

**National Water Informatics Centre
Department of Water Resources, RD & GR
Ministry of Jal Shakti**

National Competitive Bidding for Non-Consulting services

Request for Proposal (RFP)

For

Selection of Service Provider

For

Providing Professional services (IT, software development, Remote Sensing & GIS etc.) for development, improvement, operation, and maintenance of WIMS, India-WRIS, State-WRIS, GAL and ICC

IFB No.: RFP/NWIC/2024/ServiceProvider/1

Director

National Water Informatics Centre

4th Floor, Sewa Bhawan, R. K. Puram, New Delhi

Phone: 011-29583605, Email: dir-nwic-mowr@gov.in

REQUEST FOR PROPOSAL
(RFP)

GOVERNMENT OF INDIA
NATIONAL WATER INFORMATICS CENTRE
Department of Water Resources, RD & GR
Ministry of Jal Shakti
Invitation for Bids for Non-Consultancy Services
E-Procurement Notice

IFB No.: RFP/NWIC/2024/ServiceProvider/1

NATIONAL COMPETITIVE BIDDING

Name of Non-Consultancy: Selection of Service Provider for providing professional services (IT, software development, Remote Sensing & GIS etc.) for development, improvement, operation, and maintenance of WIMS, India-WRIS, State-WRIS, GAL and ICCC

IFB No.: RFP/NWIC/2024/ServiceProvider/1

1. The Government of India has received financing from the World Bank towards the cost of National Hydrology Project and intends to apply a part of the funds to cover eligible payments under the contracts for Procurement of Non-Consulting Services as detailed below. Bidding will be conducted through National Competitive Bidding procedures agreed with the World Bank. Bidding is open to all eligible bidders as defined in the *IBRD Guidelines for Procurement*. Bidders from India should, however, be registered with the Government of India or other State Governments/Government of India, or State/Central Government Undertakings. Bidders from India, who are not registered as above, on the date of bidding, can also participate provided they get themselves registered by the time of contract signing, if they become successful bidders. **Bidders are advised to note the clauses on eligibility (Section I Clause 4 and minimum qualification criteria (Section I Clause 5) of the Instructions to Bidders to qualify for the award of the contract.** In addition, please refer to paragraphs 1.6 and 1.7 of the World Bank's Guidelines setting forth the World Bank's policy on conflict of interest.
2. Director, NWIC invites bids for **Selection of Service Provider for providing professional services (IT, software development, Remote Sensing & GIS etc.) for development, improvement, operation, and maintenance of WIMS, India-WRIS, State-WRIS, GAL and ICCC.** The indicative nature of works, which outsourced professionals through agency are required to perform are updation & generation of existing & new database and analysis of available data to generate reports and other activities related to O&M, Enhancements and New Developments.
3. Bidding documents are available online on [http:// eprocure.gov.in](http://eprocure.gov.in) Bidders will be required to register in the website. The bidder would be responsible for ensuring that any addenda available on the website is also downloaded and incorporated.

- (a) Date of commencement of sale of bidding document: 13/03/2024 at 01:00 PM
 - (b) Date of Pre-bid meeting: 19/03/2024 at 11:00 AM
 - (c) Last date of submission of pre-bid query: 20/03/2024 by 05:00 PM
 - (d) Date of clarification on pre-bid query: 22/03/2024 at 06:00 PM
 - (e) Last date for sale of bidding document: 27/03/2024 at 11:00 AM
 - (f) Last date and time for receipt of bids: 03/04/2024 at 11:00 AM
 - (g) Time and date of opening of bids: 04/04/2024 at 12:00 Noon
4. For submission of the bids, the bidder is required to have Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities, authorised by Government of India for issuing DSC.
5. Bids must be submitted online on <http://eprocure.gov.in> on or before the date and time for receipt of bids, and will be opened online on the specified time and date for opening of bids, as given above. Any bid or modifications to bid (including discount) received outside e-procurement system will not be considered. If the office happens to be closed on the date of opening of the bids as specified, the bids will be opened on the next working day at the same time. The electronic bidding system would not allow any late submission of bids.
6. **The bidders are required to submit physical copy of the following documents:**
- (a) Original Bid Security in approved format (Section X: Annexure A); **and**
 - (b) **Original Affidavit regarding correctness of information furnished in bid document**
 - (c) **Power of attorney/ Board resolution/ declaration in favor of the authorized signatory representing the bidder and signing the bid document.**
- with Director, NWIC, 4th Floor, Sewa Bhawan, R. K. Puram, New Delhi 110066 before the last date and time of submission of Bid given above, either by registered post/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened.**
7. *Bids (Technical and Financial) along with necessary enclosures must be uploaded on e-procurement website <http://eprocure.gov.in> on or before 1100 hours on 03/04/2024 and will be opened on the next day at 12:00 hours, in the presence of the bidders who wish to attend. Late Bids will be rejected.*
8. All bids must be accompanied by an original Bid Security in approved form and shall be submitted as scanned copy of the original declaration along with the technical part of the bid.
9. Other details can be seen in the bidding document. The Employer shall not be held liable for any delays due to system failure beyond its control. Even though the system will attempt to notify the bidders of any bid updates, the Employer shall not be liable for any information not received by the bidder. It is the bidders' responsibility to verify the website for the latest information related to this bid.

FACT SHEET

#	Particular	Details
1.	Assignment Title	Selection of Service Provider for providing professional services (IT, software development, Remote Sensing & GIS etc.) for development, improvement, operation, and maintenance of WIMS, India-WRIS, State-WRIS, GAL and ICCC
2.	Purchaser	National Water Informatics Centre, Department of Water Resources RD & GR.
3.	Location	New Delhi
4.	Bid Submissions	Through Central Public Procurement Portal
5.	Method of Selection	Least Cost Selection Method
6.	Bid Security	Bid Security enclosed in this RFP addressed to “Director”, National Water Informatics Centre, 4 th Floor, Sewa Bhawan, Sector I, RK Puram, New Delhi-66 Non-submission of Bid Security will lead to rejection of bid
7.	Validity of Bid Security	180 days from the bid submission date
8.	Performance Security	10% of the cost discovered through tender process
9.	Date of publication of the RFP	13/03/2024 Central procurement portal, e-procure.gov.in
10.	Pre-bid Meeting	19/03/2024 at 11:00 Hrs. to be held at Conference Room, National Water Informatics Centre, 4 th Floor, Sewa Bhawan, Sector -1, R.K. Puram, New Delhi-66
11.	Last date of submission of queries	20/03/2024 by 17:00 Hrs. at www.e-procure.gov.in
12.	Last date of submission of bid	03/04/2024 at 11:00 Hrs.
13.	Date of opening of Technical bid	04/04/2024 at 12:00 Hrs.
14.	Date of opening of Financial Bid	To be informed later
15.	Language of bid	The bid should be submitted in English only
16.	Bid validity	The bid must remain valid for 180 days from the last date of submission of the bid.

#	Particular	Details
17.	Bid submission	Bidders must submit their bids in line with the requirements stated in this RFP. Bid must be submitted in CPP Portal as per instruction given in the bid document. Both technical and financial bids must be submitted separately.
18.	Issue of Work Order	To the successful bidder after evaluation of financial bid
19.	Address for Communication	<p>“Director”, National Water Informatics Centre, 4th Floor, Sewa Bhawan, Sector I, RK Puram, New Delhi-66</p> <p>Phone: 011-29583605, Email: dir-nwic-mowr@gov.in</p>

Director
National Water Informatics Centre
4thFloor, Sewa Bhawan, R. K. Puram,
Sector-1, New Delhi-110066
Phone:011-29583605
E mail: dir-nwic-mowr@gov.in

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Section I. Instructions to Bidders

Instructions to Bidders (ITB)

A. General

1. Scope of Bid
 - 1.1 The Employer as **defined¹ in Section II “Bidding Data Sheet” (BDS)**, invites bids for the Services, as described in the Appendix A to the Contract. The name and identification number of the Contract are provided in the **BDS and the PCC**.
 - 1.2 The successful Bidder shall be elected to complete the performance of the Services by the Intended Completion Date **specified in the BDS** and the PCC.
 - 1.3 Throughout these Bidding Documents:
 - (a) the term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex) with proof of receipt;
 - (b) if the context so requires, “singular” means “plural” and vice versa; and
 - (c) “day” means calendar day.
2. Source of Funds
 - 2.1 The Government of India or the Recipient (hereinafter called “Borrower”) **specified in the BDS** has received/applied for financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) in an amount **specified in the BDS**, towards the cost of the project **specified in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued.
 - 2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank, and will be subject, in all respects, to the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the Loan (or other financing) account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).

¹ See Section VII, “General Conditions of Contract,” Clause 1. Definitions.

3. Fraud and Corruption

- 3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Section V.
- 3.2 In further pursuance of this policy, Bidders shall permit and shall cause its agents (whether declared or not), sub-Service Providers, sub-consultants, service providers, or suppliers and any personnel thereof, to permit the Bank 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 Bank.

4. Eligible Bidders

- 4.1 A Bidder, and all parties constituting the Bidder, may have the nationality of any country, subject to the provisions of Section III, Eligible Countries. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed sub-Service Providers.
- 4.2 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder:
- i. Directly or indirectly controls, is controlled by or is under common control with another Bidder; or Receives or has received any direct or indirect subsidy from another Bidder; or
 - ii. has the same legal representative as another Bidder; or
 - iii. has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
 - iv. participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same sub-Service Provider in more than one bid; or
 - v. any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Services that are the subject of the bid; or
 - vi. any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the Contract implementation;
 - vii. would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any

affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm;

- ix. has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the procurement process and execution of the contract.

4.3 A Bidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.7. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, in corporate or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed sub-Service Providers or sub-consultants for any part of the Contract including related Services.

4.4 A Bidder that has been sanctioned by the Bank in accordance with the above ITB 3.1, including in accordance with the Bank's Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants ("Anti-Corruption Guidelines"), shall be ineligible to be prequalified for, bid for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address **specified in the BDS**.

4.5 Bidders that are Government-owned enterprises or institutions in the Employer's Country may participate only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not dependent agencies of the Employer. To be eligible, a government-owned enterprise or institution shall establish to the Bank's satisfaction, through all relevant documents, including its Charter and other information the Bank may request, that it: (i) is a legal entity separate from the government (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to the government, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt; and (iv) is not bidding for a contract to be awarded by the department or agency of the government which under their applicable laws or regulations is the reporting or supervisory authority of the enterprise or has the

ability to exercise influence or control over the enterprise or institution.

4.6 Not Used.

4.7 Firms and individuals may be ineligible if so indicated in Section III and (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.

4.8 Bidder shall provide such evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request

5. Qualifications
of the Bidder

5.1 All bidders shall provide in Section IV, "Letter of Service provider's Bid, Qualification Information, Letter of Acceptance, and Agreement," a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.

5.2 In the event that prequalification of potential bidders has been undertaken, only bids from prequalified bidders shall be considered for award of Contract. These qualified bidders should submit with their bids any information updating their original prequalification applications. The update or confirmation should be provided in Section IV.

With the updated information the bidder must continue to be qualified in accordance with the criteria laid down in the prequalification document. All bidder shall also furnish the information for the following in Section IV irrespective of the bidders being pre-qualified:

(i) Power of Attorney.

(ii) Evidence of access to or availability of credit facilities certified by bankers.

(iii) Details as stipulated in clause 5.3 (g) to (j)

5.3 If the Employer has not undertaken prequalification of potential bidders, all bidders shall include the following information and documents with their bids in Section IV, unless otherwise **stated in the BDS**:

(a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business of the Bidder; written power of attorney of the signatory of the Bid to commit the Bidder;

- (b) total monetary value of Services performed for each of the last five years;
- (c) experience in Services of a similar nature and size for each of the last five years, and details of Services under way or contractually committed; and names and addresses of clients who may be contacted for further information on those contracts;
- (d) list of major items of equipment proposed to carry out the Contract;
- (e) qualifications and experience of key site management and technical personnel proposed for the Contract;
- (f) reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years;
- (g) evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);
- (h) authority to the Employer to seek references from the Bidder's bankers;
- (i) information regarding any litigation, current or during the last five years, in which the Bidder was/is involved, the parties concerned, and the disputed amounts; and awards;
- (j) proposals for subcontracting components of the Services amounting to more than 10 percent of the Contract Price. ***[for each the qualification and experience of the identified sub-Service Provider in the relevant field should be annexed.]***

5.4 Bids submitted by a joint venture of two or more firms as partners shall comply with the following requirements **unless otherwise stated in BDS**;

- (a) the bid shall include all the information listed in Sub-clause 5.3 above;
- (b) the bid and, in case of a successful bid, the Agreement, shall be signed so as to be legally binding on all partners;
- (c) all partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorization mentioned under (d) below, as well as in the bid and in the Agreement [*in case of a successful bid*];

- (d) one of the partners shall be nominated as being in charge, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;
- (e) the partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the contract, including payment, shall be done exclusively with the partner in charge;
- (f) The joint venture agreement should define precisely the division of assignments to each partner. All members of JV should have active participation in providing services during the currency of the contract. This should not be varied/modified subsequently without prior approval of the Employer;
- (g) The joint venture agreement should be registered in the place **specified in BDS** so as to be legally valid and binding on partners; and
- (h) a copy of the Joint Venture Agreement entered into by the partners shall be submitted with the bid. Alternatively, a Letter of Intent to execute a joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed Agreement.

[Fill in the name of the city where contract agreement is to be signed]*

5.5 To qualify for award of the Contract, the bidder in its name should have, in the last five years², as **specified in the BDS**, the following experience and licenses:

- (a) annual volume of Services of at least the amount **specified in the BDS**;
- (b) experience as prime Service Provider in the provision of at least two service contracts of a nature and complexity equivalent to the Services over the last 7 years (to comply with this requirement, Services contracts cited should be at least 70 percent complete) as specified in the BDS;
- (c) proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment **listed in the BDS**;
- (d) a Contract Manager with five years' experience in Services of an equivalent nature and volume, including no

² Specify the financial years: they should be those immediately preceding the financial year in which the bids are received.

less than three years as Manager and others as **specified in the BDS**; and

- (e) liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of no less than the amount **specified in the BDS**.
- (f) A consistent history of litigation or arbitration awards against the Applicant or any partner of a Joint Venture may result in disqualification.

5.6 The figures for each of the partners of a joint venture shall be added together to determine the Bidder's compliance with the minimum qualifying criteria of ITB Sub-Clause 5.5(a), (b) and (e); however, for a joint venture to qualify the partner in charge must meet at least 40 percent of those minimum criteria for an individual Bidder and other partners at least 25% of the criteria. Failure to comply with this requirement will result in rejection of the joint venture's Bid. Sub-Service Providers' experience and resources will not be taken into account in determining the Bidder's compliance with the qualifying criteria, unless otherwise **stated in the BDS**.

5.7 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have: -

- made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirement;
- record of poor performance such as abandoning the works or services, not properly completion or financial failures etc.;
- consistent history of litigation or arbitration awards against the bidder or any partner of the joint venture.

6. One Bid per Bidder

6.1 Each Bidder shall submit only one Bid either individually or as a partner in a joint venture. A Bidder who submits or participates in more than one Bid (other than as a sub-Service Provider or in cases of alternatives that have been permitted or requested) shall cause all the proposals with the Bidder's participation to be disqualified.

7. Cost of Bidding

7.1 The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer shall in no case be responsible or liable for those costs.

B. Contents of Bidding Documents

8. Site Visit

8.1 The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site of required Services and its surroundings and obtain all information that may be necessary

for preparing the Bid and entering into a contract for providing the Services. The costs of visiting the Site shall be at the Bidder's own expense.

9. Contents of Bidding Documents

9.1 The set of Bidding Documents comprises the documents listed in the table below and addenda issued in accordance with ITB Clause 11:

	Invitation for Bids
Section I	Instructions to Bidders
Section II	Bidding Data Sheet
Section III	Eligible Countries
Section IV	Forms of Letter of Bid, Qualification Information, Letter of acceptance, Agreement
Section V	Bank Policy-Corrupt and Fraudulent Practices
Section VI	Activity Schedule
Section VII	General Conditions of Contract
Section VIII	Particular Conditions of Contract
Section IX	Performance Specifications and Drawings (if applicable)
Section X	Contract Forms

9.2 Unless obtained directly from the Employer, the Employer is not responsible for the completeness of the Bidding Documents, responses to requests for clarification, or Addenda to the Bidding Documents in accordance with ITB 11. In case of any contradiction, documents obtained directly from the Employer shall prevail.

9.3 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid. Sections IV, VI, and X should be completed and returned with the Bid in the number of copies **specified in the BDS**.

10. Clarification of Bidding Documents

10.1 A prospective Bidder requiring any clarification of the Bidding Documents may notify the Employer in writing at the Employer's address **indicated in the BDS**. The Employer shall respond to any request for clarification received earlier than 14 days³ prior to the deadline for submission of bids. Copies of the Employer's response shall be forwarded to all purchasers of the Bidding Documents, including a description of the inquiry, but without identifying its source. **If so, specified in the BDS**, the Employer shall also promptly publish its response at the web page **identified in the BDS**. *(where electronic downloading of bid document is permitted, the employer will upload the*

³ It may be necessary to extend the deadline for submission of bids if the Employer's response results in substantial changes to the Bidding Documents. See ITB Clause 11 below.

addenda on the website and it will be the responsibility of the bidders [who downloaded the bid document] to search the website for any addenda). Should the clarification result in changes to the essential elements of the Bidding Documents, the Employer shall amend the Bidding Documents following the procedure under ITB 11 and ITB 21.2.

11. Amendment
of Bidding
Documents

- 11.1 Before the deadline for submission of bids, the Employer may modify the Bidding Documents by issuing addenda.
- 11.2 Any addendum thus issued shall be part of the Bidding Documents and shall be communicated in writing to all purchasers of the Bidding Documents.⁴ Prospective bidders shall acknowledge receipt of each addendum in writing to the Employer. The Employer shall also promptly publish the addendum on the Employer's web page in accordance with ITB 10.1.
- 11.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend, as necessary, the deadline for submission of bids, in accordance with ITB Sub-Clause 21.2 below.

C. Preparation of Bids

12. Language
of Bid

- 12.1 All documents relating to the Bid shall be in the English.

13. Documents
Comprising the
Bid

- 13.1 The Bid submitted by the Bidder shall comprise the following:
- (a) The Letter of Service provider's Bid (in the format indicated in Section IV);
 - (b) Bid Security, in accordance with ITB Clause 17, if required;
 - (c) Priced Activity schedule;
 - (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 19.2;
 - (e) Qualification Information Form and Documents;
 - (f) Alternative offers where invited;

and any other materials required to be completed and submitted by bidders, as **specified in the BDS**.

The documents listed in Section IV, VI, and X of sub-clause 9.1 shall be filled in without exception.

⁴ *It is therefore important that the Employer maintain a complete and accurate list of recipients of the Bidding Documents and their addresses.*

- 13.2 Bidders bidding for this contract together with other contracts stated in the IFB to form a package will so indicate in the bid together with any discounts offered for the award of more than one contract.
14. Bid Prices
- 14.1 The Contract shall be for the Services, as described in Appendix A to the contract and in the Specifications, Section IX, based on the priced Activity Schedule, Section VI, submitted by the Bidder.
- 14.2 The Bidder shall fill in rates and prices (both in figures & words) for all items of the Services described in the Specifications (or Terms of Reference) Section IX and listed in the Activity Schedule, Section VI. Items for which no rate or price is entered by the Bidder shall not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Activity schedule. Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.
- 14.3 All duties, taxes, and other levies payable by the Service Provider under the Contract, or for any other cause, shall be included in the rates, prices, and total Bid price submitted by the Bidder.
- 14.4 Bidders may like to ascertain availability of excise/custom duty exemption benefits available in India to the contracts financed under World Bank loan/credits. They are solely responsible for obtaining such benefits which they have considered in their bid and in case of failure to receive such benefits for reasons whatsoever, the employer will not compensate the bidder (Service Provider). Where the bidder has quoted taking into account such benefits, he must give all information required for issue of certificates in terms of such notifications as per form attached to the Qualification Information in the bid. To the extent the employer determines the quantity indicated therein are reasonable keeping in view the specifications /performance requirements, proposed work method and schedule, the certificates will be issued within 60 [sixty] days of signing of contract and no subsequent changes will be permitted. No certificate will be issued for items where no quantity/capacity of equipment is indicated in the statement. The bids which do not conform to the above provisions will be treated as non-responsive and rejected. Any delay in procurement of the construction equipment/machinery/goods as a result of the above shall not be a cause for granting any extension of time.”
- 14.5 The rates and prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract if **provided for in the BDS** and the provisions of Clause 6.6 of the General Conditions of Contract. The Bidder shall submit with the Bid all the information required under the Particular Conditions of Contract and of the General Conditions of Contract.

- 14.6 For the purpose of determining the remuneration due for additional Services, a breakdown of the lump-sum price shall be provided by the Bidder in the form of Appendix (E) to the Contract
15. Currencies of Bid and Payment
- 15.1 The lump sum price shall be quoted by the Bidder entirely in Indian Rupees.
16. Bid Validity
- 16.1 Bids shall remain valid for the period⁵**specified in the BDS**. A bid valid for a shorter period shall be rejected by the employer as non-responsive.
- 16.2 In exceptional circumstances, prior to the expiry of the original bid validity, the Employer may request that the bidders extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 17, it shall be extended up to 45 days after the extended deadline of the extended bid validity period. A Bidder may refuse the request without forfeiting the Bid Security. A Bidder agreeing to the request shall not be required or permitted to modify its Bid, except as provided in ITB Clause 16.3.
- 16.3 In the case of contracts in which the Contract Price is fixed (not subject to price adjustment), in the event that the Employer requests and the bidder agrees to the extension of the validity period, the contract price, if the bidder is selected for award, shall be the bid price adjusted as follows: The price shall be increased by the factor (value of factor B **specified in BDS**) for each week or part of a week that has elapsed between the expiration of the initial bid validity and the date of issue of letter of acceptance to the successful bidder. Bid evaluation shall be based on the Bid Price without taking the above correction into consideration.
17. Bid Security
- 17.1 If **required in the BDS** the Bidder shall furnish, as part of its Bid, a Bid security, in original form for the amount shown in BDS for these particular Services.
- 17.2 This bid security shall be in favour of, as **specified in BDS**, in one of the following forms:
- A bank guarantee issued by a nationalized/scheduled bank located in India or a reputed bank located abroad in the form given in Section XI; or
 - Certified cheque or Bank draft payable to the employer as **specified in BDS**.

⁵ The period is a realistic time, usually 45 to 105 days, allowing for bid evaluation, clarifications, and the World Bank's "no objection" (where awards of Contract are subject to prior review).

- If the institution issuing the guarantee is located outside India, it shall be counter signed by a Nationalized/Scheduled bank located in India, to make it enforceable.
- Fixed Deposit/Time Deposit certificates issued by a Nationalized or Scheduled Bank located in India for equivalent or higher values are acceptable provided it is pledged in favour of the agency named in BDS and such pledging has been noted and suitably endorsed by the bank issuing the deposit certificate.
- Any other security **specified in BDS**

17.3 Bank guarantee issued as Bid security for the bid shall be valid for 45 days beyond the validity of the bid. 'The bid security of a joint venture must define as 'bidder' all joint venture partners and list them in the following manner:

a joint venture consisting of '.....', '.....', and '.....'.(List names of all future partners as named in the letter of intent mentioned in ITB 5.4(h))

17.4 Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clause 17.1 to 17.3 above will be rejected by the Employer as non-responsive, pursuant to ITB Clause 27.1.

17.5 The Bid security of unsuccessful bidder will be returned within 42 days of the end of the bid validity period specified in Sub-Clause 16.1& 16.2.

The Bid Security of successful bidders will be discharged and returned when the bidder has signed the Agreement and furnished the required Performance Security.

