Development of Comprehensive Water Security Action Plan at village level to ensure water sustainability of ground water based sources using scientific approach for identification of site specific recharge structures including baseline survey & studies, data collection as per requirement of project, geo-referencing of maps, development of thematic maps, decision making maps, project performance studies, hydraulic designs & drawings of artificial recharge structure, cost estimation and project report preparation based on watershed approach using Remote sensing & GIS tools for proposed various planning area of Group _____, District _____** as per Scope of Work enclosed (hereinafter referred to as services) on the following terms and conditions.

2. Cost of the Contract

The total cost of the services (hereinafter referred to as the “total cost”) is Rs. _____.

3. Payments under the contract:

Stage No.	Description	Payment Terms
01	Submission of Draft Report as per scope of work	On Submission of draft report 20% of fee payable of quoted tender rates based on PAC
02	Submission of Final Report as per scope of work	On Submission of final report based on technical validation of project by CGCOST i.e 40% of fee payable of quoted tender rates based on PAC
03	After Technical Approval by competent authority	40% of the fee payable of quoted tender rates based on PAC

	Note : Technical Validation fees to CGCOST shall be paid by the consultancy firm.
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Completion time

The works should be completed in **6 months** excluding rainy season from the date of this work order. In exceptional circumstances, the time period stated in this clause may be extended in writing by mutual consent of both the parties.

LETTER OF BID FINANCIAL PART

I/We hereby tender for the execution for the Governor of Chhattisgarh of the Works specified in the underwritten memorandum within the time specified in such memorandum at the rate specified therein and in accordance in all respect with specifications, designs, drawings, and instructions in writing in accordance with provisions of works department manual.

General description - Request for Proposal for Standardization of Rates for Consultancy Services - Development of Comprehensive Water Security Action Plan at village level to ensure water sustainability of ground water based sources using scientific approach for identification of site specific recharge structures including baseline survey & studies, data collection as per requirement of project, geo-referencing of maps, development of thematic maps, decision making maps, project performance studies, hydraulic designs & drawings of artificial recharge structure, cost estimation and project report preparation based on watershed approach using Remote sensing & GIS tools for proposed various planning area of district Durg and Raipur.

1. Probable Amount of Contract for DPR Preparation : Rs. in lacs 192.49
2. Earnest Money Deposit : Rs. 3.00 lakhs
3. Tender Processing Fee : Rs. 25000.00
4. Percentage if any to be deducted from bills – Taxes etc as per rules
5. Time allowed for the work from the date of Work Order - 6 Months excluding rainy season

SN	Name of Scheme	Probable Consultancy rates on per hectare basis in Rs.			Rates Offered by Bidder including GST	
		Basic Rate	GST @18%	Total Rates	In Figures in Rs.	In words in Rs.
01	RFP is invited from reputed Consultancy Services - Development of Comprehensive Water Security Action Plan at village level to ensure water sustainability of ground water based sources for following groups					
	Group G1 – P1, P2, P3 & P4	120	21.60	141.60		
	Group G2 – P5	120	21.60	141.60		
	Group G3 – P6, & P7	120	21.60	141.60		
	Group G4 – P8	120	21.60	141.60		

	Group G5 – P9	120	21.60	141.60		
	Group G6 – P10, P11, P12	120	21.60	141.60		
	Group G7 – P13	120	21.60	141.60		
	Group G8 – P14	120	21.60	141.60		
	Group G9 – P15 & P16	120	21.60	141.60		

01	<p>Scope of Work</p> <ul style="list-style-type: none"> • Identification of rechargeable project area using geo-referenced drainage map as a base map and other supported analytical maps. • Baseline Survey and studies, collection of data / details with reference to the project area including water quality analysis of sources. • Identification of site specific suitable recharge structures using supporting analytical thematic maps. • Water Use and Water Budgeting. • Development of action plan showing location of site specific recharge structures in the project area. • Development of village level action plan showing site specific suitable & type of recharge structures based on techno-economic feasibility studies inconsideration with various thematic maps. The types of structures are decided by the terrain conditions, geology, soil studies and geomorphology with the use of thematic maps. • Action Plan is to be technically validated by CGCOST Chhattisgarh. • Development of preliminary drawings for recharge structures. • Pre and Post project performance of ground water 			
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	<p>table need to be proposed through measurement & monitoring tools – IoT application</p> <ul style="list-style-type: none"> Preliminary cost estimates and project report. 			
	<p>Note : 1. Rates so approved shall be valid for next 24 months. In due course of time if required by department additional project can be awarded to the consultant on the approved rates.</p>			

Bid Should be three envelop system as defined under

1. Envelop A : Containing Tender Fee and EMD
2. Envelop B : Containing Technical BID
3. Envelop C : Containing Financial Offer

Should this tender be accepted. I/We hereby agree to abide by and fulfil all the terms and provisions of the said conditions of contract annexed here to so far as applicable or in default thereof to forfeit and pay to the Governor of the Chhattisgarh or his successors in office the sum of money mentioned in the said conditions.

The sum of Rs. 1 (.....) is here with, forwarded in currency notes as bid security (a) 2 the full value of which is to be absolutely forfeited to the Governor of Chhattisgarh or his successors in office, should I/We not deposit the full amount of security deposit specified in the above memorandum, in accordance with clause 1 of the said condition of contract, otherwise the sum of Rs. shall be retained by Government as of account such security deposit as aforesaid, or full value of which shall be retained by the Government on account of the security deposit specified in clause 1 of the said conditions of the contract.

Dated the.....day of20....

Signature of consultant before submission of Tender

Name and Address

Witness

Occupation

Address

The above tender is hereby accepted by me on behalf of the Governor of Chhattisgarh

Dated the day of 20....

Signature of Officer by whom accepted