17.6 The Bid Security may be forfeited:

- (a) if a Bidder withdraws/modifies/substitutes its bid during the period of bid validity specified by the Bidder on the Letter of Bidder's Bid, except as provided in ITB Sub-Clause 16.2; or
- (b) if the Bidder does not accept the correction of its Bid Price pursuant to ITB Sub-Clause 28.
- (c) if the successful Bidder fails within the specified time to:
 - (i) sign the Contract Agreement; or
 - (ii) furnish the required performance security.

17.7 If a bid security is **not required in the BDS**, and

- i. If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Service Provider's Bid, or

- ii. If the successful Bidder fails to: sign the Contract in accordance with ITB 12; or furnish a performance security in accordance with ITB 35;

the Borrower may, **if provided for in the BDS**, declare the Bidder ineligible to be awarded a contract by the Employer for a period of three years.

18. Alternative
Proposals by
Bidders

- 18.1 Unless otherwise indicated in the BDS, alternative bids shall not be considered.
- 18.2 When alternative times for completion are explicitly invited, a statement to that effect will be **included in the BDS**, as will the method of evaluating different times for completion.
- 18.3 Except as provided under ITB Sub-Clause 18.4 below, bidders wishing to offer technical alternatives to the requirements of the bidding documents must first submit a Bid that complies with the requirements of the bidding documents, including the scope, basic technical data, graphical documents and specifications. In addition to submitting the basic Bid, the Bidder shall provide all information necessary for a complete evaluation of the alternative by the Employer, including calculations, technical specifications, breakdown of prices, proposed work methods and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer. Alternatives to the specified performance levels shall not be accepted.
- 18.4 When bidders are **permitted in the BDS** to submit alternative technical solutions for specified parts of the Services, such parts shall be described in the Specifications (or Terms of Reference) and Drawings, Section IX. In such case, the method for evaluating such alternatives will be as **indicated in the BDS**.

19. Format and
Signing of
Bid

- 19.1 The Bidder shall prepare one original of the documents comprising the Bid as described in ITB Clause 13, bound with the volume containing the Form of Bid, and clearly marked "ORIGINAL." In addition, the Bidder shall submit copies of the Bid, in the number **specified in the BDS**, and clearly marked as "COPIES." In the event of discrepancy between them, the original shall prevail.
- 19.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to ITB Sub-Clause 5.3 (a)& 5.4 (d). A copy of the legally valid authorization as **specified in BDS** should be attached along with the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid where entries or amendments such as interlineations, erasures or over writing have been made, shall be valid only if

they are signed or initialed by the authorized person or persons signing the Bid.

19.3 The Bid shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Bidder, in which case such corrections shall be signed or initialed by the person or persons signing the Bid.

19.4 The Bidder shall furnish information as described in the Letter of Service Provider's Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

D. Submission of Bids

- | | |
|---|--|
| 20. Submission, Sealing and Marking of Bids | 20.1 When so specified in the BDS , bidders shall have the option of submitting their bids electronically. Bidders submitting bids electronically shall follow the procedures specified in the BDS . |
| | 20.2 Deleted |
| | 20.3 Deleted |
| | 20.4 Deleted |
| 21. Deadline for Sub-mission of Bids | 21.1 Bids must be received by the Employer at the address and no later than the date and time indicated in the BDS . Bidders submitting bids electronically (when permitted) shall follow the electronic bid submission procedures specified in the BDS against ITB 20.1 . |
| | 21.2 The Employer may, at its discretion, extend the deadline for submission of bids by issuing an amendment in accordance with ITB Clause 11, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline shall then be subject to the new deadline. |
| 22. Late Bids | 22.1 The Employer shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 21. Any bid received by the Employer after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder. |

23. Withdrawal,
Substitution
and
Modification
of Bids

- 23.1 A Bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 19.2, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:
- (a) prepared and submitted in accordance with ITB 19 and ITB 20 (except that withdrawal notices do not require copies), and in addition, their respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;" and
 - (b) received by the Employer prior to the deadline prescribed for submission of bids, in accordance with ITB 21. Bidders may withdraw, substitute or modify their Bids by giving notice in writing before the deadline prescribed in ITB Clause 21.
- 23.2 Bids requested to be withdrawn in accordance with ITB 23.1 shall be returned unopened to the Bidders.
- 23.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Service Provider's Bid or any extension thereof. This will result in the forfeiture of the Bid Security pursuant to ITB 17.6.
- 23.4 Bidders may only offer discounts to, or otherwise modify the prices of their bids, by submitting Bid modifications in accordance with this clause ITB 23.1 or included in the initial Bid

E. Bid Opening and Evaluation

24. Bid Opening

- 24.1 Except in the cases specified in ITB 22 and 23, the Employer shall publicly open and read out in accordance with ITB 24.2 & 24.3 all bids received by the deadline, at the date, time and place **specified in the BDS** in the presence of Bidders' designated representatives and anyone who choose to attend. Any specific electronic bid opening procedures required, if electronic bidding is permitted in accordance with ITB 20.1, shall be as **specified in the BDS**.
- 24.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding bid being substituted, and the substituted bid shall not be opened, but returned to the Bidder. No bid substitution shall be permitted

unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding bid. No bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at bid opening. Only envelopes that are opened and read out at bid opening shall be considered further.

24.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification, the total Bid Price, per lot (contract) if applicable, including any discounts and alternative bids (if permitted), the presence or absence of a bid security; and any other details as the Employer may consider appropriate. Only discounts and alternatives & modifications read out at bid opening shall be considered for evaluation. The Letter of Service Provider's Bid and the Activity Schedule are to be initialed by representatives of the Employer attending bid opening in the manner **specified in the BDS**. The Employer shall neither discuss the merits of any bid nor reject any bid at bid opening (except for late bids, in accordance with ITB 22.1).

24.4 The Employer shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per contract if applicable, including any discounts and alternative bids; and the presence or absence of a bid security, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

25. Confidentiality

25.1 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the award to the successful Bidder has been announced pursuant to ITB Sub-Clause 34.4. Any effort by a Bidder to influence the Employer's processing of bids or award decisions may result in the rejection of its Bid. Notwithstanding the above, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it should do so in writing.

25.2 If, after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Employer, who will provide written explanation. Any request for explanation from one bidder should relate only to its own bid; information about the bid of competitors will not be addressed.

26. Clarification of Bids
- 26.1 To assist in the examination, evaluation, and comparison of Bids, the Employer may, at the Employer's discretion, ask any Bidder for clarification of the Bidder's Bid, including breakdown of prices in the Activity Schedule, and other information that the Employer may require. The request for clarification and the response shall be in writing or by cable, telex, or facsimile, but no change including any voluntary increase or decrease, in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with ITB Clause 28.
27. Examination of Bids and Determination of Responsiveness
- 27.1 Prior to the detailed evaluation of Bids, the Employer shall determine whether each Bid (a) meets the eligibility criteria defined in ITB Clause 4; (b) has been properly signed; (c) is accompanied by the required Bid Security in accordance with ITB Clause 17, if specified; and (d) is substantially responsive to the requirements of the Bidding Documents.
- 27.2 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Services; (b) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
- 27.3 If a Bid is not substantially responsive, it shall be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.
28. Correction of Errors
- 28.1 Bids determined to be substantially responsive shall be checked by the Employer for any arithmetic errors. Errors shall be corrected by the Employer as follows:
- (a) only for unit price contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected;
 - (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

	<p>28.2 The amount stated in the Bid shall be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid shall be rejected, and the Bid Security may be forfeited in accordance with ITB Sub-Clause 17.6 (b).</p>
29. Currency for Bid Evaluation	The currency for bid evaluation shall be Indian Rupees only.
30. Evaluation and Comparison of Bids	<p>30.1 The Employer shall evaluate and compare only the bids determined to be substantially responsive in accordance with ITB Clause 27.</p> <p>30.2 In evaluating the bids, the Employer shall determine for each Bid the evaluated Bid price by adjusting the Bid price as follows:</p> <ul style="list-style-type: none"> (a) making any correction for errors pursuant to ITB Clause 28; (b) excluding provisional sums and the provision, if any, for contingencies in the Activity Schedule, Section VI, but including Day work, when requested in the Specifications (or Terms of Reference) Section IX; (b) making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted in accordance with ITB Clause 18; and (c) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with ITB Sub-Clause 23.4. <p>30.3 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the Bidding Documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Bid evaluation.</p> <p>30.4 The estimated effect of any price adjustment conditions under GCC Clause 6.6, during the period of implementation of the Contract, shall not be taken into account in Bid evaluation.</p> <p>30.5 Where bids are invited for several lots, the Employer shall determine the application of discounts so as to minimize the combined cost of all the lots, pursuant to ITB Sub-Clause 30.2(c).</p>
31. Preference for Domestic Bidders	Not used

F. Award of Contract

32. Award Criteria

- 32.1 Subject to ITB Clause 33, the Employer shall award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid price, provided that such Bidder has been determined to be (a) eligible in accordance with the provisions of ITB Clause 4, and (b) qualified in accordance with the provisions of ITB Clause 5.
- 32.2 If, pursuant to ITB Sub-Clause 13.2 this contract is being let on a “slice and package” basis, the lowest evaluated Bid Price will be determined when evaluating this contract in conjunction with other contracts to be awarded concurrently. Taking into account any discounts offered by the bidders for the award of more than one contract.

33. Employer’s Right to Accept any Bid and to Reject any or all Bids

- 33.1 Notwithstanding ITB Clause 32, the Employer reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer’s action.⁶

34. Notification of Award and Signing of Agreement

- 34.1 The Bidder whose Bid has been accepted shall be notified of the award by the Employer prior to expiration of the Bid validity period in writing by cable, telex, or facsimile confirmed by registered letter from the Employer. This letter (hereinafter and in the GCC called the “Letter of Acceptance”) shall state the sum that the Employer shall pay the Service Provider in consideration of the execution, completion, and maintenance of the services by the Service provider as prescribed by the Contract (hereinafter and in the Contract called the “Contract Price”).
- 34.2 The Letter of Acceptance shall constitute the formation of the Contract, subject to the Bidder furnishing the Performance Security in accordance with ITB Clause 35 and signing the Agreement in accordance with ITB Sub-Clause 34.3.
- 34.3 The Agreement shall incorporate all agreements between the Employer and the successful Bidder. It shall be kept ready in the office of the Employer for the signature of the Employer and the successful Bidder, within 21 days following the Letter of Acceptance’s date. Within 21 days of receipt of letter of acceptance, the successful Bidder shall sign the Agreement and deliver it to the Employer along with performance security in accordance with ITB Clause 35.1 and revised methodology of providing services.

⁶ Employers shall not reject bids or annul bidding processes, except as permitted in the Procurement Guidelines.

- (c) 34.4 The Employer shall publish in a national website(<https://www.eprocure.gov.in>)the results identifying the bid and lot numbers and the following information: (i) name of each bidder who submitted a bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated prices of each bid that was evaluated; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. After publication of the award, unsuccessful bidders may request in writing to the Employer for a debriefing seeking explanations for the failure of their bids. The Employer shall promptly respond in writing to any unsuccessful Bidder who, after publication of contract award requests the Employer in writing to explain on which grounds its bid was not selected.
35. Performance Security
- 35.1 Within 21 days after receipt of the Letter of Acceptance, the successful Bidder shall sign the contract agreement and deliver to the Employer a Performance Security in the amount stipulated in the GCC and in the form (Bank Guarantee) **stipulated in the BDS**, in Indian Rupees.
- 35.2 If the Performance Security is provided by the successful Bidder in the in the form of a Bank Guarantee or cashier's cheque/certified cheque/Bank Demand Draft, it shall be issued at the Bidder's option, by a nationalized/scheduled bank located in India, or by a foreign bank acceptable to the Employer, through a correspondent bank located in India. The performance security of a Joint Venture shall be in the name of the joint venture.'
- 35.3 Failure of the successful Bidder to comply with the requirements of ITB Sub-Clauses 35.1 and 34.3 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security and employers may resort to awarding the contract to the next lowest evaluated responsive bidder. Upon the successful Bidder's, signing of the Agreement and furnishing of the Performance Security pursuant to ITB Clause 35.1, the Employer shall promptly notify the name of the winning bidder to each unsuccessful bidder and shall discharge the Bid Securities of the unsuccessful bidders pursuant to ITB Clause 17.5.
36. Advance Payment and Security
- 36.1 The Employer shall provide an Advance Payment on the Contract Price as stipulated in the GCC, subject to a maximum amount, as **stated in the BDS**. The Advance Payment shall be guaranteed by a Security. Section X "Security Forms" provides a Bank Guarantee for Advance Payment form.
37. Adjudicator /Disputes Review Expert
- 37.1 The Employer proposes the person **named in the BDS** to be appointed as Adjudicator (or Dispute Review Expert) under the Contract, at the daily rate **specified in the BDS**, plus reimbursable expenses (actual boarding, lodging, travel and other incidental expenses). If the Bidder disagrees with this proposal, the Bidder should so state in Letter of Service Provider's Bid. If, in the Letter

of Acceptance, the Employer does not agree on the appointment of the Adjudicator [or Disputes Review Expert] proposed by the Bidder, the Employer will request the Appointing Authority **designated in the BDS** & Particular Conditions of Contract (PCC) pursuant to Clause 23.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator [or Disputes Review Expert].

Section II. Bidding Data Sheet

A. General								
ITB 1.1	The Employer is: Director, NWIC, New Delhi.							
ITB 1.1	<i>The name of the Services is</i> Selection of Service Provider for providing professional services (IT, software development, Remote Sensing & GIS etc.) for development, improvement, operation, and maintenance of WIMS, India-WRIS, State-WRIS, GAL and ICC. The identification number of the Services is: IFB No.: RFP/NWIC/2024/ServiceProvider/1.							
ITB 1.2	The Intended Completion Date is 11 (Eleven) Months <i>from the date of signing of contract or 28th February 2025, whichever is earlier.</i>							
ITB 1.2(a)	The Purchaser shall use the electronic-procurement system specified in BDS 10.1 to manage this Bidding process.							
ITB 2.1	The Borrower is Government of India							
ITB 2.1	The name of the Project is <i>National Hydrology Project</i>							
ITB 4.4	The list of firms debarred from participating in World Bank projects is available at: http://www.worldbank.org/debarr/ .							
ITB 4.5	State owned enterprises or institutions are allowed to participate.							
ITB 5.2	Pre-Qualification (PQ) criteria:							
	<table> <tr> <th>S.No.</th><th>Eligibility Criteria</th><th>Required Documents</th></tr> <tr> <td>1.</td><td>The service provider should be a company registered under the provisions of the Indian Companies Act, 2013/ Companies Act, 1956 or a partnership firm registered under the Indian Partnership Act, 1936 or the Limited Liability Partnerships Act, 2008 or an organization registered under Society Act or a Consortium with their registered office in India for the last five years. The service provider must have a valid PAN, GST Registration, EPF registration, ESIC Registration, State Labour</td><td>Certificate of Incorporation Copy of PAN GST Registration Copies of Articles of Association EPF registration/ESIC Registration/ State Labour Registration, as applicable</td></tr> </table>	S.No.	Eligibility Criteria	Required Documents	1.	The service provider should be a company registered under the provisions of the Indian Companies Act, 2013/ Companies Act, 1956 or a partnership firm registered under the Indian Partnership Act, 1936 or the Limited Liability Partnerships Act, 2008 or an organization registered under Society Act or a Consortium with their registered office in India for the last five years. The service provider must have a valid PAN, GST Registration, EPF registration, ESIC Registration, State Labour	Certificate of Incorporation Copy of PAN GST Registration Copies of Articles of Association EPF registration/ESIC Registration/ State Labour Registration, as applicable	
S.No.	Eligibility Criteria	Required Documents						
1.	The service provider should be a company registered under the provisions of the Indian Companies Act, 2013/ Companies Act, 1956 or a partnership firm registered under the Indian Partnership Act, 1936 or the Limited Liability Partnerships Act, 2008 or an organization registered under Society Act or a Consortium with their registered office in India for the last five years. The service provider must have a valid PAN, GST Registration, EPF registration, ESIC Registration, State Labour	Certificate of Incorporation Copy of PAN GST Registration Copies of Articles of Association EPF registration/ESIC Registration/ State Labour Registration, as applicable						

		Registration etc., as applicable.	
	2.	The Service Provider should have positive Net worth in any one F.Y. out of the last three financial years (F.Y. 2020-21, 2021-22 and 2022-23).	Audited financial statements & CA Certificate for positive Net-worth in any one FY in the last three financial years.
	3.	The Service Provider should have a minimum average annual turnover of Rs 4 crore from outsourcing IT and GIS professionals related projects for the last three Financial Years (F.Y 2020-21, FY 21-22 and FY 22-23). Note: Turnover from supply of Hardware/IT infrastructure shall not be considered.	A certificate duly certified by the statutory auditor of the Service Provider mentioning the average annual turnover for the last 3 financial years. The certificate may clearly specify that turnover from supply of Hardware/ IT infrastructure has not been taken into consideration while furnishing the average annual turnover.
	4.	The Service Provider must have at least 200 employees on organization's payroll as on the date of submission of bid document for the last one year. Note: The Service Provider must have at least 100 employees having minimum qualification – B.E./B. Tech/MCA/Remote Sensing and GIS/Hydrology and Hydrogeology or any other equivalent continuously on its rolls for the past one year.	An undertaking / self-declaration duly signed (with Organization seal), by the HR Head/CA/CS/Authorize Signatory
	5.	The Service Provider shall submit an undertaking of non-Blacklisting (during the last three years) by any agency/department/etc. under the Central/State/PSUs.	An undertaking / self-declaration duly signed (with Organization seal), by the Authorize Signatory

	6.	<p>Experience:</p> <p>The experience required to be demonstrated by the Service Provider should include the similar works/projects awarded and completed during the last 7 years as per the following criteria:</p> <p>a. One Service contract of similar nature with contract value of INR 11 Crore or more.</p> <p>OR</p> <p>b. Two service contracts of similar nature with contract value of INR 7 Crore to less than 11 Crores.</p> <p>OR</p> <p>c. Three service contracts of similar nature and complexity with contract value of INR 5 Crore to less than 07 Crore.</p> <p>Similar nature means</p> <p>a) For IT & Remote Sensing & GIS Manpower supplying agencies as the bidder:</p> <p>Supply of technical manpower consisting mainly of IT professionals such as software programmers, data base professionals, system analysts as well as Remote Sensing & GIS professionals to Govt, PSUs or other Govt organizations of center or state.</p>	<p>Purchase orders / work orders. The date on the Purchase orders/work orders must fall within that financial year to be considered as documentary proof for that financial year.</p> <p>Performance certificate/ completion certificate from the clients or certificate signed by CA/authorised signatory/board resolution must be submitted as supporting documents</p>
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		<p>b) For IT & Remote Sensing & GIS firms as the bidder:</p> <p>Contracts executed for development or O & M of GIS enabled IT platform for Govt, PSUs or other Govt organizations of center or state.</p> <p>(Contracts, which are yet to be fully completed but have been completed to the extent of 70 % or more in terms of contract amount, can be considered eligible under the experience Criteria.)</p>	
	7.	The Service Provider should have direct support offices in Delhi-NCR	Documentary proof such as Office registration details, list of service centers/business allies etc. with the Address, contact person and contact details to be submitted along with the bid.
ITB 5.3	<p>In addition to the information required from bidders in ITB Sub-Clause 5.3 following documents are also required:</p> <ul style="list-style-type: none"> ○ Certified copy of Valid Registration in Goods and Services Tax, Govt. of India (Registration in Man Power supply/relevant category is mandatory) ○ Certified copy of Valid Registration in Labor Department of any State / Central Govt. (Registration in Man Power Supply is mandatory) ○ The Service Provider shall submit a certified copy of firm's by-laws/MoA/Article of association. ○ Certified copy of Provident Fund/ESIC registration ○ Copy of PAN Card ○ The Service Provider covenants that nothing stands against it in any court of justice to prevent it to enter in to this Agreement with the Purchaser. 		
ITB 5.4	<p>The information needed for Bids submitted by joint ventures is as follows: <i>Joint Ventures are permitted.</i> In case of JV/consortium, the attributes of the</p>		

	lead bidder will be considered for purpose of pre-qualification, technical and financial evaluation.
ITB 5.4 (g)	Place where the agreement to form JV to be registered anywhere in India
ITB 5.5	The previous financial years are: 2020-21, 2021-22, 2022-23
ITB 5.5	The qualification criteria in ITB Sub-Clause 5.5 are modified as follows: - None
ITB 5.5(a)	The Service Provider should have a minimum annual average turnover of Rs 4 crore from outsourcing IT and GIS professionals related projects for each of the last three Financial Years (F.Y 2020-21, FY 21-22 and FY 22-23). Note: Turnover from only supply of Hardware/IT infrastructure shall not be considered.
ITB 5.5(b)	<p>Experience:</p> <p>During the last 7 years, the service provider should have executed the following:</p> <p>The experience required to be demonstrated by the Service Provider should include as a minimum that he has executed during the last 7 years the following:</p> <p>a. One Service contract of similar nature with contract value of INR 11 Crore or more.</p> <p style="text-align: center;">OR</p> <p>b. Two service contracts of similar nature with contract value of INR 7 Crore to less than 11 Crores.</p> <p style="text-align: center;">OR</p> <p>c. Three service contracts of similar nature and complexity with contract value of INR 5 Crore to less than 07 Crore.</p> <p>Similar nature means</p> <p>a) For IT & Remote Sensing & GIS Manpower supplying agencies as the bidder:</p> <p>Supply of technical manpower consisting mainly of IT professionals such as software programmers, data base professionals, system analysts as well as Remote Sensing & GIS professionals to Govt, PSUs or other Govt organizations of center or state.</p> <p>b) For IT & Remote Sensing & GIS firms as the bidder:</p> <p>Contracts executed for development or O & M of GIS enabled IT platform for Govt, PSUs or other Govt organizations of center or state.</p> <p>(Contracts, which are yet to be fully completed but have been completed to the extent of 70 % or more in terms of contract amount, can be considered eligible under the experience Criteria.)</p>

ITB 5.5 (c)	The essential equipment to be made available for the Contract by the successful Bidder shall be: <i>None</i>																							
ITB 5.5 (d)	<p>The bidder is required to nominate a nodal officer as Contract Manager (HR Expert) with minimum five years' experience in dealing with services of supplying professionals in the field of Software development, Database, IT & Networking related field. His/her remuneration deemed to be included in the overheads and profit of the firm and covered under service charges quoted in price schedule.</p> <p>The Nodal officer would coordinate with purchaser for project execution and day to day management of contract and should have sufficient experience of managing the contracts of similar nature. Nodal officer shall function from the premises of the bidder</p> <p>The Key Personnel required for the project implementation are:</p> <p>The bidder has to provide Biodata/CVs against each of professionals as per the requirement mentioned in the Activity Schedule so as to enhance the evaluation of the Bidder by the employer. The Biodata/CVs should inter alia include Qualifications, Experience details, and References of the previous employers (Optional) along with contact nos. for evaluation and verification by the employer. In case of replacement, the replaced person should be better in Experience and Qualification than the person being replaced and prior approval by employer.</p> <p>The employees of the following department(s) are not permitted to be in the employment of the Bidder:</p> <p>Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWR, RD&GR) and its related Organizations</p> <table border="1"> <thead> <tr> <th>Sl. No</th><th>Position/ Designation</th><th>No. of Positions</th><th>Minimum qualification</th><th>Minimum Work Experience Total (Yr.)</th></tr> </thead> <tbody> <tr> <td>1</td><td>Solution Architect</td><td>2</td><td>B.E./ B.Tech. in IT/CS (or) MCA/ other equivalent degree</td><td>10</td></tr> <tr> <td>2</td><td>Database Architect</td><td>1</td><td>Bachelors in Engineering/ Technology or any other equivalent degree or MCA with BCA</td><td>10</td></tr> <tr> <td>3</td><td>Database Administrator</td><td>2</td><td>Bachelors in Engineering/ Technology or any other equivalent degree or MCA with BCA / equivalent degree</td><td>8</td></tr> </tbody> </table>				Sl. No	Position/ Designation	No. of Positions	Minimum qualification	Minimum Work Experience Total (Yr.)	1	Solution Architect	2	B.E./ B.Tech. in IT/CS (or) MCA/ other equivalent degree	10	2	Database Architect	1	Bachelors in Engineering/ Technology or any other equivalent degree or MCA with BCA	10	3	Database Administrator	2	Bachelors in Engineering/ Technology or any other equivalent degree or MCA with BCA / equivalent degree	8
Sl. No	Position/ Designation	No. of Positions	Minimum qualification	Minimum Work Experience Total (Yr.)																				
1	Solution Architect	2	B.E./ B.Tech. in IT/CS (or) MCA/ other equivalent degree	10																				
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3	Database Administrator	2	Bachelors in Engineering/ Technology or any other equivalent degree or MCA with BCA / equivalent degree	8																				

	4	Team Lead (Software Development)	2	B.E./ B.Tech. in IT/CS with MCA/M-tech or other equivalent degree	10
	5	Team Lead - Remote Sensing & GIS	1	Masters or equivalent degree in Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field. Candidates with professional certification from ERDAS, ArcGIS ESRI is preferred.	10
	6	Integrated Command & Control Centre (Services) Team Lead	1	B.E./ B. Tech /M.Tech / MCA/ MBA or other equivalent degree	10
	7	Senior Software Developer	6	Bachelors in Computer Science Engineering/ Technology or any other equivalent degree or MCA with BCA / equivalent degree	9
	8	Junior Software Developer	8	Bachelors in Computer Science Engineering/ Technology or any other equivalent degree or MCA with BCA / equivalent degree	7
	9	IT Quality Assurance Manager	1	Bachelors in Engineering/ Technology or any other equivalent degree	6
	10	Test Engineer	2	Bachelors in Computer Science Engineering/ Technology or any other equivalent degree or MCA with BCA	4
	11	IT Hardware and Networking Expert	2	Bachelors in Engineering/ Technology or equivalent degree or BCA /MCA or equivalent degree or A+, N+, CCNA/recognized training institute	6

				certification is mandatory	
	12	IoT Engineer	1	B.E./ B.Tech. in computer science, or any other equivalent	5
	13	Business Analyst	2	B.E./ B. Tech (IT/CS/ equivalent) / MCA Experience of working in Water Sector (minimum 02 yrs) is mandatory	4
	14	Data Analyst	2	B.E/B. Tech in IT/CS or equivalent degree	8
	15	Customer Care Executive	4	Bachelor's degree in any field	3
	16	Hydrologist	2	Essential M.E/MTech/ M.Sc. in Hydrology/Water Resources/Natural Resource Management/Geo-informatics or any other equivalent qualification. Desirable Preference to Ph.D. in Hydrology/ Water Resources Management with professional experience in water sector or any other equivalent qualification	9
	17	Hydrogeologist	2	Essential M.E/ M. Tech/ M. Sc in Geology/Hydrogeology or other related fields. Desirable Preference to PhD in Hydrogeology or other related fields	9
	18	Sr. Remote Sensing & GIS Expert	4	Masters or equivalent degree in Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field Candidates with professional certification	8

				from ERDAS, ArcGIS ESRI is preferred.	
	19	Jr. Remote Sensing & GIS Expert	6	Masters or equivalent degree in Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field. Candidates with professional certification from ERDAS, ArcGIS ESRI is preferred.	6
	20	GIS application modeler	1	B. Tech in engineering or Bachelor's degree or Master's degree in water resources, Hydrology, Agriculture or civil/environmental engineering	6
	21	GIS Quality Assurance Expert	1	BE, B. Tech, MSc, MCA or equivalent degree in Computer Science/ Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field	6
	22	Google Earth Engine Expert	2	B. Tech/ M. Tech in engineering or Bachelor equivalent degree in Geoinformatics / Remote Sensing / Geology/ Environmental Science/ Geography / any relevant field	8
	23	Image Analyst	2	Masters or equivalent degree in Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field.Candidates with professional certification from ERDAS, ArcGIS ESRI is preferred.	4

	24	Digitizer (GIS)	3	B. Tech in engineering or Bachelor equivalent degree in Geoinformatics / Remote Sensing / Geology/ Environmental Science/ Geography / any relevant field	3
	25	Technical Content Writer	1	Bachelors or equivalent degree in Marketing, English, Journalism/Mass Communication or relevant field	4
	26	Media Executive	1	Bachelors or equivalent degree in Marketing, Mass Communication or relevant field	4
*for minimum qualification refer Appendix A					
ITB 5.5 (e)	The minimum amount of liquid assets and/or credit facilities net of other contractual commitments of the successful bidder shall be INR 150 lacs.				
B. Bidding Documents					
ITB 9.3	Bids shall be submitted electronically.				
ITB 10.1	<p>The Purchaser shall use the following electronic-procurement system to manage this</p> <p>Bidding process:</p> <p>Central Public Procurement Portal (CPPP) URL: https://www.eprocure.gov.in</p> <p>The electronic-procurement system shall be used to manage the following aspects of the</p> <p>Bidding process:</p> <ul style="list-style-type: none">• Bid creation/publishing and addenda/corrigendum if any thereon• Issuing/Downloading bid documents• Submission of bids• Opening of bids <p>For Clarification, the bidder may submit queries on CPPP (URL: https://www.eprocure.gov.in) portal only.</p> <p>For <u>Submission of Original document</u> only, the Employer's address is Director,</p> <p>NWIC, 4th Floor, Sewa Bhavan, R K Puram, Sector-1,</p>				

	<p>New Delhi-110066. Phone: 011 29583605</p> <p>The electronic bidding system specified in the BDS 9.3 provides for online clarifications. A prospective Bidder requiring any clarification on the Bidding Documents may notify the Purchaser online. Clarifications requested through any other mode shall not be considered by the Purchaser. The Purchaser will respond to any request for clarification, provided that such request is received no later than fifteen (15) days prior to the deadline for submission of bids. Description of clarification sought and the response of the Purchaser shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 11 and ITB Sub-Clause 23.2. It is the bidder’s responsibility to check on the e-procurement system, for any addendum/ amendment/ corrigendum to the bidding document.</p>								
ITB 10.1 (a) Additional clause.	<p>A pre-bid meeting will be held. Date of Pre-bid meeting: 19/03/2024 Time: 11.00 am Place: NWIC Committee Room, 4th Floor, Sewa Bhavan, R K Puram, Sector-1, New Delhi-110066. Phone: 011 29583605, Email: dir-nwic-mowr@gov.in</p> <p>Pre-Bid queries format.</p> <p>Bidders can seek written clarifications within one week of the release of bid to the email address on which the bidder received confirmation of registering the bid. The clarification shall be issued by the Authority and will be published on the Bid. The queries should necessarily be submitted in the following format:</p> <table><tr><th>Sl. No</th><th>RFP Bid Document Reference</th><th>Content of RFP Bid requiring clarification</th><th>Points of Clarification</th></tr><tr><td></td><td></td><td></td><td></td></tr></table>	Sl. No	RFP Bid Document Reference	Content of RFP Bid requiring clarification	Points of Clarification				
Sl. No	RFP Bid Document Reference	Content of RFP Bid requiring clarification	Points of Clarification						
ITB 11.2	<p>Replace Clause 11.2 as below:</p> <p>At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Documents by issuing addendum. The addendum will appear on the e-procurement (https://www.eprocure.gov.in) system under “Latest Corrigendum” and email notification is also automatically sent to those bidders who have started working on the tender.</p>								
C. Preparation of Bids									
ITB 13 Documents comprising the Bid	<p>Replace Clause No. 13 and its sub clause with the following:</p> <p>13.1 The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously.</p>								

	<p>13.2 The Technical Part shall contain the following:</p> <ul style="list-style-type: none"> (a) Letter of Bid – Technical Part, in accordance with ITB Clause 13.7; (b) original Bid Security in approved form, in accordance with ITB Clause 17.1, if required; (c) Alternative bids– Technical Part, Not Applicable; (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 19.2; (e) documentary evidence in accordance with ITB Clause 5 establishing the Bidder’s qualifications to perform the contract if its bid is accepted; (f) documentary evidence in accordance with ITB 5 establishing the Bidder’s eligibility to bid; (g) Method Statement and Work Plan. <p>13.3 The Financial Part shall contain the following:</p> <ul style="list-style-type: none"> (a) Letter of Bid – Financial Part: prepared in accordance with ITB 13.7,13.8, 13.9 (b) Price Schedules: completed prepared in accordance with ITB 13.7,13.8, 13.9 (c) Alternative Bid - Not Applicable; and <p>13.4 The Technical Part shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part, the Bid shall be declared non-responsive.</p> <p>13.5 In addition to the requirements under ITB 13.1 to ITB 13.4, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.</p> <p>13.6 The Bidder shall furnish in the Letter of Bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid</p>
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	<p>13.7 The Letter of Bid – Technical Part, Letter of Bid – Financial Part, and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 19.2. All blank spaces shall be filled in with the information requested.</p> <p>13.8 Entire Bid including the Letter of Bid and filled-up Price Schedules shall be submitted online on e-procurement system specified in ITB 10.1. Details and process of online submission of the tender and relevant documents are given in the website mentioned above. Scanned copies of documents listed in clauses 11 should also be uploaded on this website.</p> <p>13.9 Submission of Original Documents: The bidders are required to separately submit (i) Original Bid Security in approved form (ii) Original Power of Attorney (iii) Original affidavit regarding correctness of information furnished with bid document; with the office specified in the BDS 20.3 before the last date & time of bid submission, either by registered/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened. Hard copy of rest of the bid is not to be submitted</p> <p>As e- procurement system is being used, there is no hard copy submission of bid. The scanned copy of the power of attorney, and affidavit may be uploaded in the e-procurement portal.</p>
ITB 14.5	The Contract <i>is not</i> subject to price adjustment in accordance with GCC Clause 6.6.
ITB 16.1	The Bid shall be valid for 180 days after the deadline for Bid submission specified in the RFP.
ITB 17.1	The bidders are required to submit (a) (i) original Bid Security in approved format along with the technical part of the bid; to Director, NWIC, 4th Floor, Sewa Bhavan, R K Puram, Sector-1 , New Delhi-110066, before the opening of the technical part of the Bid given above, either by registered post/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened.
ITB 17.2	Bid shall include a Bid Security. Bid Security of <i>INR 28 Lakhs</i> is required and the amount of it shall be paid in the form of Bank Guarantee of Nationalized / Scheduled bank in India. Bid security shall be in the name of Director, NWIC, 4th Floor, Sewa Bhawan, R K Puram, Sector-1 , New Delhi-110066. The bank guarantee is issued by bank, it shall be as per forms of bid security appended at Annexure A of Forms of Securities .
ITB 17.7	Not Applicable
ITB 18.1	Alternative bids are not permitted.
ITB 18.2	Alternative times for completion are not permitted.

ITB 18.4	Alternative technical solutions shall be permitted for the following parts of the Services: Not Applicable
ITB 19.1	Replace Clause No. 19.1 with the following: The Bidder shall prepare the Bid as per details given in ITB 19.2.
ITB 19.2	The bid shall be signed by a person duly authorized to sign on behalf of the Bidder. The authorization shall consist of a written confirmation and shall be uploaded along with the bid. The written confirmation of authorization to sign on behalf of the Bidder shall indicate: <i>Legally valid Power of Attorney/ Board Resolution certified by Company Secretary is required to demonstrate the authority of the signatory to sign the Bid.</i>
ITB 19.3	Not Applicable
	Add Clause No. 19.5 as below: Corrections if any in the bid shall be carried out by the employer by editing the information before electronic submission on e-procurement portal.
D. Online Submission of Bids	
ITB 20.1	Bidders may submit their bids electronically: “Yes” Further: Replace Clause 20.1 with the following: The Letter of Bid – and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 19.2. All blank spaces shall be filled in with the information requested.
ITB 20.1(a)	For participation in the Bid, it is mandatory for the Bidder to obtain Class-II Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities (CA) and then register with the Government of India e-procurement platform and submit the Bid by using their user e-tender ID and Digital Signature. Foreign Bidders may obtain DSC from any Licensed Certifying Authority which has been recognized by the Controller of Certifying Authorities, Govt. of India as per details available at www.cca.gov.in Bidders already possessing the Digital Signature issued from authorized CAs can use the same in this Bid submission. Please also refer to https://www.eprocure.gov.in for detailed information regarding obtaining digital signatures. Bids shall be submitted online on the e-procurement system specified in ITB 9.3. Detailed guidelines for viewing bids and submission of online bids are given on the website. The Invitation for Bids under this Project is published on https://www.eprocure.gov.in . Any citizen or prospective bidder can logon to this website and view the Invitation for Bids and can view the details of goods for which bids are invited. A prospective bidder can submit its bid online;

	<p>however, the bidder is required to have enrolment/registration in the website, and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token obtained from any authorised certifying agency of Government of India (for class of DSC specified in BDS). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, along with the bid, otherwise the bid will be rejected.</p> <p>Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the electronic procurement system.</p>
ITB 20.2	<p>Replace ITB Clause 20.2 with the following:</p> <p>a) The completed bid comprising of documents indicated in ITB 13, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security.</p> <p>The bids should be submitted on the https://eprocure.gov.in. All the documents are required to be signed digitally by the bidder. After electronic on-line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.</p> <p>b) Name and Identification number of the contract as given in ITB 1.1 above in this sheet.</p> <p>c) Deleted</p>
ITB 20.3	<p>Replace ITB Clause 20.3 with the following:</p> <p>Submission of Original Documents: The bidders are required to separately submit (i) Original Bid Security in approved form (ii) Original Power of Attorney/board resolution required to prove the authenticity and genuineness of the bid signatory (iii) Original affidavit regarding correctness of information furnished with bid document, with Director, NWIC, 4th Floor, Sewa Bhavan, R K Puram, Sector-1, New Delhi-110066, before the opening of the technical part of the Bid, either by registered/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened. Hard copy of rest of the bid is not to be submitted.</p>
ITB 20.4	Deleted
ITB 21.1	<p>Replace ITB Clause 21.1 with the following:</p> <p>Bids shall be submitted online on the e-procurement system. Detailed guidelines for viewing bids and submission of online bids are given on the website. The Invitation for Bids under this Project is published on https://www.eprocure.gov.in</p>

	Any citizen or prospective bidder can logon to this website and view the Invitation for Bids and can view the details of services for which bids are invited. A prospective bidder can submit its bid online; however, the bidder is required to have enrolment/registration in the website, and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token obtained from any authorized certifying agency of Government of India. The bidder should register in the website using the relevant option available. The completed bid comprising of documents indicated in ITB 13, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security.
ITB 21.1 a	<p>The deadline for submission of bids shall be</p> <p>Date: 03/04/2024</p> <p>Time: 1100 Hrs</p> <p>Bidders shall have to submit their Bids electronically.</p> <p>The electronic Bid submission procedures shall be:</p> <p>Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.</p> <p>The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.</p>
	<p>Add ITB Clause 21.3 with the following:</p> <p>All the documents are required to be signed digitally by the bidder. After electronic online bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.</p>
	<p>Add ITB Clause 21.4:</p> <p>Physical, Email, Telex, Cable or Facsimile bids will be rejected as non-responsive.</p>
ITB 22.1	The electronic bidding system would not allow any late submission of bids after due date & time as per server time.
ITB 23	<p>Replace ITB Clause 23 with following:</p> <p>23.1 Bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential</p>

	<p>re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is not allowed (or allowed if specified in BDS).</p>
23.2	Bids requested to be withdrawn in accordance with ITB Sub-Clause 23.1 shall not be opened.
23.3	No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid, or any extension thereof

E. Bid Opening and Evaluation

ITB 24.1	<p>ITB 24 Replaced as under</p> <p><u>Public Opening of Technical Parts of Bid</u></p> <p>24.1 The Employer shall publicly open all bids received by the deadline at the date, time and place specified in the BDS below in the presence of Bidders' designated representatives and anyone who chooses to attend. In all cases, original documents submitted as specified in ITB 13.9 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 13.9 will be declared non-responsive and will not be opened. The bidder's names and such other details as the Employer may consider appropriate will be notified online by the Employer at the time of opening of the Bids.</p> <p>24.2 The electronic summary of the opening of the Bids will be generated and uploaded online. The Employer will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Bids – Technical Parts, shall be considered further for evaluation</p> <p>24.3 In the event of the specified date of bid opening being declared a holiday for the Employer, the bids will be opened at the appointed time and location on the next working day.</p> <p>The online bid opening shall take place at: Address: NWIC, 4th Floor, Sewa Bhavan, R K Puram, Sector-1, New Delhi-110066. Phone: 011 29583605 Date: 04/04/2024 Time: 1200 Hrs</p> <p><u>Public opening of Financial part of Bid</u></p> <p>Following the completion of the evaluation of the Technical Parts of the Bids, and the Bank has issued its no objection (if applicable), the Employer shall notify in writing those Bidders who have failed to meet the qualification criteria and/or whose Bids were considered non-responsive to the requirements in the bidding document, advising them of the following information:</p>
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	<p>(i) their Technical Part of Bid failed to meet the requirements of the bidding document;</p> <p>(ii) their Financial Part of the Bid shall not be opened; and</p> <p>(iii) notify them of the date and time for public opening of the Financial Parts of the Bids. Financial Parts of the bids shall not be opened earlier than seven (7) days from the communication of technical evaluation results to the bidders.</p> <p>(iv) The Employer shall, simultaneously, notify in writing those Bidders whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria, advising them of the following information:</p> <p>(a) their Bid has been evaluated as substantially responsive to the bidding document and met the Qualification Criteria;</p> <p>(b) their Financial Part of Bid will be opened at the public opening of Financial Parts;</p> <p>(c) notify them of the date and time of the second public opening of the Financial Parts of the Bids, as specified below.</p> <p>(d) The opening date should allow Bidders sufficient time to make arrangements for attending the opening. The Financial Part of the Bid shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The bidder's names, the Bid prices, the total amount of each bid, including any discounts and Alternative Bid – Financial Part, and such other details as the Employer may consider appropriate will be notified online by the Employer at the time of bid opening.</p> <p>In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.</p> <p>(e) The electronic summary of the bid opening will be generated and uploaded online. The Employer will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation</p> <p>Public Opening of Financial Parts of Bids</p> <p>The online opening of Financial Part of Bids shall take place at</p> <p>Address: Director, NWIC, 4th Floor, Sewa Bhawan, R K Puram, Sector-1, New Delhi-110066. Phone: 011 29583605</p> <p>Time: To be notified at later stage</p>
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ITB 28.1	<p>Replace ITB clause 28.1 with following:</p> <p>The e-procurement system automatically calculates the total amount from unit rates and quantities and the system also automatically populates the amount in words from the amount in figures and therefore there is no scope of discrepancy and need for arithmetic correction. However, in case of any discrepancy, amount in words shall prevail.</p>										
ITB 30.1	<p>Add following sub clause to ITB 30.1</p> <p>The method of selection is Least Cost Selection (LCS):</p> <p>The Financial Parts of the bids shall be opened in the e-procurement system, following the evaluation of the Technical Parts of the Bids. In all cases, documents submitted as specified in ITB 5.3,13.1and in other clauses as applicable shall be first scrutinized, and non-compliant Bids shall be declared non-responsive and would be rejected technically. Service providers failing to submit the original documents as per clause no. ITB 20.1 & 20.2 SHALL ALSO BE REJECTED.</p> <p>Technically responsive bids shall be further ranked following the process as given below:</p> <p>i. Only technically responsive bids meeting all qualification criteria and which shall secure minimum 70 marks in technical evaluation would be further considered for financial opening of bids. The lowest (L1) bidder on opening of financial bid will be selected for the award of the contract.</p> <p>Technical Evaluation Criteria:</p> <table><tr><th>S. No</th><th>Parameter</th><th>Criteria</th><th>Documents Required</th><th>Max. Marks</th></tr><tr><td>1</td><td>Financial Turnover</td><td>The Service Provider should have a minimum average annual turnover of Rs 4 crore from outsourcing IT and GIS professionals related projects for each of the last three Financial Years (F.Y 2020-21, F.Y 2021-22 and F.Y. 2022-23).</td><td>A certificate duly certified by the statutory auditor of the Service Provider mentioning the average annual turnover for the last 3 financial years. The certificate may clearly specify that turnover from supply of Hardware/ IT infrastructure has not been taken into</td><td>30</td></tr></table>	S. No	Parameter	Criteria	Documents Required	Max. Marks	1	Financial Turnover	The Service Provider should have a minimum average annual turnover of Rs 4 crore from outsourcing IT and GIS professionals related projects for each of the last three Financial Years (F.Y 2020-21, F.Y 2021-22 and F.Y. 2022-23).	A certificate duly certified by the statutory auditor of the Service Provider mentioning the average annual turnover for the last 3 financial years. The certificate may clearly specify that turnover from supply of Hardware/ IT infrastructure has not been taken into	30
S. No	Parameter	Criteria	Documents Required	Max. Marks							
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			<p>(Note: Turnover from only supply of Hardware/ IT infrastructure shall not be considered.)</p> <p>i. Average annual turn-over during the last three financial years, Rs. 4 crore: 20 marks</p> <p>ii. For each additional average annual turnover of Rs. 2 crore above Rs. 4 crore: 1 additional mark each up to maximum 10 marks</p> <p>[For Example: Suppose a bidder has average annual turn-over of last three financial years is Rs. 10 Crore, 20 marks will be allotted against criterion (i) and $((10 - 4) / 2) = 3$ additional marks against criterion (ii). So, total marks will be 23.]</p>	consideration while furnishing the average annual turnover.	
	2	Experience Criteria	<p>The experience required to be demonstrated by the Service Provider should include the similar works/projects awarded and completed during the last 7 years as per the following criteria:</p> <p>a. One Service contract of similar nature and complexity</p>	<p>a) Copies of Purchase orders / work orders. The date on the Purchase orders/work orders must fall within that financial year to be considered as documentary proof for that financial year.</p> <p>b) Copies of Performance certificate/ completion certificate from</p>	30

			<p>with contract value INR 11 Crore or more. – 20 marks</p> <p>OR</p> <p>b. Two service contracts of similar nature and complexity with contract value from INR 7 Crore to less than 11 Crores. – 20 marks</p> <p>OR</p> <p>c. Three service contracts of similar nature and complexity with contract value from INR 5 Crore to less than 07 Crore. – 20 marks.</p> <p>(For every additional work order above 5 Cr.: 05 marks for each work order upto maximum of 10 marks)</p> <p>Note 1: Value of Work Order will be considered as inclusive of all taxes.</p> <p>Note 2: Subsequent Work Orders, in</p>	<p>the clients or certificate signed by CA must be submitted as supporting documents</p> <p>Copies of work orders along with completion certificates duly certified by CS and CA of the Service Provider certifying relevant workorder value for the period; and name & address of clients who may be contacted for further information on those contracts.</p>	
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			<p>continuation of existing Work Orders, for any Project will be considered as a single W/O Similar nature means</p> <p>(iii) For IT & Remote Sensing & GIS Manpower supplying agencies as the bidder:</p> <p>Supply of technical manpower consisting mainly of IT professionals such as software programmers, data base professionals, system analysts as well as Remote Sensing & GIS professionals to Govt, PSUs or other Govt organizations of center or state.</p> <p>(iv) For IT & Remote Sensing & GIS firms as the bidder:</p> <p>Contracts executed for development or O & M of GIS enabled IT platform for Govt, PSUs or other Govt</p>		
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			<p>organizations of center or state.</p> <p>(Contracts, which are yet to be fully completed but have been completed to the extent of 70 % or more in terms of contract amount, can be considered eligible under the experience Criteria.)</p>		
	3	Technical Manpower Strength of Service Provider	<p>Number of Technical Manpower on the payroll of Service Provider for the past one year as on the bid submission date (having minimum qualification – B.E./ B.Tech/MCA/Remote Sensing and GIS/Hydrology and Hydrogeology or any other equivalent qualification)</p> <p>i. 200 to 300 – 20 marks</p> <p>ii. 300 to 400 – 30 marks,</p> <p>iii. More than 400 – 40 marks</p> <p>Note 1: Service Provider will be considered only in one of the</p>	<p>An undertaking / self-declaration duly signed (with organization seal), by the HR Head/ CA/ CS/Authorize Signatory</p>	40

			above-mentioned categories. Note 2: Manpower of subsidiaries companies will not be considered.		
<p>Marks under financial turnover and projects/ work experience, technical manpower strength and certifications shall be added together for generating overall ranking of technically responsive Service Providers and shall be used for technical qualification of the bids and also for the purpose of selection from amongst L-1 Service Providers if there happen to be more than one.</p> <p>Thereafter Service Provider’s names, and such other details as the Purchaser may consider appropriate will be notified online as Technical Part of bid opening summary.</p> <p>Minimum marks required for consideration of opening the financial bids is 70 (Seventy) marks.</p> <p>Further, only those service providers who qualify the technical evaluation will be considered for financial evaluation.</p>					
F. Award of Contract					
ITB 34.3	The bidder shall complete signing of agreement and submission of performance security within 14 days of receipt of letter of acceptance				
ITB 34.4	The results of the tender process shall be published on CPP Portal www.eprocure.gov.in .				
ITB 35.1	<p>The Performance Security shall be in the form of a “Bank Guarantee” in the name of purchaser or crossed demand draft” drawn in favor of the Director, NWIC, 4th Floor, Sewa Bhawan, R K Puram, Sector-1, New Delhi-110066.</p> <p>Bank guarantee shall be issued or drawn on any Nationalized or Scheduled bank in India</p> <p>Within 7(seven) days of Notification of Award, the supplier shall furnish Performance Security to the Purchaser for an amount of 10% of the contract value, valid up to 60 days after the expiry of contract/date of completion of performance obligations.</p> <p>In the event of any contractual amendment, the Supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract, as amended for 60 days after the completion of performance obligations.</p>				

ITB 36.1	Advance Payment shall be: Nil
ITB 37.1	Purchaser and the Service Provider will make every effort to resolve amicably, by direct negotiation, any disagreement or dispute arising between them under or in connection with the agreement/order. If any dispute arises between parties on aspects not covered by this agreement, or the construction or operation thereof, or the rights, duties or liabilities under these except as to any matters the decision of which is specially provided for the general or the special conditions, such dispute will be referred to the arbitrator appointed by NWIC, and the award of the arbitration will be final and binding on both the parties. The arbitration proceedings will be held in New Delhi, India.

Section III. Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement

- (v) In reference to ITB 4.7, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this bidding process:

Under ITB 4.7 (a) *“none”*

Under ITB 4.7 (b) *“none”*

Section IV. Forms of Letter of Service Provider's Bid, Qualification Information, Letter of Acceptance, and Agreement (Form of Contract)

1. Letter of Services Provider's Bid – Technical Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing this form.

Date of this Bid submission: *[insert date (as day, month and year) of Bid submission]*

Bid No.: RFP/NWIC/2024/ServiceProvider/1

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Employer]*

- (a) **No reservations:** We have examined and have no reservations to the bidding document, including Addenda issued in accordance with ITB 11;
- (b) **Eligibility:** We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) **Conformity:** We offer to provide the Non-Consulting Services in conformity with the bidding document for the following: *[insert a brief description of the Non-Consulting Services]*;
- (d) **Bid Validity Period:** Our Bid shall be valid for the period specified in BDS 16.1 (as amended if applicable) from the date fixed for the Bid submission deadline (specified in BDS 21.1a (as amended if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (e) **Performance Security:** If our Bid is accepted, we commit to obtain a Performance Security in accordance with the bidding document;
- (f) **One Bid Per Bidder:** We are not submitting any other Bid(s) as an individual Bidder, and we are not participating in any other Bid(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITB 4.2, other than alternative Bids submitted in accordance with ITB 18;
- (g) **Suspension and Debarment:** We, along with any of our subcontractors, suppliers, consultants, manufacturers, or Bidders for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Employer's Country laws

or official regulations or pursuant to a decision of the United Nations Security Council;

(h) **State-owned enterprise or institution:** *[select the appropriate option and delete the other] [We are not a state-owned enterprise or institution] / [We are a state-owned enterprise or institution but meet the requirements of ITB 4.6];*

(i) *Deleted.*

(j) **Binding Contract:** We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;

(k) **Not Bound to Accept:** We understand that you are not bound to accept the lowest evaluated cost Bid, the Most Advantageous Bid or any other Bid that you may receive;

(l) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption;

(m) We also undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India on date namely "Prevention of Corruption Act 1988";

(n) We accept the appointment of *[insert name proposed in Bid Data Sheet]* as the Adjudicator and propose instead that *[insert name]* be appointed as Adjudicator whose daily fees and biographical data are attached; and

(a) If awarded the contract, the person named below shall act as Bidder's Representative:

Name of the Bidder: **[insert complete name of person signing the Bid]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ***[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid: *[insert complete title of the person signing the Bid]*

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* **day of** *[insert month]*, *[insert year]*

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

**: Person signing the Bid shall have the power of attorney given by the Service Provider to be attached with the Bid Schedules.

Annexure A to Technical Part

(iv) Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid submission]*

IFB No.: *[insert number of Bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

Page _____ of _____ pages

1. Bidder's Name *[insert Bidder's legal name]*

2. In case of JV, legal name of each member: *[insert legal name of each member in JV]*

3. Bidder's actual or intended country of registration: *[insert actual or intended country of registration]*

4. Bidder's actual or intended year of registration: *[insert Bidder's year of registration]*

5. Bidder's legal Address in country of registration: *[insert Bidder's legal address in country of registration]*

(vi) Bidder's Authorized Representative Information

Name: *[insert Authorized Representative's name]*

Address: *[insert Authorized Representative's Address]*

Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]*

Email Address: *[insert Authorized Representative's email address]*

(vii) Attached are copies of original documents of *[check the box(es) of the attached original documents]*

- ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.4.
- ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1.
- ☐ In case of state-owned enterprise or institution, in accordance with ITB 4.6 documents establishing:
 - Legal and financial autonomy
 - Operation under commercial law
 - Establishing that the Bidder is not under the supervision of the agency of the Employer

2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Annexure B to Technical Part

Qualification Information

Notes on Form of Qualification Information

The information is to be filled in by individual bidders and by each member of Joint Venture in case of JV participating in the Bid. The following pages will be used for purposes of post-qualification as provided for in Clause 5 of the Instructions to Bidders. This information will not be incorporated in the Contract. Attach additional pages as necessary.

Individual Bidders Qualification

1	(i) Constitution or legal status of Bidder (ii) Place of registration: (ii) Principal place of business: (iv) Power of attorney of signatory of Bid	[attach copy] [attach]																														
	Total annual volume of similar nature of services as mentioned in ITB 5.2 and ITB 5.5 (b) provided and payments received in the last five years preceding the year in which bids are invited. (<i>Attach certificate from Chartered Accountant</i>)	Year (Rs. Cr.) 20 -20 20 -20 20 -20 20 -20 20 -20																														
	(iii) Services performed as prime Service Provider (<i>in the same name and style</i>) on providing services of a similar nature and volume over the last five years ⁸ . [<i>Attach certificate from the Engineer-in-charge.</i>]																															
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Name</th> <th style="width: 10%;">Name of Employer</th> <th style="width: 10%;">Description of Service</th> <th style="width: 10%;">Contract No.</th> <th style="width: 10%;">Value of contract</th> <th style="width: 10%;">Date of Issue of Work Order</th> <th style="width: 10%;">Stipulated Date of Completion</th> <th style="width: 10%;">Actual Date of Completion</th> <th style="width: 10%;">Remarks explaining reasons for Delay, if any</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Project Name	Name of Employer	Description of Service	Contract No.	Value of contract	Date of Issue of Work Order	Stipulated Date of Completion	Actual Date of Completion	Remarks explaining reasons for Delay, if any																					
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[@ The items or activities for which date is requested should tally with that specified in ITB 5.5(b)]

* Attach certificates from Engineer in-charge]

8 Immediately preceding the financial year in which bids are received.

9 Immediately preceding the financial year in which bids are received.

2	Availability of Major items of Service Provider's Equipment: List all information requested below. Refer also to Clause 5.3 (d) & 5.5 (c) of the Instructions to Bidders.									
	Item of Equipment	Description	make	capacity	age (Years)	Condition	Number available	Owned	Leased	Purchased
3	Qualifications of technical personnel proposed: Refer also to Clause 5.3 (e) and Clause 5.5(d) of the Instructions to Bidders and Clause 4.1 of Part-1 General Conditions of Contract.									
	Position	Name	Qualification	Years of experience....	Years of experience in proposed position					
					1	2	3	Total		
4	Proposed sub-contracts and firms: Refer to ITB Clause 5.3(j) and GCC Clause 3.5 and 4.									
	Sections of the Services	Value of subcontract		Sub-Service Provider (name and address)				Experience in similar services		
	<i>Note: The capability of the sub-Service Provider will also be assessed (on the same lines as for the main Service Provider) before according approval to him.</i>									
5	Financial reports for the last three years: Balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.									
									
									
6	Financial Resources: Evidence of access to financial resources to meet the qualification requirements [<i>cash in hand, lines of credit, etc.</i>] List below and attach copies of support documents. [<i>Attach a certificate from Bank in the format at the end of this section. Other Certificate, will not be accepted</i>]									
									
									
									
									
7	Banker's References: Name, address, and telephone, telex, and facsimile numbers of banks that may provide references if contacted by the Employer.									
									
									
8	Information on current litigation in which the Bidder is involved.									
	Name of Other party(s)	Cause of dispute	Litigation where (Court or Arbitration)		Amount involved		Remarks regarding present status			
	1	2	3		4		5			

9	Proposed Program (Service work method and schedule): The bidder should attach descriptions, drawings, and charts as necessary, to comply with the requirements of the bidding documents. <i>[Refer Clause 5. 1]</i> Method Statement Work Plan							
10	Statement of Compliance under the requirements of Sub-Clause 5.3 of ITB.							
11	Financial Statements Summary: To be submitted by each bidder including each member of JV.							
	SUMMARY OF FINANCIAL STATEMENTS							
	Name of bidder/JV Member:							
	(Equivalent Rs. Crores)							
	S.No.	Financial Information in Rupee equivalent with exchange rate at the end of concerned year	Actuals for Previous three years excluding the current financial year					Ref. of Page Nos. of Balance Sheets
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1.	Total Assets						
	2.	Total Turnover						
	3.	Current Assets						
	4.	Current Assets + Loan & Advances						
	5.	Total Liabilities						
	6.	Current Liabilities						
	7.	Current liabilities & provision						
	8.	Profit before Interest and Tax						
	9.	Profit before Tax						
	10.	Profit after Tax						
	11.	Shareholder's Funds (Net Worth) = (Paid up equity +Reserves)-(revaluation reserves + Miscellaneous expenditure not written off)						
	12.	Depreciation						
	13.	Current Ration (2)/(5)						
	14.	Net cash accruals= Profit after Tax + depreciation						
12	<p>This information should be extracted from the Annual Financial Statements/ Balance sheets, which should be enclosed. Year 1 will be the latest year for which audited financial statements are available. Year 2 shall be the year immediately preceding year 1 and year 3 shall be the year immediately preceding Year 2.</p> <p>Additional Requirements: Bidders should provide any additional information required to fulfill the requirement of Clause 5 of ITB.</p>							

13	<p><i>SAMPLE FORMAT (no substitute is acceptable) FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT FACILITIES* CLAUSE 5.5 [e] OF ITB</i></p> <p><i>BANK CERTIFICATE</i></p> <p><i>This is to certify that M/s.....is a reputed company with a good financial standing.</i></p> <p><i>If the contract for the Services, namely..... [funded by the World Bank] is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. to meet their working capital requirements for executing the above contract.</i></p> <p style="text-align: right;"><i>---Sd.---</i></p> <p style="text-align: right;"><i>Name of Bank</i></p> <p style="text-align: right;"><i>Senior Bank Manager</i></p> <p style="text-align: right;"><i>Address of the Bank</i></p> <hr/> <p><i>(To be given from a nationalized or scheduled bank in India. No other substitute will be acceptable)</i></p>
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	Joint Ventures
14	The information listed in 1 to 2.8 above shall be provided for each partner of the joint venture.
15	The information in 2.9 above shall be provided for the joint venture.
16	Attach the power of attorney of the signatory[ies] of the bid, authorizing signature of the bid on behalf of the joint venture.
17	Attach the agreement among all partners of the joint venture [<i>and which is legally binding on all partners</i>], which shows the requirements as indicated in sub-clause 5.4 of the 'Instructions to Bidders'. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed Agreement.

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Furnish details of participation proposed in the joint venture as below:

DETAILS OF PARTICIPATION IN THE JOINT VENTURE

<i>PARTICIPATION DETAILS</i>	<i>FIRM 'A'</i> <i>(Lead Partner)</i>	<i>FIRM 'B'</i>	<i>FIRM 'C'</i>
Financial			
Name of the Banker(s)			
Planning			
Construction Equipment			
Key Personnel			
Execution of Services (Give details on contribution of each partner and the controlling partner)			

2. Letter of Services Provider's Bid – Financial Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing this form.

Date of this Bid submission: [insert date (as day, month and year) of Bid submission]

RFB No.: [insert number of RFB process]

Alternative No.:[insert identification No if this is a Bid for an alternative]

To: [insert complete name of Employer]

We, the undersigned Bidder, hereby submit the second part of our Bid, the Financial Part

In submitting our Financial Part, we make the following additional declarations:

- (a) **Bid Validity Period:** Our Bid shall be valid for the period specified in BDS 16.1 (as amended if applicable) from the date fixed for the Bid submission deadline (specified in BDS 21.1 (as amended if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (b) **Bid Price:** The total price of our Bid, including any discounts has been submitted online in the price schedule of eprocure.gov.in.
 - (i) **Discounts:** All the discounts have been considered while quoting the prices online in the price schedule. [Specify in detail each discount offered) The exact method of calculations to determine the net price after application of

discounts is shown below: [Specify in detail the method that shall be used to apply the discounts];

- (c) **Commissions, gratuities and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount in Rs of each such commission or gratuity]*

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate "none.")

- (d) **Binding Contract:** We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed.

Name of the Bidder: **[insert complete name of person signing the Bid]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ***[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid: *[insert complete title of the person signing the Bid]*

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* **day of** *[insert month]*, *[insert year]*

***:** In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

****:** Person signing the Bid shall have the power of attorney given by the Service Provider to be attached with the Bid Schedules.

Format of Financial Bid – Monthly remuneration to be payable to the Service Provider
(Financial bid should be submitted in the format given below)

1	2	3	4	5	6	7	8
S. No	Detail of Post	Number of Posts	Minimum Remuneration payable to professionals per month (in INR)	Sub-Total	Monthly Operating Margin of the Service Provider (in INR)	Total Taxes as applicable on monthly basis (in INR)	Total remuneration payable to the Service Provider by NWIC per month (in INR)
		A	B	$C = A * B$	D	E	$F = C + D + E$
1.	Solution Architect	2					
2.	Database Architect	1					
3.	Database Administrator	2					
4.	Team Lead (Software Development)	2					
5.	Team Lead-Remote Sensing & GIS	1					
6.	Integrated Command & Control Centre (Services) Team Lead	1					
7.	Senior Software Developer	6					
8.	Junior Software Developer	8					
9.	IT Quality Assurance Manager	1					
10.	Test Engineer	2					
11.	IT Hardware and Networking Expert	2					
12.	IoT Engineer	1					

13.	Business Analyst	2					
14.	Data Analyst	2					
15.	Customer Care Executive	4					
16.	Hydrologist	2					
17.	Hydrogeologist	2					
18.	Sr. Remote Sensing & GIS Expert	4					
19.	Jr. Remote Sensing & GIS Expert	6					
20.	GIS application modeler	1					
21.	GIS Quality Assurance Expert	1					
22.	Google Earth Engine Expert	2					
23.	Image Analyst	2					
24.	Digitizer (GIS)	3					
25.	Technical Content Writer	1					
26.	Media Executive	1					
Grand Total (F) [In INR] (In words and figures)		62 (in figures) (in words)				

Note:

- a) In the financial bid format, the rate shall be quoted in Indian Rupees in figures and words. In case of discrepancy between the rate quoted in figures and words, the rate quoted in words will be taken as final and shall be binding on the agency.
- b) All payments will be subjected to deduction of application taxes and penalties if any as per SLA.
- c) The bidders are required to submit a Financial Quote as per format prescribed in the RFP only.

Yours sincerely

(Authorized Signatory)

(Name, Designation, Address, Contact Details, Seal, Date)

FORM OF AFFIDAVIT FOR CORRECTNESS OF INFORMATION AND
DOCUMENTS SUBMITTED WITH BID

[Reference ITB 20.2]

*[This affidavit should be on a non-judicial stamp paper of Rs.10/- and shall be attested by
Magistrate/ Sub-Judge/ Notary Public]*

I, (Name of the authorised representative of
the Bidder) solemnly affirm and state as under:

1. I hereby certify that all the information and documents furnished with the Bid submitted
online in response to IFB number date
issued by (Authority
inviting bids) for (Name and identification of Goods &
Related Services) are true and correct.
2. *I hereby certify that I have been authorised by
..... (The Bidder) to sign on
their behalf, the Bid mentioned in paragraph 1 above.

Deponent

Place:

Date:

**This sub-paragraph is not applicable if the Bidder is an individual and is signing the Bid on
his own behalf.*

3. Letter of Acceptance

[Letterhead paper of the Employer]

[The Letter of Acceptance shall be the basis for formation of the Contract as described in ITB Clauses 34 and 35. This Standard Form of Letter of Acceptance shall be filled in and sent to the successful Bidder only after evaluation of bids has been completed, subject to any review by the World Bank required under the Loan Agreement.]

[Insert date]

Identification No and Title of Contract: *[insert identification number and title of the Contract]*

To: *[insert name and address of the Service Provider]*

This is to notify you that your Bid dated *[insert date]* for execution of the *[insert name of the Contract and identification number, as given in the PCC]* for the Contract Price *[insert amount in numbers and words]* as corrected and modified¹⁰ in accordance with the Instructions to Bidders is hereby accepted by our Agency.

[insert one of the following (a) or (b) options]

- (a) We accept that *[insert name proposed by bidder]* be appointed as the Adjudicator.¹¹
- (b) We do not accept that *[insert name proposed by bidder]* be appointed as Adjudicator, and by sending a copy of this Letter of Acceptance to *[insert name of the Appointing Authority]*, we are hereby requesting *[insert name]*, the Appointing Authority, to appoint the Adjudicator in accordance with ITB Clause 37.1.¹²

We note that as per your bid, you do not intend to subcontract any component of services.

[OR]

We note that as per your bid, you propose to employ M/s. as sub-Service Provider for executing

[Delete whatever is inapplicable]

You are hereby requested to furnish Performance Security, in the form detailed in ITB Clause 35.1 for an amount of Rs. _____ within 21 days of the receipt of this letter of acceptance, valid upto 28 days from the date of issue of the Certificate of Completion i.e. upto and sign the contract, failing which action as stated in ITB Clause 35.3 will be taken.

¹⁰ Delete “corrected and” or “and modified” if not applicable. See Notes on Standard Form of Agreement, next page.

¹¹ To be used only if the Service Provider disagrees in the Bid with the Adjudicator proposed by the Employer in the Instructions to Bidders, and has accordingly offered another candidate.

¹² To be used only if the Service Provider disagrees in the Bid with the Adjudicator proposed by the Employer in the ITB, has accordingly offered another candidate, and the Employer does not accept the counterproposal.

We have reviewed the proposed methodology submitted by you along with the bid in response to ITB Clause 5.1 and our comments are given in the attachment. You are requested to submit a revised Program as per Clause 2.2. of General Conditions of Contract within 14 days of receipt of this letter of acceptance.

Yours faithfully,

Authorized Signature.....

Name and Title of Signatory.....

Name of Agency.....

Issue of Notice to proceed with the Services

(Letterhead of the Employer)

_____ (date)

To

_____ (name and address of the Service Provider)

Dear Sirs:

Pursuant to your furnishing the requisite security as stipulated in ITB clause 35.1, insurance policy as per GCC 3.4, methodology as stated in letter of acceptance and signing of the contract agreement for providing the Services of _____ at a Bid Price of Rs. _____, you are hereby instructed to proceed with the execution of the said Services in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of
signatory authorized to sign on
behalf of Employer)

4. Form of Contract

[Letterhead paper of the Employer]

(The Letter of Acceptance will be the basis for formation of the Contract as described in Clauses 34 and 35 of the Instructions to Bidders. This Standard Form of Letter of Acceptance should be filled in and sent to the successful Bidder only after evaluation of bids has been completed, subject to any review by the World Bank required under the Loan Agreement.)

LUMP-SUM REMUNERATION

This CONTRACT (hereinafter called the “Contract”) is made the *[day]* day of the month of *[month]*, *[year]*, between, on the one hand, *[name of Employer]* (hereinafter called the “Employer”) and, on the other hand, *[name of Service Provider]* (hereinafter called the “Service Provider”).

[Note: In the text below text in brackets is optional; all notes should be deleted in final text. If the Service Provider consist of more than one entity, the above should be partially amended to read as follows: “...(hereinafter called the “Employer”) and, on the other hand, a joint venture consisting of the following entities, each of which will be jointly and severally liable to the Employer for all the Service Provider’s obligations under this Contract, namely, [name of Service Provider] and [name of Service Provider] (hereinafter called the “Service Provider”).]

WHEREAS

- (a) the Employer has requested the Service Provider to provide certain Services as defined in the General Conditions of Contract attached to this Contract (hereinafter called the “Services”);
- (b) the Service Provider, having represented to the Employer that they have the required professional skills, and personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract at a contract price of.....;
- (c) the Employer has received *[or has applied for]* a loan from the International Bank for Reconstruction and Development (hereinafter called the “Bank”) *[or a credit from the International Development Association (hereinafter called the “Association”)]* towards the cost of the Services and intends to apply a portion of the proceeds of this loan *[or credit]* to eligible payments under this Contract, it being understood (i) that payments by the Bank *[or Association]* will be made only at the request of the Employer and upon approval by the Bank *[or Association]*, (ii) that such payments will be subject, in all respects, to the terms and conditions of the agreement providing for the loan *[or credit]*, and (iii) that no party other than the Employer shall derive any rights from the agreement providing for the loan *[or credit]* or have any claim to the loan *[or credit]* proceeds;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents shall be deemed to form and be read and construed as part of this Agreement, and the priority of the documents shall be as follows:

- (a) The Letter of Acceptance;
- (b) The Service Provider's Bid;
- (c) The Particular Conditions of Contract;
- (d) The General Conditions of Contract;
- (e) The Specifications;
- (f) The Priced Activity Schedule; and
- (g) The following Appendices: [*Note: If any of these Appendices are not used, the words "Not Used" should be inserted below next to the title of the Appendix and on the sheet attached hereto carrying the title of that Appendix.*]

Appendix A: Job Description of the professionals sought for the services at NWIC.

Appendix B: Schedule of Payments.

Appendix C: Key Personnel and Sub-Service Providers.

Appendix D: Not used.

Appendix E: Breakdown of Contract Price in Rupees.

Appendix F: Services and Facilities Provided by the Employer.

Appendix G: NICS Tier-I Payment structure for equivalent job

Appendix H: Appointment of Adjudicator.

2. The mutual rights and obligations of the Employer and the Service Provider shall be as set forth in the Contract, in particular:
 - (a) the Service Provider shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) the Employer shall make payments to the Service Provider in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of [*name of Employer*]

[*Authorized Representative*]

For and on behalf of [*name of Service Provider*]

[*Authorized Representative*]

[*Note: If the Service Provider consists of more than one entity, all these entities should appear as signatories, e.g., in the following manner:*]

For and on behalf of each of the Members of the Service Provider

[*name of member*]

[Authorized Representative]

[name of member]

[Authorized Representative]

Section V. Bank Policy - Corrupt and Fraudulent Practices

(Section V shall not be modified)

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011:

“Fraud and Corruption:

1.16 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, Service Providers and their agents (whether declared or not), sub-Service Providers, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.¹³ In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;¹⁴
 - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;¹⁵
 - (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;¹⁶
 - (iv) “Coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;¹⁷
 - (v) “Obstructive practice” is

13 In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

14 For the purpose of this sub-paragraph, “*another party*” refers to a public official acting in relation to the procurement process or contract execution. In this context, “*public official*” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

15 For the purpose of this sub-paragraph, “*party*” refers to a public official; the terms “*benefit*” and “*obligation*” relate to the procurement process or contract execution; and the “*act or omission*” is intended to influence the procurement process or contract execution.

16 For the purpose of this sub-paragraph, “*parties*” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

17 For the purpose of this sub-paragraph, “*party*” refers to a participant in the procurement process or contract execution.

- (aa) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
 - (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 1.16(e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-Service Providers, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- (c) will declare mis-procurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- (d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank's sanctions procedures,¹⁸ including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated¹⁹;
- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and Service Providers, and their sub-Service Providers, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents

18 A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

19 A nominated sub-Service Provider, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.

Section VI. Scope of Work

1. Introduction:

1.1 The National Water Informatics Centre (NWIC) formed under NHP is to provide a ‘Single Window’ source of updated data on water resources & allied themes; and provide value added products and services to all stake holders for its management and sustainable development and benefit all communities across the nation. NWIC is headed by Director (Joint Secretary level officer) who reports to the Secretary, Ministry of Water Resources Ganga Rejuvenation & River Development. The establishment of NWIC is for timely and reliable water resources data acquisition, storage, collation & management and to provide tools for informed decision making for management of water resources of the country. It is created as a subordinate office under Ministry of Jal Shakti, Department of Water Resources, RD & GR and the office is located in New Delhi.

Objectives of NWIC:

- Collection of available data from varied sources, generate new database, organize in standardized GIS format and provide scalable web-enabled information system.
- Maintaining, updating, collating and disseminating water data and information.
- Sharing of hydro-meteorological data amongst central and state government organisations and other stakeholders of water & general public.
- Provide tools to create value-added maps by way of multilayer stacking of GIS database so as to provide an integrated view of the water resources scenarios, and
- Collaborate with national/ international research institutes.

1.2 The goal of NWIC is to empower, inform and enrich every citizen with up to date and reliable water data (other than classified data) and information through web-based India Water Resources Information System (India-WRIS) on a GIS platform in Public Domain; and to develop value added products and services for all aspects of integrated water resources management serving the nation through research, capacity building, linkages, outreach and better governance in water resources sector. For more details, the NWIC website can be accessed by <https://nwic.gov.in> .

1.3 NWIC, implementing the National Hydrology Project requiring the expert services for IT platforms (India-WRIS, WIMS etc.) of NWIC. The expert services are for “Development of New Modules, Enhancement of Existing Modules and Operation and Maintenance of India-WRIS (Covering state-WRIS) and WIMS of NWIC”.

1.4 Below mentioned are the brief about the tasks:

- Development of New Modules: The professionals will be responsible for analyzing the requirements of NWIC and developing new modules for India-WRIS and WIMS. This will involve conducting a thorough assessment of the existing system, identifying gaps and areas for improvement, and designing and

implementing new functionalities to meet the evolving needs of water resource management.

- Enhancement of Existing Modules: The professionals will review the current modules of India-WRIS and WIMS and propose enhancements to optimize their performance, usability, and effectiveness. This may involve refining data collection methods, improving data visualization and analysis tools, and incorporating advanced features to support better decision-making in water resource planning and management.
- Operation and Maintenance: The professionals will provide ongoing support for the operation and maintenance of India-WRIS and WIMS. This includes ensuring the system's smooth functioning, addressing technical issues, performing regular updates and upgrades, and maintaining data integrity and security. The professionals will also be responsible for monitoring the performance of the platforms, conducting periodic audits, and implementing necessary improvements.

1.5 Purpose and Service Outcomes Statement

NWIC is handling the operations & maintenance of two web-enabled water resources data platforms; WIMS (<https://india-water.gov.in/wims>) & India-WRIS (<https://indiawris.gov.in/wris/#/>). WIMS is an integrated web-based water resource data collection system for both surface and groundwater resources. The data are being collected through web-based data entry, mobile app and also in automated methods through telemetric sensors. The time-series information available with WIMS is automatically updated on daily basis and disseminated to all users through India WRIS platform. India-WRIS is a single window solution for all water resources data and information in a standardized national GIS framework. It allows users to Search, Access, Visualize, Understand and Analyse comprehensive and contextual water data for the assessment, monitoring, planning and development of water resources in the context of Integrated Water Resources Management (IWRM).

NWIC will act as an umbrella organization and all water resources portals developed previously i.e. India-WRIS, e-SWIS, e-GEMS, e-WQIS etc. shall be taken over during the course of development and consolidated as per requirement.

NWIC is encouraging and supporting states to establish State Water Informatics Centres (SWIC) with the goal of optimising the use of water data within states and adding value to existing data through standardisation, increased interoperability, improved data validation and integration of latest technologies and GIS framework.

The basic objective of establishing SWIC is to empower states with digital, validated, on-line water resources information system required for better planning and management of water resources at State level and simultaneously to feed the central system for basin and regional level policy planning and taking strategic decisions based on authentic data analytics.

2. IT Platforms of NWIC (India-WRIS and WIMS)

2.1 India-WRIS

Water is a scarce & precious resource whose effective development, conservation and management is widely recognized as critical for sustainable economic growth and poverty reduction. The National Water Policy of India (2002) recognizes that development and management of water resources need to be governed by national perspectives and aims to develop and conserve the scarce water resources in an integrated and environmentally sound basis. The policy emphasizes the need for effective and economical management of our water resources by intensifying research efforts in use of remote sensing technology and developing an information system.

The management of water resources is a highly complex and tedious task that involves expertise of multidisciplinary domains and depend on reliable data and information which is accessible to all the stakeholders. Accordingly, the foremost requirement is to develop, maintain and update regularly a comprehensive “Water Resources Information System” (WRIS) in public domain which would lead to scientific assessment of the resources and for developing analytical tools, Decision Support System (DSS) for informed decision making.

Considering the challenges involved in the water resources sector, Government of India took an initiative for developing a centralized platform to act as a repository of water resources and related data at National level with administrative granularity up to the smaller units of governance at state level as well as hydrological level such as basin and sub basins.

Although the first initiative towards development of centralized Water Resources information system was taken in 2008 through collaborative effort of Central Water Commission (an apex body of Government of India dealing with Water Resources) and National Remote Sensing Centre, however, the developed system was standalone, not connected to temporal database and was not capable of capturing real time data. Vision of that portal was to provide a ‘Single Window solution’ for all water resources data and information in a standardized national GIS framework. It allowed users to Search, Access, Visualize, Understand and Analyze comprehensive and contextual water resources data for assessment, monitoring, planning, development and finally Integrated Water Resources Management (IWRM). During the due course of time, the technology on which platform was developed also became obsolete.

During 2016-17, Government of India, through Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti (erstwhile Ministry of Water Resources, RD & GR) embarked upon a World Bank supported flagship program named National Hydrology Project on pan India basis with the objective of improving the extent, quality, and accessibility of water resources information, decision, basin level resource assessment/planning, development of decision support system and to strengthen the capacity of targeted water resources professionals and management institutions in India.

To fulfil the objectives of National Hydrology Project, the foremost action taken was to modify the existing Water Resources Data Dissemination Policy which enabled the Implementing Agencies of National Hydrology Project to freely access the central data. This progressive step is proving to be a confidence building measure among Centre and State departments for sharing the data and thus to bring the data to a centralized platform which is must for development and management of water resources on hydrological unit basis. This has become the foundation stone for revamping the existing water Resources Information system (Old India WRIS) duly integrated with the centralized data base rather than a standalone system.

New India-WRIS is a dissemination platform for showing water resources data i.e River Points, Reservoir, Surface Water Quality, Ground Water Level, Ground Water Quality, Rainfall, Evapotranspiration, Soil Moisture, and Minor Irrigation system, Water Resource Projects, ground Water Resources etc in a public platform.

The URL of India-WRIS is <https://indiawris.gov.in/wris/> and homepage of the portal is shown in figure 1.

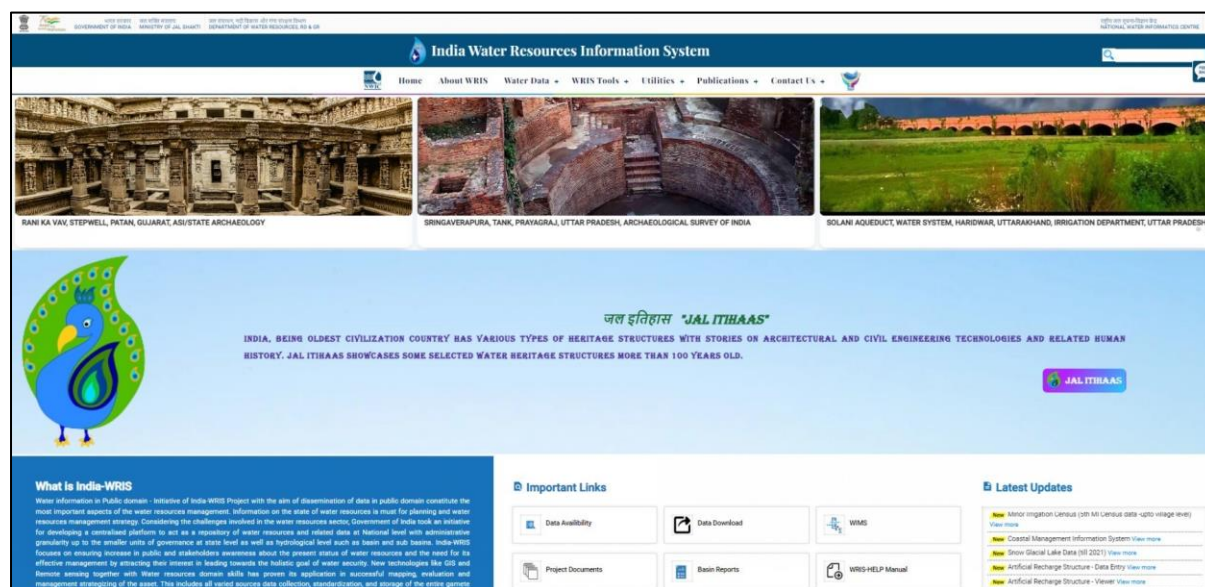
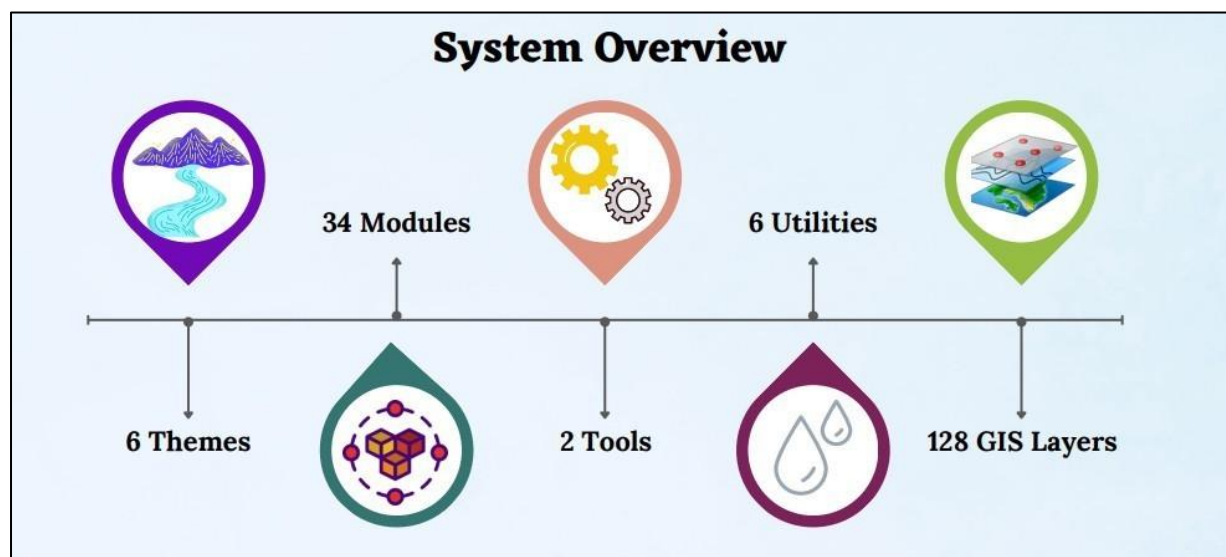


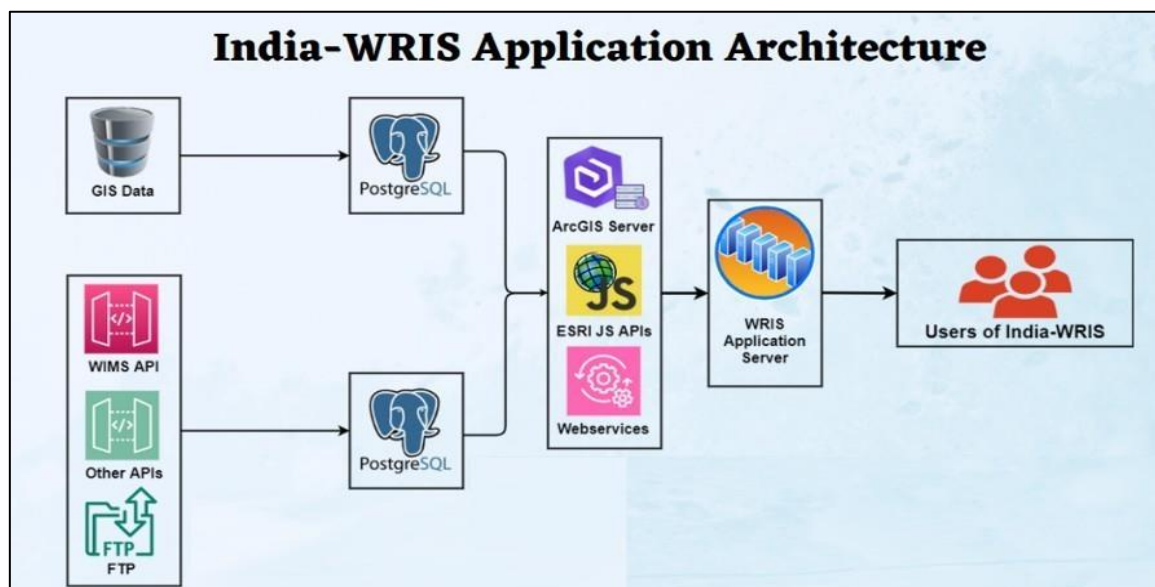
Figure 1: Home Page India-WRIS web portal



Architecture of India-WRIS

India-WRIS (Water Resources Information System) is completed under integrated WRIS-WIMS architecture. All the Timeseries data related with Water Resources of India is stored, managed, and maintained by Water Information management System (WIMS). All the timeseries data is received by WIMS through manual entry, telemetry sensor, and mobile application. The dissemination of all the water resources data in public domain is through India-WRIS.

All the spatial information like state boundary, district boundary, basin, sub basin boundary is stored, managed, and maintained by India-WRIS. Thematic layers like River points, Groundwater stations points, dam, barrages, lift, reservoir waterbodies are also stored, managed, and maintained by India-WRIS.



2.2 WIMS (<https://india-water.gov.in>)

2.2.1 NWIC is handling operation & maintenance of WIMS (Water Information Management system), a web enabled water resources data entry, storage and management system for both surface and ground water resources. The data are being collected through web-based data entry, and also by automated methods through telemetry sensors. WIMS is conceived as an internal application to be used by the technical staff of Central and State water departments. The time-series information available with WIMS is automatically updated on a daily basis and disseminated to all other users through India WRIS portal. Salient features of WIMS are:

- Real time Data Acquisition System (telemetry) modules for configuration and receiving of water related parameters for Surface, ground and hydro-meteorological data.
- Information management system for time series historical and manual data for central and state agencies working on surface and groundwater monitoring.
- Water Quality labs information along with sample data entry system.
- User based access system with defined set of roles and privileges for data entry, view and validation.
- Various reporting and import / export utilities for authorized users.
- Free access to IAs under NHP. Can extend to other departments on purpose basis.

2.2.2 Flood Forecasting Website (<http://ffs.india-water.gov.in>)

From WIMS database for Flood forecasting, a map based public portal for Central Water Commission's Flood Monitoring and Flood Dissemination has also been created for exploring 'Current Flood Forecast', 'Site' or 'Hydrograph'.

Map based tool to find information of CWC Flood Forecasting Stations consisting of Level Forecasting stations for towns/important villages and Inflow Forecasting Stations for Dams/Reservoirs. Individual station's static information and latest available dynamic information such as water level and flood forecast issued are also displayed.

Current Flood Forecast or Site or Hydrograph provided information for all flood monitoring stations including Flood forecasting Stations. The Colour of any point signifies the basic characteristics of the station. Green is for Flood Level Forecast Station basically important towns/ villages and Blue is for Inflow forecast station basically a dam/reservoir/barrage/weir etc. These colours will be dynamically changing for Flood Level Forecast Stations as per the river water level with respect to Warning Level (WL), Danger Level (DL), and Highest Flood Level (HFL). Normally latest dynamic information is available during flood period 1st May/1st June to 31st October/31st December.

- "Yellow" when the river is flowing Above Normal Flood Level: When river water level is at or above WL but below DL.
- "Orange" when the river is flowing in Severe Flood: When river water level is at or above DL but below HFL.
- "Red" when the river is flowing in Extreme Flood: When river water level is at or above HFL.

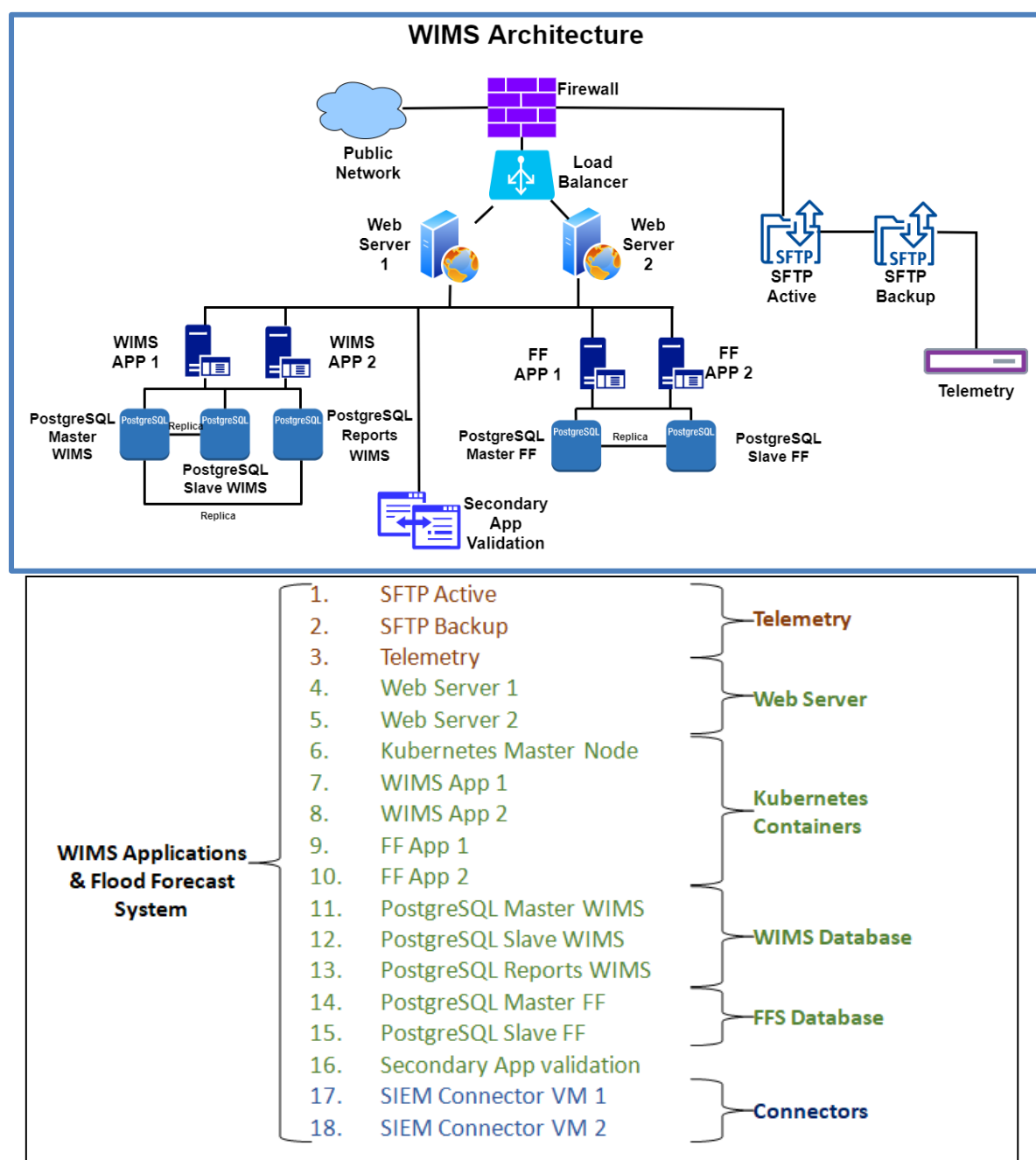
HFL is updated on a yearly basis before start of the flood season. Newly attained HFL during the flood season of a particular year in any station will be updated in the next year before start of the flood season.

2.2.3 MIS Website (<https://india-water.gov.in/mis/>)

The Management Information System (MIS) is information system about ground and surface water data from data source agencies along with status of data available. This dashboard provides information about the number of stations created in WIMS (NHP and Non-NHP), total number of ground water stations (along with manual and telemetric), total number of surface water stations (along with manual and telemetric). This dashboard has been categorized into three distinct sections: NHP Data, Non-NHP Data and Data performance. This portal is available as publicly accessible to all and is used extensively by the Implementing Agencies and other website visitors for the data integrated in WIMS.

Architecture of WIMS

WIMS website is hosted on Tata Cloud. 18 virtual machines are there for hosting the website as follows:



3. Scope of Work under the Contract

The scope of work includes regular maintenance and updating of the website. The deployed professionals will be responsible for designing, developing, and maintaining the website. This will include information architecture, user interface design, user experience mapping and execution. The deployed professionals will be required to perform the following Key Activities and Dependencies for **India-WRIS** and **WIMS** as mentioned in the below Table:

Section	Description of Work to be undertaken
3.1	India-WRIS
3.2	WIMS
3.3	WIMS-WRIS Integration
3.4	Documentation of WIMS & WRIS
3.5	WARIMS
3.6	SWIC
3.7	Miscellaneous (Training, Workshop & Conference)

3.1 India-WRIS (India-Water Resources Information System)

3.1A. Operation and Maintenance (O&M) related

1. Regular Maintenance of India-WRIS

- i) Regular updation of data received from agencies will be processed; corrected for spatial as well as non-spatial errors; harmonized; updated in existing schema (if available) or new schema; attribute and domain updation; and topology correction. In case of raster datasets, tabular datasets as per administrative and hydrological boundaries will be generated. Raster and vector layers along with tables and relationships will be created, updated or shared in appropriate GIS database of the existing/new module.
- ii) Created/Existing GIS database for the modules will be converted for standard GIS format. Prepared GIS database requires validation. So, this task will include segregation of required activities into different parts and distribution of these activities to Remote Sensing & GIS professionals for carrying it.
- iii) Real Time data in India WRIS should be updated regularly; Necessary modifications in functionality, development or modifications as per various user requirements.
- iv) **Helpdesk Queries:** Preparation of replies along with GIS database, if requested, for related queries received through NWIC Help Desk.
- v) NWIC provides support to various ministerial; NHP & Non-NHP (central/state governments) agencies; NGOs; public/users; and other stakeholders regarding water and allied resources GIS datasets. This activity includes available spatial as well as non-spatial data preparation for requested information; map preparation; meetings for support on shared GIS datasets and resolving queries, if raised. This activity also includes preparation of new modules and live dashboards for hosting

theme-wise water and allied resources datasets from Govt agencies on India-WRIS.

- vi) **RTI/ Parliament Queries:** Preparation of replies along with GIS database, if requested, for received RTI queries and Parliament Questions to NWIC.

2. O&M (Bug Fixing) of existing modules of India-WRIS

- i) Issues reported by users and helpdesk related to GUI i.e. responsiveness, scroll etc; database i.e. If there will be any updation in the database (updation of the data/table/schema); Functionality issues i.e. displaying of charts, tables etc; Services related issues i.e. map services, feature services, python services, database services need to be restarted; Server issues i.e. storage issues, performance issues.
- ii) Reported bugs/issues will be resolved by the concerned team of India WRIS

3. Development/ Production Server Activity of India-WRIS

i) Management of development and production server.

- (1) Install new updates: Install patches and updates can resolve security issues, expand functionality, and improve performance
- (2) Physically Clean Server Hardware: Schedule time to physically clean and inspect servers to prevent hardware failure. This helps keep dust and debris out of the circuit boards and fans.
- (3) Verify Network Utilization: Examination of the network, including checking server log files, hard disk space, folder permissions, and redundancy
- (4) Review Server Resource Usage: Reviewing disk space, Memory and processor usage, reducing the burden on your hardware by upgrading
- (5) Schedule and verify backups: Take backup of VMs before some big changes has been done on server and verify it.
- (6) Check System Security: The periodic security audits serve as a check on system configuration, and other potential security risks
- (7) Resolution of vulnerability test reports, given by NIC and TATA cloud
- (8) Preparation of reports if any problem will be found
- (9) Management of IP, GIGA switch and server racks
- (10) Reported bugs/issues will be resolved by the concerned team of India WRIS
- (11) Restart the services i.e. python/database services/application server-based services if required

ii) Troubleshooting of systems used by the professionals and officers (desktop, laptops) i.e. internet issues, hardware issues, software issues, printer issues etc.

iii) Management of software's i.e. ArcGIS, MS Office, Antivirus

- (1) Renewal of licenses
- (2) Co-ordinate with the deployed professionals to solve the problem, if any issues will be found in any software
- (3) Co-ordinate with the officers regarding procurement of any software
- (4) Updation of patches of software if required.
- (5) Preparation of system configuration, if any new procurement will be required

iv) Maintenance of firewall policies, UPS batteries

- (1) Defining and managing firewall policies.
- (2) Accessing and managing firewall policies via the command line interface or the FortiGate Appliance
- (3) Troubleshooting own firewall policies
- (4) Ensuring that the device use to manage their firewall policies is configured with an IP from the primary subnet
- (5) Creating VPN for users and managing their logs
- (6) Monitoring of outbound/inbound packets and traffic
- (7) Backup of firewall configuration and updation of firmware

v) Management of all database servers

- (1) Troubleshooting of database servers
- (2) Weekly/Monthly backup will be done on development server
- (3) Automation and customization of database table for storage spaces.

vi) Upgradation of ArcGIS License

- (1) Backup of all VMs
- (2) Back up of database
- (3) Backup of geospatial database
- (4) upgradation of Arc GIS Server License.
- (5) Restoration of Data in PostgreSQL database

- (6) Establishment of ArcGIS server to the database machine
- (7) Re- Publishing of map services
- (8) Re-creation of Cache, Portal Web Map creation, map services Analysis, Define parameters, module customization
- (9) Re-creation of WEB Map Applications.
- (10) Updation of India WRIS code with new map services URLs
- (11) Testing of Modules.

4. O&M (Data Updation) of existing modules of India-WRIS

- i) **Agency-wise updation of the existing geo-database (130 vector layers, 40 Raster & related tables) based on data frequency:** This task includes updation and standardization of existing India-WRIS geodatabase. Datasets includes 130 vector layers, 40 Raster & related tables based on data frequency. The new data received for existing database will be processed; corrected for spatial as well as non-spatial errors; harmonized; updated in existing schema (if available) or new schema; attribute and domain updation; and topology correction. In case of raster datasets, tabular datasets as per administrative and hydrological boundaries will be generated. Raster and vector layers along with tables and relationships will be updated in respective GIS database of the existing module. Created/Existing GIS database for existing modules will be converted for standard GIS format and validated. After validation of existing GIS database, data will be migrated to development server, feature service or web map service be configured and customized for required information and then published. Published feature service or web map service will be configured. In some cases, these layers will be shared through Web App for updation of existing module. The Map/App ID and Map/App URL will then be shared with Software Team for further development and testing of module. After testing, GIS database will be migrated to production server, tested feature service or web map service be configured, customized and published. Published feature service or web map service will be configured and privileges will be assigned. In some cases, these layers will then be shared through Web App for creation/updation of existing module. The Map/App ID and Map/App URL will then be shared with Software Team for further activities required for finalization of existing module on India WRIS geoportal.
- ii) **Updation of the Hydrological layers (River Line, Name, Polygon & Surface waterbody):**
 - (1) This task specifically aims at updation of features in hydrological layers such as river line, river name and river polygon. New feature creation; attribute and domain updation; relationship creation; finalization & validation of the spatial/non-spatial entities and topology correction are activities included in this updation.

(2) Correction, deletion, updation and new creation of surface waterbody above than 1 hectare with respect of the recent ESRI satellite imagery basemap will be achieved. Attribute and domains will be updated.

iii) **Updation of the Water Resources Projects (Major medium irrigation Projects, Command, Hydro power projects, Lift irrigation & ERM schemes & their associated structures):** Data received in pdf or other document formats will be processed, geolocated and validated using Google earth imagery to create feature layer. Attributes and domain will be created/updated. Relationships among associated features will be done.

iv) After revamping of master geo-spatial database, code build will be updated and after final testing module will be made live on India WRIS

5. Data Dissemination via APIs, SFTP's (& Other modes) to Central & State Agencies from India-WRIS

i) Co-ordinate with service team for agency requirements

ii) Write queries to get and post data in database through API, SFTP's etc

iii) Development of web services to provide and receive spatial, non-spatial datasets and real time data sets from ministerial; NHP & Non-NHP (central/state government); and private agencies

iv) Testing of web services before disseminating to the concerned department

v) Support documentation of their requirements and web services provided to the concerned department

6. Testing of live dashboard in MoJS website as well as modules in India WRIS

i) Regular testing of the Live dashboard of NWIC on MoJS website, modules of India-WRIS platform - Testing is essential for the modules of India-WRIS Platform and the Live Dashboard of NWIC on the MoJS website. It helps identify any bugs, errors, or discrepancies in the design, functioning, and user experience on the website. This helps us in making sure that the data and information on the site are reliable, and that users are satisfied with the experience. Furthermore, regular testing of the modules and information also helps in improving the performance of the websites, by making sure that all features are working smoothly and efficiently.

ii) Reporting WRIS bugs to the concerned team is essential for the uninterrupted operation of the WRIS platform. This process ensures that all bugs are addressed in a timely manner and that the users are provided with appropriate bug resolution.

7. Technical Content Creation (Newsletter, NHP Bulletin, Jal Charcha, Technical Manuals etc.)- India-WRIS

i) Technical content writing on WRIS/WIMS modules

- ii) Content identification, collection of information, coordination with teams, designing and publishing of quarterly e-Newsletter of NWIC - The task of creating quarterly e-Newsletter involves identifying relevant topics, collecting the right information, coordinating with different teams for input and feedback, designing the layout of the newsletter to make it visually appealing, and finally publishing it. NWIC needs to ensure to have a system in place that allows to efficiently manage all these tasks so that it can deliver high-quality e-Newsletters on time every quarter.
- iii) Preparation of contents for quarterly newsletter as per the module/layer wise updation in datasets
- iv) Technical/ Non-technical content generation, management and publication for Blogs, Articles, NHP Bulletin, Jal Charcha Magazine, etc.

8. Social Media - Content Creation and Handling of official accounts (Daily) of NWIC

- i) Generate content and design regular posts for the official social media accounts of NWIC - NWIC needs to develop engaging content and design regular posts with relevant visuals and infographics for its official social media accounts to ensure that people are aware of the organization's work. By doing so, NWIC will be able to attract more people to its social media pages, which will help in reaching a wider audience.

9. Resolving of Helpdesk queries (Daily Basis) (Telephonic & Email) - India-WRIS

- i) Responding to all the queries raised by users via calls and emails related to India-WRIS - In order to provide the best user service and support, it is important to have an efficient system of responding to queries raised by users. Though India-WRIS provides an easy-to-use interface for users so that they can easily access the information they need still there are chances that users may face some issues. India-WRIS is one such system that helps users by resolving helpdesk queries quickly and efficiently. The system helps in responding to all the queries raised by users via calls and emails related to portal-related issues such as geospatial layers not retrieving in the module, issues with module functionality and downloading available data, guiding users on how to use specific functions or module navigation, classified data access, etc.
- ii) Troubleshooting and resolution of bugs shared via helpdesk - Troubleshooting and resolution of bugs shared via helpdesk is an essential task to ensure the smooth functioning of India-WRIS portal. The process of troubleshooting and resolution begins with understanding the issue reported by the user and informing the concerned team about the same. With proper troubleshooting and resolution strategies in place, organization can ensure that all users have an excellent experience with its products or services.
- iii) Escalate unresolved issues to the concerned team/official - Escalating unresolved issues to the concerned team/official is an important part of service team. It is a

process that involves identifying the source of the problem and then finding the right person or team to address it. This process can be time-consuming but is necessary in order to ensure that user concerns are addressed quickly and effectively.

- iv) Collect feedback and suggestions from users - By gathering user feedback and suggestions, NWIC can identify areas for improvement and make sure that the India-WRIS platform remains relevant to its users. Additionally, it will also help India-WRIS to develop new features that meet user needs more effectively.
- v) Data dissemination request processing for generation of data and sharing with concerned departments/agencies - Data request processing involves collecting data from concerned teams, verifying the accuracy of the data, and then disseminating it to concerned departments or agencies. Additionally, this process helps in streamlining operations by providing a streamlined way of collecting and sharing relevant information with all stakeholders involved.
- vi) Query records and log-sheet management - Query records and log-sheet management allow the organization to keep a track of all its data (bulk data and maps) dissemination, manage user queries, and record all the activities in one place.

10. GIGW Compliance of India-WRIS

- i) Portal should be validated against GIGW guidelines and necessary modifications will be made to ensure compliance. Please check the url for GIGW guidelines: <https://guidelines.india.gov.in/compliance-matrix/#>

11. Revamping of Database for India-WRIS

- i) Technical Guidance required for identification of necessary fields, key name for data calling through scripts etc during revamping
- ii) "Complete assessment of the Vector, raster, tables of WRIS database & re design of the database schema for all the layers & tables.
 - (1) This task requires redesigning of schema for various GIS datasets in India-WRIS geodatabase. Attributes and domains will be updated. Raster and vector layers along with tables and relationships will be updated in respective database of the module. "
- iii) Unique codification based on administrative, hydrological, theme-wise, and/or type-wise information for each and every feature as well as layers will be achieved here.
- iv) Synchronization of the existing data based on the updated Admin boundary. Administrative summary analysis with LGD code directory will be included. Module-wise layers will be synchronized with latest SOI administrative boundary.

- v) Standardization and removal of redundant unwanted layers and tables from modules Feature Datasets in master geodatabase.

12. Development of Hydro-meteorological Module- India-WRIS

- i. Requirement Gathering for the module as per data received from the agencies
- ii. Preparation of BRD, SRS and FRS documents for the module. Note: Involvement of subject matter professionals for dealing with the Technical aspects
- iii. Creation of table for timeseries data in WRIS database as per the data received from WIMS
- iv. Creation of python script to get data from WIMS database and insert/ update the data in WRIS database and set up cron jobs to get data from WIMS database and insert/ update the data in WRIS database on WRIS server
- v. Creation of geo -spatial data:
 - 1. Data will be received from WIMS database through FTP/API
 - 2. Checking of raw data
 - 3. Conversion of data into standard GIS format, non-spatial data entry.
 - 4. Validation of data i.e. boundaries etc.
 - 5. Creation of relationship tables to store time series data
 - 6. Publish of geo-spatial data as map service"
- vi. Creation of python script to get the data from WRIS database, as per the functionality of the module i.e. data shown on the basis of boundaries, time, date, agency etc.
- vii. Creation of user interface of the module as per the BRD
- viii. Backend Functionality to show data on the web in the form of maps, tables, charts etc.
- ix. Publish the build on development server and testing the module on development server and fix the bugs reported by the officers
- x. Write user manual for module information with images. This manual will be made available at module in India-WRIS. User manual will be available for download.
- xi. All geo-spatial, real time data will be migrated in production database, code build will be deployed after final testing and Module will be made live on India WRIS

13. Development of River Sediment Module- India-WRIS

- i) Requirement Gathering for the module as per data received from the agencies
- ii) Preparation of BRD, SRS and FRS documents for the module
- iii) Creation of table for timeseries data in WRIS database as per the data received from WIMS
- iv) Creation of python script to get data from WIMS database and insert/ update the data in WRIS database and set up cron jobs to get data from WIMS database and insert/ update the data in WRIS database on WRIS server
- v) Creation of geo -spatial data:
 - (1) Data will be received from WIMS database through FTP/API
 - (2) Checking of raw data
 - (3) Conversion of data into standard GIS format, non-spatial data entry.
 - (4) Validation of data i.e., boundaries etc
 - (5) Creation of relationship tables to store time series data
 - (6) Publish of geo-spatial data as map service"
- vi) Creation of python script to get the data from WRIS database, as per the functionality of the module i.e., data shown on the basis of boundaries, time, date, agency etc
- vii) Creation of user interface of the module as per the BRD.
- viii) Backend Functionality to show data on the web in the form of maps, tables, charts etc
- ix) Publish the build on development server and testing the module on development server and fix the bugs reported by the officers
- x) Write user manual for module information with images. This manual will be made available at modules in India-WRIS. User manual will be available for download.
- xi) All geo-spatial, real time data will be migrated in production database, code build will be deployed after final testing module will be made live on India WRIS

14. Development of Jal Dharohar Modules- India-WRIS

- i) Requirement Gathering for the module as per data received from the agencies
- ii) Preparation of BRD, SRS and FRS documents for the module.

- iii) Data will be received in different formats based on multiple agencies. Some common datatypes include spatial and non-spatial tables, shapefiles, reports, pdfs, etc. Based on the module, these datasets will be utilized, processed and harmonized to create point or polygon GIS datasets. Attributes and domains are updated. Relationships are created. This data is migrated into Development server. If timeseries data will be received, Creation of python script to get timeseries data from agencies and insert/ update the timeseries data in WRIS database and set up cron jobs to get /insert/ update the timeseries in WRIS database on WRIS server
- iv) Creation of geo -spatial data:
 - (1) Creation of geo-spatial and data will be received from various agencies in various format
 - (2) Checking of raw data
 - (3) Conversion of data into standard GIS format, non-spatial data entry.
 - (4) Validation of data i.e., boundaries etc
 - (5) Creation of relationship tables to store time series data
 - (6) Publish of geo-spatial data as map service
- v) Creation of python script to get the data from WRIS database, as per the functionality of the module i.e., data shown on the basis of boundaries, time, date, agency etc
- vi) Creation of user interface of the module as per the BRD
- vii) Backend Functionality to show data on the web in the form of maps, tables, charts etc
- viii) Publish the build on development server and testing the module on development server and fix the bugs reported by the officers
- ix) Write user manual for module information with images. This manual will be made available at module in India-WRIS. User manual will be available for download.
- x) All geo-spatial, real time data will be migrated in production database, code build will be deployed after final testing and Module will be made live on India WRIS

15. Dissemination of Web Map and Feature Services via India-WRIS

- i) Requirement Gathering for the module as per data received from the agencies
- ii) Preparation of BRD, SRS and FRS documents for the module.

- iii) Creation of python script to get the data from WRIS database, as per the functionality of the module
- iv) Creation of user interface of the module as per the BRD
- v) Backend Functionality to process user query for download of web map service and web feature service
- vi) Publish the build on development server and testing the module on development server and fix the bugs reported by the officers
- vii) Write user manual for module information with images. This manual will be made available at module in India-WRIS. User manual will be available for download.
- viii) All geo-spatial data will be migrated in production database, code build will be deployed after final testing and Module will be made live on India WRIS.

16. Creation of Legacy data (LULC, Wasteland, Urban Sprowl etc.) - India-WRIS

- i) Preparation of Level I LULC 10 k data using Bhuvan portal WMS layer for all the states & UT's of the country using open source software.
- ii) Download and preparation of State and UT's wise LULC data at Level I (10K Scale) from Bhuvan WMS API. Data will be stored in raster data format. It will be used as reference basemap for data preparation of various WRIS modules."
- iii) Creation of LULC data using suitable classification techniques/algorithms in Sentinel 2 optical imageries on Google Earth Engine platform. This activity can be performed based on required area of interest of various case studies. Timeseries data at monthly and yearly basis will be created and utilized.
- iv) Wasteland Mapping: Data received in raster format will be converted into raster and tabular format at district and sub-basin levels for various wasteland classes. New wasteland data will also be created using classification techniques from time-series satellite imageries.
- v) Urban Sprawl mapping: Manual/Automated digitization of urban sprawl from satellite imagery. Polygon datasets will be created and stored in new GIS database. Attribute and Domain updation will be carried out. Topology correction will also be done
- vi) Relationship establishment among layers & time series data tables, data transfer to server and hosting; Creation of new relationships for finalized layers and tables in main geodatabase will be achieved in this module.
- vii) After revamping of master geo-spatial database, code build will be updated and after final testing Module will be made live on India WRIS

3.1B. Audit related

1. Security Audit (Once a year) - India-WRIS

- i) Deployed professionals will work with CERTIN/NICSI empaneled third party for the security audit of the website (application, Public IP, modules etc.)
- ii) Security audit should be done of website (application, Public IP, modules etc.) and issue the certificate of security audit

2. Coding Standard Audit (Once a year) - India-WRIS

Deployed professionals will work with the third party and assist in the audit of coding standards once in a year and provide the certificate to NWIC.

3. Performance Audit (Once a year) - India-WRIS

Deployed professionals will work with the third party and assist in performance audit of Application server, database server etc.

4. Compliance to the Audit Reports and Achievement of Performance score (Google's Page speed Insights) - India-WRIS

- i) Security Audit (Once a year) - India-WRIS.
- ii) Coding Standard Audit (Once a year) - India-WRIS
- iii) Performance Audit (Once a year) - India-WRIS

3.1C. Data Quality Assessment - India-WRIS

- i. Quality control of data which need to be disseminated through the India-WRIS portal for general users and requested from the Helpdesk through emails
- ii. "Complete data quality assessment of WRIS geodatabase (Vector, raster & tables) & re-design of the database schema for all the layers.
- iii. Data validation through ArcGIS Data Reviewer automation tool.
- iv. Complete updation of the "General Guidelines and Database organization & Geodatabase standards" of India WRIS, documentation of the Vector geodatabase, raster datasets & tables, documentation of the Domains & Abbreviation, Documentation of the Geodatabase Components and its organization -Feature Datasets, Tolerance, Subtype, Topology, Geometric Networks, Relationship Class etc.

3.1D. Creation of Geo-Spatial Tool in India-WRIS

- i. Requirement gathering for the geo-spatial tools

- ii. Creating, managing and publishing existing modules on ArcGIS Enterprise, various GIS performing tools can be provided in the module. These tools include customized AOI upload; timeseries data visualization on clicking; buffer tool, proximity search, clipping tool, elevation profile, query, pop-ups; location/name discovery, etc.
- iii. Testing of Geospatial tools with respect to various data queries
- iv. Integration of geo-spatial tool in India WRIS code directory

3.1E. Development of Hydro-meteorological Module- India-WRIS

- xii. Requirement Gathering for the module as per data received from the agencies
- xiii. Preparation of BRD, SRS and FRS documents for the module. Note: Involvement of subject matter professionals for dealing with the Technical aspects
- xiv. Creation of table for timeseries data in WRIS database as per the data received from WIMS
- xv. Creation of python script to get data from WIMS database and insert/ update the data in WRIS database and set up cron jobs to get data from WIMS database and insert/ update the data in WRIS database on WRIS server
- xvi. Creation of geo -spatial data:
 - 7. Data will be received from WIMS database through FTP/API
 - 8. Checking of raw data
 - 9. Conversion of data into standard GIS format, non-spatial data entry.
 - 10. Validation of data i.e. boundaries etc.
 - 11. Creation of relationship tables to store time series data
 - 12. Publish of geo-spatial data as map service"
- xvii. Creation of python script to get the data from WRIS database, as per the functionality of the module i.e. data shown on the basis of boundaries, time, date, agency etc
- xviii. Creation of user interface of the module as per the BRD
- xix. Backend Functionality to show data on the web in the form of maps, tables, charts etc
- xx. Publish the build on development server and testing the module on development server and fix the bugs reported by the officers

- xxi. Write user manual for module information with images. This manual will be made available at module in India-WRIS. User manual will be available for download.
- xxii. All geo-spatial, real time data will be migrated in production database, code build will be deployed after final testing and Module will be made live on India WRIS

3.1F Development of Canal Data Dissemination Module- India-WRIS

- i) Requirement Gathering for the module as per data received from the agencies
- ii) Preparation of BRD, SRS and FRS documents for the module. Note: Involvement of subject matter professionals for dealing with the Technical aspects
- iii) Creation of table for timeseries data in WRIS database as per the data received from WIMS
- iv) Creation of python script to get data from WIMS database and insert/ update the data in WRIS database and set up cron jobs to get data from WIMS database and insert/ update the data in WRIS database on WRIS server
- v) Creation of geo -spatial data:
 - (1) Creation of geo-spatial and data will be received from various agencies in various format
 - (2) Checking of raw data
 - (3) Conversion of data into standard GIS format, non-spatial data entry.
 - (4) Validation of data i.e boundaries etc
 - (5) Creation of relationship tables to store time series data
 - (6) Publish of geo-spatial data as map service
- vi) Creation of python script to get the data from WRIS database, as per the functionality of the module i.e data shown on the basis of boundaries, time, date, agency etc
- vii) Creation of user interface of the module as per the BRD
- viii) Backend Functionality to show data on the web in the form of maps, tables, charts etc
- ix) Publish the build on development server and testing the module on development server and fix the bugs reported by the officers
- x) Write user manual for module information with images. This manual will be made available at module in India-WRIS. User manual will be available for download.

- xi) All geo-spatial, real time data will be migrated in production database, code build will be deployed after final testing and Module will be made live on India WRIS

3.2 WIMS (Water Information Management System)

3.2A. Operations & maintenance (O&M) related

1. Regular Maintenance of WIMS/MIS/FFS platforms

- i) **Deployment** - Development, Staging & Production deployment.
- ii) **Testing** of application/ modules in Development, Staging & Production environment.
- iii) **SFTP Server** - User Creation, User Updation (Password/access permissions/folder structure, etc.)
- iv) **SFTP Server** - Raw File Verification (Format, Receival, Frequency - For verified users)
- v) **Kubernetes** - Pods (Up & Running, Restart if needed, Logs Check, Replicas creation if needed)
- vi) **Application - Database** (Connectivity, Connection close after usage in application, Connection time out policy, checking of logs, etc.)
- vii) **SVN Repository Management** - Maintain versions for all the applications - FFS/MIS/WIMS
- viii) **TCL (Tata Communication Limited) Coordination:**
 - a. Coordination - Register Incidents - Register Requests - Spotlight Application of TCL (Cloud Service Provider)
 - b. Monitor VMs performance - Storage Allocation monitoring and reporting on Grafana Dashboard
 - c. As per Escalation Matrix correspondence for any bugs/queries/solution requests with the TCL team
 - d. Monitor and implement the necessary activities for the various reports and SLA compliance by TCL- SIEM/Vulnerability Scan of VMs, Incident Reports, Incidents Status, any correspondence requested from TCL, etc."
- ix) **Telemetry Data Decoder**
 - a. Current Date & Back Date Decoder Maintenance for Telemetry Data Decoding - GPRS / INSAT / BOTH
 - b. Verify the data decoded for various agencies

- c. Checking and reporting to any agency raised or identified issues in data decoder, related sensor configuration etc.
- d. Previous Hour Transmission Implementation & Monitoring in the decoder (current date)
- e. Update in the decoder as and when required for correct decoding of telemetry data received through various modes

x) **MIS Website**

- a. Update core website MIS modules (Code) and plugins if required.
- b. Checking of all forms, to ensure they are working properly
- c. Checking of website loading speed and check for 404 errors and resolve these by fixing links or redirecting.
- d. Checking of data updation by cron jobs in MIS application and test the website to ensure that it GUI displays content properly on the multiple browsers and mobile devices (responsive design).
- e. Review each page of the site for content accuracy and consider updating the website design for MIS application frontend.
- f. Checking the web services data in MIS application in JSON format and by DB queries.
- g. SVN version backups are performed regularly and stored off site for MIS application.
- h. Verifying all agencies and stations data by web API and DB queries in MIS application for NHP/Non-NHP Statistics.

xi) **FFS Website**

- a. Monitoring & maintain the correct functioning of FFS website along with the corresponding WIMS data entry applications for flood related data entry and reporting. And priority resolution during monsoon season for any queries raised by Agencies.
- b. FFS website functional maintenance for all the information - Flood condition - Warning, Danger Level, Highest Flood level in near real time basis.
- c. Integration & sharing in various modes for the requirements shared by CDOT and other State Disaster Management Authorities
- d. Updation of core website FFS modules (Code) and plugins if required.
- e. Checking of all forms, to ensure they are working properly

- f. Checking ok website loading speed and Check for 404 errors and resolve these by fixing links or redirecting.
- g. Checking of data updation by Cron jobs in application and test the website to ensure that its GUI displays content properly on the multiple browsers and mobile devices (responsive design).
- h. Review each page of the site for content accuracy and consider updating the website design
- i. Checking the web services data in application in JSON format and by DB queries.
- j. SVN version backups are performed regularly and stored off site
- k. Verify all agencies and stations data by web API and DB queries"

xii) **WIMS Applications**

- a. Login - Update/Create WIMS Users - Specify Agency Hierarchy, Permissions, Roles add/update using User Management Module. Necessary modifications in functionality as per various user agencies requirements.
- b. Data View - As per requests monitoring data using data view module along with number of parameters and stations in an agency for a project. Necessary modifications in functionality as per various user agencies requirements.
- c. Flood Forecast Modules - Necessary modifications in functionality, development or modifications for reports as per various user agencies requirements.
- d. All WIMS modules under various sections - Necessary modifications in functionality, development or modifications for reports as per various user agencies requirements.
- e. Data Import /Export Facility for all types of parameters - Enhance the current functionality and automate the process for bulk data import/export for various parameters and related metadata in form of defined templates/reports, etc. in various formats - pdf, excel, api, ftp etc. as per requests
- f. Email & SMS & Manage Contacts: SMS service provider – correspondence for necessary updates in template and auto fill of data in the SMS contents as per user selection and sharing and management of the contacts - numbers & emails connected to site/agency"

xiii) **Cron Jobs**

- a. Creation Cron Jobs, Updating & Maintenance of Cron Jobs (Up & Running, Query update, Shell Script update, file transfer to respective location, File update policies)"

- xiv) Correspondence for various calls/emails/letters/parliament questions/any other queries form help-desk and other platforms

2. Bug fixing/new functionalities related O&M of existing modules of WIMS/MIS/FFS

- i) Involvement of subject matter professionals for dealing with the technical aspects of various modules in WIMS

- ii) Resolving bugs if any for the open access websites - FFS (Flood Forecast)

- a. Verify after deployment of any new functionality and checking all existing functionalities are in working condition with correct information
- b. Map load for all types of Sites, Hydrograph, Current Flood Forecast & Sites page - Functional updates & new enhancements as per the Agencies requirements

- iii) Resolving bugs if any for the open access websites - MIS

- a. Verify after deployment of any new functionality and checking all existing functionalities are in working condition with correct information
- b. NHP/Non-NHP (Various Project wise Segregation) of Agencies sites - Metadata, Parameter wise - Data Availability, Sensor configuration details, Login based access for deployed professionals/Agencies for detailed data view.
- c. Cron Jobs - Corresponding Queries/DB functions, Shell scripts, DB tables update/modification/addition for functional workflow for MIS.

- iv) Resolving bugs of WIMS modules if any and implementation of changes required by client.

- a. New change requests like flood forecast report changes, discharge, sediment report changes, water quality (sample data entry) changes and others are implemented.
- b. Creation of web services like flood forecast websites daily user count using both services and cronjob implementation for it.
- c. Various cron job creations for assisting rest services and data availability to user
- d. Migration tool creation for Station Creation, Water Quality data entry, and data migration from mdb files.

- e. Migration tool creation for all other parameters in WIMS
- v) Resolving bugs/New developments if any in following WIMS modules pages such as:
 - a. User Management
 - b. Station Management
 - c. Manual data entry
 - d. Data View
 - e. Data View Management
 - f. Flow Measurement & Summary Stage-Discharge
 - g. DWLR Details
 - h. Elevation Area Capacity Data
 - i. Groundwater Report
 - j. Groundwater Data Download
 - k. Inventory management Module
 - l. Site Inspection Modules
 - m. RL of Zero of the Gauge
 - n. X-Section
 - o. Current Meter
 - p. Flood Forecast - Level Forecast
 - q. Flood Forecast -Inflow Forecast
 - r. Flood Forecast - New Reports (from 2018)
 - s. Flood Forecast -Bangladesh Reports
 - t. Flood Forecast - Flood Data Entry
 - u. Flood Forecast - Alerts, Email & SMS, Manage Contacts
 - v. Water Quality - Laboratory Information
 - w. Water Quality - Parameter Information
 - x. Water Quality - Sample Data Entry
 - y. Water Quality - Water Quality Report & Graphs

- z. Sediment-Suspended Sediment Summary
- aa. Sediment-Suspended Sediment Measurement
- bb. Import / Export - Import Tool
- cc. Import / Export - Export Analysis Data to Excel (Discharge & Water Level)
- dd. Import / Export - Export Data to WYB Format
- ee. Import / Export - Export Data to MIKE-11
- ff. Master Module
- gg. Ground Water Exploration
 - (a) Ground Water Exploration - Drilling Details
 - (b) Ground Water Exploration - Drill Time Log
 - (c) Ground Water Exploration - Litholog
 - (d) Ground Water Exploration - Well Assembly
 - (e) Ground Water Exploration - Development Details
 - (f) Ground Water Exploration - Water Bearing Zone
 - (g) Ground Water Exploration - Grouting/ Sealing/ Gravel Packing
 - (h) Ground Water Exploration - Geophysical Logging
- hh. Geophysical Investigation
 - (a) Geophysical Investigation - Investigation Details
 - (b) Geophysical Investigation - Interpreted Result of Geophysical Exploration
 - (c) Geophysical Investigation - Profile Data
 - (d) Geophysical Investigation - Miss Masse Profiling
 - (e) Geophysical Investigation - Dipole Sounding
 - (f) Geophysical Investigation - Axial Profiling
 - (g) Geophysical Investigation - Hlem Sounding
 - (h) Geophysical Investigation - Vlf Exploration
 - (i) Geophysical Investigation - All new Modules
- ii. Pumping Test

- (a) Pumping Test - Aquifer Performance Test
- (b) Pumping Test - Dug Well Pumping Test
- (c) Pumping Test - Preliminary Yield Test
- (d) Pumping Test - Step Draw Dawn Test
- (e) Pumping Test - Dynamic Aquifer Performance Test
- jj. Telemetry Management - Sensor Hub Configuration
- kk. Telemetry Management - Reservoir Sensor Hub Configuration
- ll. Telemetry Management - FTP Configuration

Note: The number & names of the modules are subject to merging or splitting as per the requirements posed in later stages. Also, the module development activities are subject to the requirements posted by the various user agencies like CWC, CGWB, and other state/central agencies. The list is not to be considered as the exhaustive content for development/modifications purpose.

3. Data Updation related O&M of existing modules of WIMS/MIS/FFS

- i) Station Creation - Coordination with IA/Deployed professionals/Depts for Metadata Template (SW/GW) - Transfer to the correct format template along with reference IDs insertion as per production & Staging DB
- ii) Station Creation on Staging & production as per the formatted template - Using Script/Tool (update/modify script as per requirements) - Verify with Users - MIS - WIMS Application"
- iii) For Telemetry Sites
 - a. Coordinate for getting Sensor Configuration Template filled by Deployed professionals/IA/Depts
 - b. Verification of the received template - Creation of new parameters Data type code if needed"
- iv) Preparation of the table for DB function execution for insertion of Telemetry Sensor configuration in respective tables
 - a. Modify the DB function as per the new Datatypes or any other updates as and when needed
 - b. Execute DB Function for Sensor Configuration in Production DB
 - c. Verify the sensor configuration implemented - MIS - Telemetry Module - DB Query

- d. Check for raw files for the configured sites in respective - SFTP, Format Verify for the parameters data received for position, right digit, equation, etc.
 - e. Check the decoding status for these raw file decoding"
- v) Sample Data Entry for water quality
 - a. Preparation of water quality template with data provided by deployed professionals/IA
 - b. Verification of data and mapping of data with its corresponding DB columns
 - c. Coordination with deployed professionals/IA/Depts regarding data if needed
 - d. Migration of water quality data using migration tool after filling the water quality template
 - e. Removal/identification of duplicate data or any inconsistencies if found and further coordinating with concerned deployed professionals/IA for mismatched/incorrect data
- vi) Check data updation by cron jobs in MIS application and test the website to ensure that it looks and displays properly on the most popular browsers and mobile devices
 - a. Review each page of the site for content accuracy and consider updating the website design for MIS application frontend.
 - b. Check the web services data in MIS application in JSON format and by DB queries.
 - c. SVN version backups are performed regularly and stored off site for MIS application.
 - d. Verify all agencies and stations data by web API and DB queries in MIS application for NHP/Non NHP Statistics.
- vii) Check the web services data in FFS (Flood Forecast site) application in JSON format and by DB queries.
 - a. Review each page of the site for content accuracy and consider updating the website design for FFS application frontend.
 - b. Check data updation by cron jobs in FFS application and test the website to ensure that it looks and displays properly on the most popular browsers and mobile devices
 - c. Backups are performed regularly and stored off site for FFS application.
 - d. Verify all Level/Inflow/Base stations data by web API and DB queries in FFS application."

- viii) Updation/deletion of data if needed requested from client for station management, water level data entry and others using database scripts.
- ix) Delete unnecessary plugins which is a potential loophole for hackers to exploit.
- x) Delete unwanted code and plugins if no longer require
- xi) Reduce attack surface by removing images files that no longer require.
- xii) Optimize Database for reduce the server load and boost page load times
- xiii) Water Level, Rainfall and other data migration from mdb file/or any other format to WIMS database using migration tool.
 - a. Coordination with concerned deployed professionals/IA if data mismatch like station code not found and others if any
 - b. Modifying the data after correct data received and then migrating it to WIMS database.
- xiv) Query generation for data fetch from production database according to user's requirement for different modules in WIMS and then data delivery to users.
- xv) Involvement of subject matter professionals for dealing with the Technical aspects of various modules in WIMS

4. Data Dissemination via APIs, SFTPs (& Other modes) to Central & State Agencies from WIMS

- i) Preparation of APIs - for various requests received via multiple modes
- ii) File sharing through auto mode over SFTPs / FTPs as per requirement
- iii) Any Other mode data sharing to data request as per requirements
- iv) Maintaining the Data sharing policy and have necessary permissions for sharing any classified data"

5. Testing of all the modules in WIMS

- i) WIMS Applications - all modules testing using various testing tools (the most relevant & popular tools in market) - reporting the issue to the relevant developer and recheck after implementation of the changes required in the bugs, errors, or discrepancies in the design, functioning, and user experience on the website.
- ii) Maintaining a functional bug reports, GUI related report - Status (twice a month)"
- iii) Involvement of subject matter professionals for testing the scientific output of all modules in WIMS

6. Resolving of Helpdesk queries (Daily Basis) (Telephonic & Email)

- i) Data Requests & Data Sharing in various modes - APIs/DB/Excel/CSVs/PDF/Reports/SFTP/FTP etc.
- ii) Functionality Developments - New or existing
- iii) Bugs in Functional workflow in WIMS modules, FFS Application and MIS Application
- iv) Station Creation / updation/ location update/ Project update / etc.
- v) Sensor Configuration creation & updation requests
- vi) Data migration requests for various parameters
- vii) Data verification for various manual/telemetry bases parameters
- viii) User Creation/modification requests
- ix) Data Sharing policy-based requests
- x) Data/Application/Tool Integrations requests
- xi) Any Other requests

7. Updation of GUI of existing Modules of WIMS

- i) The updation of workflow for the entire user experience on WIMS modules.
- ii) Intuitive process workflow for the users with need-based inputs and mandatory fields only
- iii) Provision for redirection to connected modules (ex - station creation - parameter addition - data entry for parameter - data view - data download)"
- iv) Technical Guidance to developer as per the requirement of agencies concerned

8. Geo-spatial Enhancement of WIMS

- i) Map based geolocation capturing for the sites - autofill the admin hierarchy (state, district etc), Hydrological hierarchy (basin, Sub basin etc)
- ii) Map based display of stations as per user choice.

9. GIGW Compliance of WIMS

- i) Portal should be validated against GIGW guidelines and necessary modifications to be made to ensure compliance. Please check the url for GIGW guidelines: <https://guidelines.india.gov.in/compliance-matrix/#>

3.2B. Audit Related

1. Security Audit (Once a year) - WIMS

- i) Grey Box Security Audit for WIMS applications - india-water.gov.in, ffs.india-water.gov.in, india-water.gov.in/mis/
- ii) For all static & dynamic pages, all types of users as per role, code audit, webservices for entire Website Technology Tier.
- iii) NIC-CERT Guidelines based audit
- iv) GIGW Compliance based audit for all websites
- v) Vulnerabilities, threats and risks that may exist in the environment and identifying remedial solutions and recommendations for implementation of the same to mitigate all identified risks, with the objective of enhancing the security of the websites and servers. Based upon the findings of the security assessment and scanning process, the same shall be reported to NWIC.
- vi) To perform security assessment and required scanning of the websites and servers for vulnerabilities and also implement the alarm system on servers and power backup, so in case of issues in servers and power backup the authorities or the nominated officer will get the information through SMS.
- vii) A detailed information security policy, assessments, and implementation document. Detailed reports on security policy, and implementation to be undertaken by NWIC.
- viii) A detailed document on Gap Analysis and to do list based upon gaps.
- ix) A brief document on Crisis Management Plan (CMP) for staging and production environment and to do lists based upon crisis management plan.

2. Coding Standard Audit (Once a year) – WIMS

- i) Coding Standard Audit for WIMS applications - india-water.gov.in, ffs.india-water.gov.in, india-water.gov.in/mis/ and other components
- ii) For all static & dynamic pages, all types of users as per role, code audit, webservices for entire Website Technology Tier.
- iii) NIC-CERT Guidelines based Audit for coding standards.
- iv) GIGW Compliance audit for websites for coding standards.
- v) Compliance report and suggestive measures and corrections report in detail.

3. Performance Audit (Once a year) – WIMS

- i) Websites/Web Services/Webservers/Database Servers/Application Servers - Response time, efficiency/page load etc. performance Audit for all websites.

4. Compliance to the Audit Reports and Achievement of Performance score (Google's Page speed Insights) - WIMS

- i) Security Audit (Once a year). Score based compliance based on standard methods.
- ii) Coding Standard Audit (Once a year) Score based compliance based on standard methods.
- iii) Performance Audit (Once a year) Score based compliance based on standard methods.

3.2C. Data Validation tool for existing parameters of WIMS and its Automation

- i) Analysis of groundwater level, fluctuation and its long and short-term trend at various scales (administrative and hydrogeological boundaries) and under various hydrometeorological condition
- ii) Analysis of groundwater level, fluctuation and its long and short-term trend as per Groundwater estimation Committee methodology-2015 and other updated methodologies.
- iii) Handling of aquifer information related system under NAQUIM and other projects
- iv) Finding the groundwater data duplicity with respect to spatial distribution (duplicate station)
- v) Finding the groundwater data duplicity with respect to time series data (data repetition)
- vi) Development of representation of Aquifer using cross section and 3D visualization
- vii) Development of Validation methodologies for the Water level in WIMS
- viii) Development of Validation methodologies for the Ground Water Quality in WIMS
- ix) Development of Validation methodologies for the Aquifer related data such as Groundwater exploration and prospecting, Drilling details, Geophysical logging, pumping tests etc.
- x) Technical guidance in the development of tools for automatization of primary and secondary data validation of groundwater-related parameters
- xi) Analysis of river system in India and interpret the gauging station reading
- xii) Hydrological Data analysis (River water level & Discharge, Reservoir storage & water level, Surface water quality)
- xiii) Hydro-meteorological Data analysis (Soil Moisture, Evapotranspiration, Rainfall)

- xiv) Finding the surface water data duplicity with respect to spatial distribution (duplicate station)
- xv) Finding the surface water data duplicity with respect to time series data (data repetition)
- xvi) Develop the correlation between various hydrological and hydro-meteorological data
- xvii) Development of the methodology for hydrological data validation and technical guidance in the development of tools for primary and secondary data validation
- xviii) Development of Validation methodologies for the River water level & Discharge in WIMS
- xix) Development of Validation methodologies for the Reservoir storage & water level in WIMS
- xx) Development of Validation methodologies for the Surface Water Quality in WIMS
- xxi) Technical guidance in the development of tools for automatization of primary and secondary data validation of surface water-related parameters

3.2D. Revamping of Database for WIMS

- i) Removal of duplicate or irrelevant observations
- ii) Checking of Data types for all the fields in all the existing tables
- iii) Checking Data dispersion & Identification of outliers
- iv) Filter & Correct unwanted outliers
- v) Handling missing data and replacing it with validated values
- vi) Preparation of Data Validation Scripts
- vii) Detailed Documentation of Data Cleaning and Validation Script
- viii) Formulation of Unique ID Standards
- ix) Formulation of Coding Standards
- x) Implementation of Unique IDs in WIMS DB
- xi) Detailed Documentation"

3.2E New Development

a. Coastal Information Management System (CIMS) module

- i) Requirement Gathering for Data Entry Platform for CMIS system

- ii) Database Tables/ Design as per the requirement
- iii) Development of Module for data Entry / Bulk Upload / Data integration / data view & export & mapping with WIMS Users
- iv) Testing of the developed Module with subject matter expert and Deployment
- v) Technical guidance in the development of CIMS module

b. ADCP Module

- i) Requirement Gathering for Data Entry Platform for ADCP Module system
- ii) Database Tables/ Design as per the requirement
- iii) Development of Module for data Entry / Bulk Upload / Data integration / data view & export & mapping with WIMS Users
- iv) Testing of the developed Module with subject matter expert and Deployment
- v) Technical guidance in the development of CIMS module

c. Reservoir Data Entry Module

- i) Requirement Gathering for Data Entry Platform for Reservoir Data Entry Module
- ii) Database Tables/ Design as per the requirement
- iii) Development of Module for data Entry / Bulk Upload / Data integration / data view & export & mapping with WIMS Users
- iv) Testing of the developed Module with subject matter expert and Deployment
- v) Technical guidance in the development of Reservoir Data Entry Module

d. Canal Data Entry Module

- i) Requirement Gathering for Data Entry Platform for Reservoir Data Entry Module
- ii) Creation of Database tables as per the requirement
- iii) Development of Module for data Entry / Bulk Upload / Data integration / data view & export & mapping with WIMS Users
- iv) Testing of the developed Module with subject matter expert and Deployment
- v) Technical guidance in the development of Canal Data Entry module

e. SCADA system Integration

3.3 WRIS-WIMS Integration

- i) Creation of code to get data from WIMS database and transfer the meta data and timeseries data on daily basis to WRIS through WIMS FTP server/ API

- ii) Testing of code to get data from WIMS database and transfer the meta data and timeseries data on daily basis to WRIS through WIMS FTP server/ API
- iii) Creation of code in WRIS to download the file from WIMS FTP server or read the metadata and business data from the API and insert metadata and timeseries data in WRIS database
- iv) Testing the code in WRIS for to download the file from WIMS FTP server or read the metadata and business data from the API and insert metadata and timeseries data in WRIS database
- v) Set up of cron jobs on India WRIS server for the automation of inserting metadata and timeseries data in WRIS database through FTP server / API
- vi) Testing of Cron jobs on WRIS server
- vii) After testing the integration of WIMS and WRIS, the whole system to be deployed on production server of WIMS and WRIS

3.4 Documentation of WRIS & WIMS Activities

- i) Creation of description for India WRIS modules and data assessment report for quality and review of datasets and APIs of India WRIS modules.
- ii) Functional Requirement Specification- Module-wise Attributes
- iii) Functional Requirement Specification- Details of layers & Relationship with Modules
- iv) WRIS Wiki is digital encyclopedia of concepts and definitions utilized in water and allied resources in modules of India-WRIS. Updation of content for existing modules and creation of content for new modules in WRIS WIKI.
- v) Preparation of documents for manuals of India WRIS modules, letters to data providing agencies for data and APIs request and BRD with GUI and GIS functionalities for existing and new modules
- vi) Designing of standard template containing data and formats for sharing with NWIC. Some standard fields such as LGD code for administrative details in shared data could be mandated here.
- vii) NSDI: Reporting, Monitoring & Review of IDSF implementation on monthly basis
- viii) Data Governance Quality Index questionnaire submission on quarterly basis
- ix) Creation of metadata for every dataset shared on production server with details obtained from data providing agencies as well as inhouse information.
- x) Presentation prepared for various project, module etc

- xi) Creating content for user manuals, informative module info pages, and monthly WIMS training presentations.

3.5 Water & Allied Resources Information and Management System (WARIMS)

a. ICCC and Helpdesk

Integrated Command & Control Centre (ICCC) will be a collaborative workspace where key decision-makers monitor and manage incident response activities in real-time, enhancing their situational awareness.

The ICCC will provide a single source of truth for all business operations across functions, irrespective of the location or department they represent. It will equip organizations with the information necessary to make informed decisions.

It will be used to manage both day-to-day operations, showcase the project outcomes, plan future projects, and predict emergencies. ICCC will provide advanced connectivity, modern Communication, Command and Control solutions to on-field resources in a rapidly evolving world.

b. Development of Geospatial Analysis Laboratory (GAL)

With continuous increase in the utilization of satellite images in the field of water management and crop planning, it is imperative to equip National Water Informatics Centre (NWIC) in subject of satellite image processing and analysis using advance techniques under a state-of-the-art infrastructure. Geospatial Analysis Laboratory which will be hosted on cloud and will be accessible via internet/intranet to the intended user, will be developed.

Geospatial Analysis Laboratory will be a complimentary supporting model for the DSS which will heavily depends on the satellite images and their driven products. The laboratory will receive a large number of images from a wide range of sensors/platforms ranging from satellites, aircraft, and drones to terrestrial vehicles. Therefore, it will be quintessential to equip the laboratory and agency with image management tool that can support all type of spatial data.

The applications brief is as follows:

Geospatial Analysis Laboratory: Integration of satellite image driven system will leverage the satellite data or processed product, themes, results from global and Indian satellites to regularly estimate surface water availability through estimating water spread area, soil moisture, crop health using NDVI and NDWI parameters, change in water bodies number and size and locate water bodies etc. The laboratory will automatically download, process, store and publish satellite data and its derived results. It will make use of both optical and microwave-based satellite data from more than 1000 data point for 272 business specific requirements/use cases under 25 modules. There are many data points which are satellite image driven products and will be consumed as inputs data for further analysis in WARIMS. These products will be driven from both optical as well as microware satellite image.

3.6 State Water Informatics Centre (SWIC)

3.6.1 Setting up of SWIC in States/UTs

- i) Supporting States in establishing and implementing SWIC and establishing State-WRIS is the responsibility of NWIC. During all stages of State-WRIS and SWIC implementation, NWIC will guide States/SWIC. NWIC to provide technical guidance and support for all developments related to geospatial & time-series data aggregation and standardization, as well as software & hardware technologies, including development & production environment setup, hosting, etc.

3.6.2 Operation and Maintenance of State-WRIS

- i) To play a key role in the standardization of data attributes capturing time series and geospatial data.
 - (1) Maintain and share the usage of a common country schema for similar themes and make it available to all states.
 - (2) Creation of schema for data integration and standardization of any new parameter currently not available in NWIC.
 - (3) The geospatial layer data available in NWIC (India-WRIS) is to be utilized by States. If states have any additional information pertaining to the existing geospatial layer at NWIC (India-WRIS), the same needs to be populated.
 - (4) Schema preparation and creation of new/additional geospatial layer in State-WRIS.
- ii) Sharing & Integration of data with states – Based on the hydro-meteorological data dissemination policy 2018, the NWIC will share available data with States. Presently, viewing rights are open to all whereas, editing is limited to the respective state jurisdiction. Downloads are also permitted as per the dissemination policy.
- iii) Development of Common Validation Tools for existing and new data parameters – To help SWIC team in the development of validation tools for new parameters available with states and to share these tools with all other states. In order to validate huge amounts of meteorological and water resource data collected/to be collected, NWIC will guide, train and support the states.
- iv) Providing hosting platform to States – States can continue on their hosting platform or they have the option to migrate to the NWIC hosting platform. NWIC shall have more cloud space progressively as per requirement and expenditure on hosting platform and internet connectivity for the State-WRIS website shall be fully borne by the NWIC.

- v) Licenses for software (GIS and Databases) – As far as the Model 1 category is concerned, NWIC is responsible for the costs of licenses except those that are required by client-end teams (like ArcGIS desktop) deployed on a common platform and utilized by Central & State Agencies in shared mode.
- vi) Development of generic reports, Visualization, and Dashboards – NWIC shall draft, develop, and standardize reports, visualizations, and dashboards which are to be used by the States.
- vii) Assistance to States in development of generic applications and DSS – A common set of applications and a DSS will be developed by NWIC for use by all states. NWIC shall guide, assist and mentor states for the customization and development of State-specific reports, applications, and DSS.

3.7 Miscellaneous (Trainings, Workshops & Conferences)

- i) Overall Managing Team Members, their workload, performance & outputs
- ii) Managing inter personal relationship of the team members
- iii) Recognize and acknowledge the skills of key team members and utilize their strengths to the benefit of the team
- iv) Clearly define and assign work to the team members.
- v) Prepare daily/ Monthly performance report & submission
- vi) Evaluate results and provide feedback in a timely fashion
- vii) Review the work quality and do quality checks, prepare quality standards
- viii) Provide proper information for the modules for the development
- ix) Provide guidance and coordinate between team members
- x) The training activities provided by NWIC to users and NHP implementing agencies (State governments/Central Agencies) will include training on spatial and non-spatial data collection; new GIS data creation, GIS data management; map preparation, GIS data, Web services and App services publishing and sharing; and fulfilment of inter-departmental requirements.
- xi) Establish an open discussion for decision-making

3.8 Responsibilities of the Service Provider

- i. Service Provider would be required to provide qualified manpower as per the requirement in the RFP for selection/replacement, capable of supporting the functioning of the project/ office in a manner agreed with NWIC. The services shall be rendered as per the agreement terms of the NWIC and Service Provider.
- ii. Service Provider shall provide manpower Services at NWIC's premises as per Schedule of Work/Requirements, which may be amended from time to time by

the NWIC during the Contractual period and it shall always form part and parcel of the Contract.

- iii. **The hired/engaged manpower/professional shall compulsorily be required to work at NWIC premises. Work from Home (WFH) will not be allowed under any circumstances.**
- iv. Service Provider shall have appropriate medical insurance cover for its personnel for illness, personal accident and death whilst performing the duty and the NWIC shall own no liability and obligation in this regard. Service Provider shall also mandatorily make provisions for Employees Provident Fund (EPF) as per applicable rules for engaged professionals.
- v. The Service Provider shall exercise adequate supervision to reasonably ensure proper performance of Manpower Services in accordance with Schedule of Requirements.
- vi. The Service Provider shall issue identity cards/identification documents to all its employees who will be instructed by the Service Provider to display the same.
- vii. Personnel of the Service Provider shall not be the employees of the NWIC, and they shall not claim any salary or allowances, compensation, damages, or anything arising out of their employment/duty under this Contract. The Service Provider shall make them known about this position in writing before deployment under this agreement.
- viii. All necessary reports and other information shall be supplied immediately as required and regular meetings will be held with the NWIC.
- ix. It is the responsibility of the Service Provider to provide manpower for the above listed work. The manpower must be segregated, based on their years of experience:
- x. The responsibility of effective and efficient delivery would rest with the Service Provider.
- xi. Thus, the education qualifications and experience of the manpower deployed would be left to the subjugation of the Service Provider, subject to them meeting the minimum qualifying criteria.
- xii. The police verification, character and antecedent's verification of the employees is the whole and sole responsibility of the Service Provider. The same may be verified by the NWIC at the time of joining of the employees, if desired.
- xiii. The Service Provider shall ensure the following in respect of the engaged professionals:

a) The professionals will be entitled for

- (i) 12 days of Casual leave per year and**
- (ii) 01 day of medical/sick leave per month subject to a maximum of 07 days at a time.**

If medical/sick leave is not availed in a particular month, the medical/sick leave will automatically carry forward to the next subsequent month.

- b) The working hours and days of the outsourced employees will be as per the existing applicable rules of the respective Central/State Government organizations. However, they must work on extended hours and/or holidays, if necessary and required based on demand of work.
 - c) In an event of deployed personnel availing leave and if required by NWIC suitable substitute(s) shall be provided by service provider as per mutual understanding with NWIC.
 - d) Consequent to poor performance of deployed manpower, service provider shall immediately replace the deployed manpower thereby maintaining service levels and continuity.
 - e) Working shifts (includes day and night shift) if any, and daily working hours shall be mutually agreed upon between NWIC and service provider prior to deployment of manpower.
 - f) The attendance of the employees will be entered in the register provided by the Service Provider and/or in the Aadhaar based Biometric attendance system at the NWIC's premises. The persons deployed should be polite, cordial, and efficient while handling the assigned work and their actions should promote good will and enhance the image of the Corporation or office concerned.
- xiv. The persons deployed shall, during their work be privy to certain qualified documents and information which they are not supposed to divulge to third parties. In view of this, they shall be required to take oath of confidentiality and breach of this condition shall make the Service Provider as well as the person deployed liable for penal action under the applicable laws besides, action for breach of contract.
- xv. The NWIC or its representative shall have the right to inspect and/or to test the Services/Solution/Technology to check their conformity to the contract Specifications at no extra cost to the NWIC.
- xvi. The NWIC will in no way be responsible for the violation of any statutory rules/guidelines applicable in India and/or infringement of any other laws from the time being in force, either by the employee or by the Service Provider. The

employees as well as the Service Provider shall comply with the relevant rules and regulations applicable at present and as may be enforced from time to time, for which the NWIC's office would not be liable or responsible in any manner. The onus of compliance to all the applicable laws/acts/rules shall only rest with the Service Provider. The Service Provider shall be required to keep the NWIC updated about the change of address, change of the Management etc. from time to time.

- xvii. The NWIC shall have the right, within reason, to have any personnel removed who is undesirable with proper reasoning and similarly the Service Provider reserves the right to remove any personnel with prior intimation to the NWIC, emergencies, exempted. The Service Provider shall not be allowed to transfer, assign, pledge or subcontract its rights and liabilities under this Agreement to any other agency or organization by whatever name be called without the prior written consent of the Authority.
- xviii. The Service Provider shall nominate a coordinator who shall be responsible for regular interaction with the NWIC Office so that optimal services of the persons deployed could be availed without any disruption.
- xix. **For all intents and purposes, the Service Provider shall be the “Employer” within the meaning of different Rules & Acts in respect of manpower so deployed. The persons deployed by the Service Provider shall not have any claim whatsoever , like employer and employee relationship , against the NWIC Office.**
- xx. The NWIC Office shall not be responsible for any financial loss or any injury to any person deployed by the Service Provider during their performing the functions/duties, or for payment towards any compensation.
- xxi. The persons deployed by the Service Provider shall not claim nor shall be entitled to pay, perks and other facilities admissible to regular / confirmed employees during the currency or after expiry of the Agreement.
- xxii. In case a deployed person leaves the job in between (because of unsatisfactory performance or any other reason), then an alternate equivalent resource is to be deployed by the Service Provider with immediate effect.
- xxiii. **If any engaged / hired personnel/professional/expert is**
 - (a) absent without intimation, or**
 - (b) on leave of any kind for more than 15 (Fifteen) consecutive days, or**
 - (c) is recommended for removal by NWIC on account of unsatisfactory performance,**

the service provider shall mandatorily provide a suitable replacement with immediate effect in consultation with NWIC, so that the work of NWIC is not hampered in any case.

- xxiv. The Service Provider should furnish copies of all appointment documents of the deployed manpower to NWIC for its records from time to time.
- xxv. Retaining a candidate deployed by the Service Provider shall be the prerogative of NWIC and no resource change shall be made without written consent of the concerned Project Coordinator of the NWIC.
- xxvi. In the event of the service provider or the concerned division of the company being taken over/bought over by another company, it shall be ensured in the negotiation for their transfer that all the obligations under the agreement with NWIC, are passed on for compliance by the new company/new division.
- xxvii. All data, documents, reports, software developed, works carried out whether routine or IPR related, generated during the Contract shall be exclusive property of NWIC and the Service Provider or professionals provided by service provider shall have no claim over it. All codes and formula being used for development activities shall be the exclusive property of NWIC. The Service Provider & professionals provided by service provider shall be bound by restrictions imposed by Security Classification of such data, documents and reports.
- xxviii. Service provider or professionals provided by service provider shall not retain any copy of the documents and software or any other works carried out for purchaser.
- xxix. In case of extension of contract beyond the intended completion period, as mentioned in PCC Clause 2.3, an increment may be given on completion of 12 months to those personnel/professionals deployed under this contract, subject to maximum of 15 percent (%) of earlier drawn remuneration.

3.9 Responsibilities of the NWIC

- i. NWIC may provide all the required equipment and facilities at the location(s) where the manpower Services are to be deployed to enable Service Provider's employees to perform and deliver.
- ii. The NWIC shall notify the Service Provider of any dishonest, wrongful, or negligent acts or omissions of the Service Provider's employees or agents in connection with the Services as soon as possible after the NWIC becomes aware of them

- iii. The NWIC shall not be under any obligation for providing work to any of the personnel of the Service Provider after the expiry of the contract. The NWIC does not recognize any employee employer's relationship with any of the workers of the Service Provider.
- iv. No medical facilities or reimbursement or any sort of medical claims thereof in respect of employees provided by the Service Provider will be entertained by the NWIC.
- v. The NWIC or its representative shall have the right to inspect and/or to test the Services/Solution/Technology to check their conformity to the contract Specifications at no extra cost to the NWIC.
- vi. The NWIC will in no way be responsible for the violation of any rules and/or infringement of any other laws from the time being in force, either by the employee or by the Service Provider. The employees as well as the Service Provider shall comply with the relevant rules and regulations applicable at present and as may be enforced from time to time, for which the NWIC's office would not be liable or responsible in any manner. The onus of compliance to all the applicable laws/acts/rules shall only rest with the Service Provider. The Service Provider shall be required to keep the NWIC updated about the change of address, change of the Management etc. from time to time.
- vii. The NWIC shall have the right to have any personnel removed who is undesirable and similarly the Service Provider reserves the right to remove any personnel with prior intimation to the NWIC. The Service Provider shall not be allowed to transfer, assign, pledge or subcontract its rights and liabilities under this Agreement to any other agency or organization by whatever name be called.
- viii. The Service Provider shall nominate a coordinator who shall be responsible for regular interaction with the NWIC Office so that optimal services of the persons deployed could be availed without any disruption.
- ix. For all intents and purposes, the Service Provider shall be the **"Employer"** within the meaning of different Rules & Acts in respect of manpower so deployed. The persons deployed by the Service Provider shall not have any claim whatsoever like employer and employee relationship against the NWIC Office.
- x. The NWIC Office shall not be responsible for any financial loss or any injury to any person deployed by the Service Provider during their performing the functions/duties, or for payment towards any compensation.
- xi. The persons deployed by the Service Provider shall not claim nor shall be entitled to pay, perks and other facilities admissible to regular / confirmed employees during the currency or after expiry of the Agreement.
- xii. Travelling and Boarding expenses:

Travelling and Boarding expenses for personnel engaged by NWIC **shall be reimbursed** through the service provider as per the travelling/boarding expenses entitled to officers in Level-10 as per 7th CPC, subject to actual expenditure or maximum entitlement of Level-10 whichever is minimum. Details of Travel required during the duration of Contract will be conveyed by the NWIC. No profit or overheads shall be payable to service provider on account of travelling/boarding expenses of professionals. However, applicable taxes shall be paid.

3.10 Activity Schedule and Deliverables

The deliverable associated with this assignment is as follows:

Sl. No.	Activity	Deliverable	Timelines in days (T: Date of signing of contract)
1.	Initiation of mobilization of Team	Initiation of deployment as per the contract	T+7 days
2.	Completion of mobilization of Team	Completion of deployment	T+15 days
3.	Start working independently	Completion of Knowledge Transfer and handing/taking over of the project	T+30 days
4.	Broad activities as per the Scope of Work	All deliverables as per scope of RFP	T+31 days onwards till the engagement period

3.11 Payment Terms and Schedule

Sl. No.	Particulars	Payment Terms	Documents Required
1.	Billing for engaged professionals	Monthly invoicing at the end of each month based on actual number of days of deployment subject to deductions/ penalties (if any)	1. Sign off from NWIC 2. List of all the resources and their positions/designations as per the RFP 3. Attendance validated by NWIC

3.12 Indemnity

- 3.12.1 NWIC stands indemnified of all legal obligations, past/present/future, of the service provider with its professionals/resources deployed to NWIC.
- 3.12.2 NWIC stands absolved of any liability on account of death or injury sustained by the professionals deployed by the Service Provider during the performance of the contract and for any damages or compensation due to any dispute between the Service Provider and its professionals/staff so deployed.
- 3.12.3 The Service Provider will indemnify NWIC of any infringement of third-party rights under the Patents Act or the IPR.

3.13 Confidentiality

The Service Provider and their deployed professionals will not, either during the term or after expiration of this contract, use, sell, disclose any proprietary or confidential information relating to the software, services, contract or business or operations of NWIC or its clients without the prior written consent of NWIC. The service provider must sign the Non-Disclosure Agreement with NWIC.

3.14 Security

The Service Provider will ensure that no information about the software, hardware, database, and the policies of the client organization is taken out in any form including electronic form or otherwise, by the professionals posted by them.

3.15 Format of submission of CVs

The bidder shall submit minimum 02 number of CVs for all the required resources for evaluation and selection in the below format:

1.	Name			
2.	Proposed position			
3.	Date of birth			
4.	Years with bidder's firm (if applicable)			
5.	Nationality			
6.	Education			
	Degree (Specialization)	Institution	Year in which obtained	
7.	Professional certifications			
	Certification	Accreditation date	Valid up to date	
8.	Language details (Languages should be graded as <u>basic, average, and advanced</u> depending on the reading, writing, and speaking skill of the resource person)			
	Language known	Reading	Writing	Speaking
9.	Area of Expertise (It will be preferred if the resource person has expertise in areas relevant to the role defined for this project. It is expected that the same should be reflected in work experience details required in this format)			
10.	Employment record (starting with present position, list in reversed order every employment held for the last ten years and state the start and end dates of each employment)			
	Employer	From	To	Position held and description of duties
	Work experience details			

11.	Project name: (Please mention the details of <u>each</u> project separately)	
	Client name:	Position held:
	Project duration:	Number of team members:
	Technology used in project:	
	Brief description of the activities carried out by the resource person:	
12.	I understand that my willful misstatement described herein may lead to my disqualification or dismissal if engaged.	
	Name and signature (resource person)	Name and signature (authorized signatory of bidder)
	Date of signing:	Place of signing:

Section VII: Conditions of Contract

General Conditions of Contract

1. General Provisions

1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

The Adjudicator is the person appointed jointly by the Employer and the Service Provider to resolve disputes in the first instance, as provided for in Sub-Clause 8.2 hereunder.

“Activity Schedule” is the priced and completed list of items of Services to be performed by the Service Provider forming part of his Bid.

- (c) “Bank” means the Financing institution **named in PCC**.
- (d) “Completion Date” means the date of completion of the Services by the Service Provider as certified by the Employer.
- (e) “Contract” means the Contract signed by the Parties, to which these General Conditions of Contract (GCC) are attached, together with all the documents listed in Clause 1 of such signed Contract.
- (f) “Contract Price” means the price to be paid for the performance of the Services, in accordance with Clause 6.
- (g) “Dayworks” means varied work inputs subject to payment on a time basis for the Service Provider’s employees and equipment, in addition to payments for associated materials and administration.
- (h) “Employer” means the party who employs the Service Provider.
- (i) “Foreign Currency” means any currency other than the currency of the country of the Employer.
- (j) “GCC” means these General Conditions of Contract.
- (k) “Government” means the Government of India or any State Government.
- (l) “Local Currency” means Indian Rupees.
- (m) “Member,” in case the Service Provider consist of a joint venture of more than one entity, means any of these entities; “Members” means all these entities, and “Member in Charge” means the entity **specified in the PCC** to act on their behalf in exercising all the Service Provider’ rights and obligations towards the Employer under this Contract.

- (n) “Party” means the Employer or the Service Provider, as the case may be, and “Parties” means both of them.
- (o) “Personnel” means persons hired by the Service Provider or by any Sub-Service Provider as employees and assigned to the performance of the Services or any part thereof.
- (p) “Service Provider” is a person or corporate body whose Bid to provide the Services has been accepted by the Employer.
- (q) “Service Provider’s Bid” means the completed bidding document submitted by the Service Provider to the Employer.
- (r) “PCC” means the Particular Conditions of Contract by which the GCC may be amended or supplemented.
- (s) “Specifications” means the specifications of the service included in the bidding document submitted by the Service Provider to the Employer.
- (t) “Services” means the work to be performed by the Service Provider pursuant to this Contract, as described in Appendix A; and in the Specifications and Schedule of Activities included in the Service Provider’s Bid.
- (u) “Sub-Service Provider” means any entity to which the Service Provider subcontracts any part of the Services in accordance with the provisions of Sub-Clauses 3.5 and 4.

1.2 Applicable Law

The Contract shall be interpreted in accordance with the laws of Union of India.

Throughout the execution of the Contract, the Service Provider shall comply with the import of goods and services prohibitions in the India when

- (a) as a matter of law or official regulations, India prohibits commercial relations with that country; or
- (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, India prohibits any import of goods from that country or any payments to any country, person, or entity in that country.

1.3 Language

This Contract has been executed in English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

1.4 Notices

Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex,

telegram, or facsimile to such Party at the address **specified in the PCC.**

1.5 Location The Services shall be performed at such locations as are specified in Appendix A, in the specifications and, where the location of a particular task is not so specified, at such locations, whether in India or elsewhere, as the Employer may approve.

1.6 Authorized Representatives Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Employer or the Service Provider may be taken or executed by the officials **specified in the PCC.**

1.7 Inspection and Audit by the Bank 1.7.1 The Service provider shall keep, and shall make all reasonable efforts to cause its Sub-Service Providers and sub-consultants to keep, accurate and systematic accounts and records in respect of the performance of Services in such form and details as will clearly identify relevant time changes and costs.

22.3 The Service Provider shall permit and shall cause its Sub-Service Providers and sub-consultants to permit, the Bank and/or persons appointed by the Bank to inspect the Site and/or the accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Service provider's and its Sub-Service Providers' and sub-consultants' attention is drawn to Sub-Clause 9.1 which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under this Sub-Clause constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

1.8 Taxes and Duties The Service Provider, Sub-Service Providers, and their Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.

2. Commencement, Completion, Modification, and Termination of Contract

2.1 Effectiveness of Contract This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be **stated in the PCC.**

2.2 Commencement of Services

2.2.1 Program Before commencement of the Services, the Service Provider shall submit to the Employer for approval a revised Program (revising the Program given along with the bid) showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.

2.2.2 Starting Date	The Service Provider shall start carrying out the Services thirty (30) days after the date the Contract becomes effective, or at such other date as may be specified in the PCC .
2.3 Intended Completion Date	Unless terminated earlier pursuant to Sub-Clause 2.6, the Service Provider shall complete the activities by the Intended Completion Date, as is specified in the PCC . If the Service Provider does not complete the activities by the Intended Completion Date, it shall be liable to pay liquidated damage as per Sub-Clause 3.8. In this case, the Completion Date will be the date of completion of all activities.
2.4 Modification	Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made by written agreement between the Parties. In particular contract cases where clearance of the Bank or the Association is required for such modifications, the modification shall not be effective until the consent of the Bank or of the Association, as the case may be, has been obtained.
2.5 Force Majeure	
2.5.1 Definition	For the purposes of this Contract, “Force Majeure” means an event which is beyond the reasonable control of a Party and which makes a Party’s performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.
2.5.2 No Breach of Contract	The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.
2.5.3 Extension of Time	Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.
2.5.4 Payments	During the period of their inability to perform the Services as a result of an event of Force Majeure, the Service Provider shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.
2.6 Termination	
2.6.1 By the Employer	The Employer may terminate this Contract, by not less than thirty (30) days’ written notice of termination to the Service Provider, to

be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Sub-Clause 2.6.1:

- (a) if the Service Provider does not remedy a failure in the performance of its obligations under the Contract, within thirty (30) days after being notified or within any further period as the Employer may have subsequently approved in writing;
- (b) if the Service Provider become insolvent or bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (c) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than sixty (60) days; or
- (d) if the Service Provider, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract pursuant to GCC clause 9, then the Employer may after giving fourteen days written notice to the Service provider, terminate the contract and expel him from the site.

**2.6.2 By the
Service
Provider**

The Service Provider may terminate this Contract, by not less than thirty (30) days' written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs (a) and (b) of this Sub-Clause 2.6.2:

if the Employer fails to pay any monies due to the Service Provider pursuant to this Contract and not subject to dispute pursuant to Clause 7 within forty-five (45) days after receiving written notice from the Service Provider that such payment is overdue; or

if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than sixty (60) days.

**2.6.3 Suspension
of Loan or
Credit**

In the event that the World Bank suspends the loan or Credit to the Employer, from which part of the payments to the Service Provider are being made:

The Employer is obligated to notify the Service Provider of such suspension within 7 days of having received the World Bank's suspension notice.

If the Service Provider has not received sums due to by the due date stated in the PCC in accordance with Sub-Clause 6.5 the Service Provider may immediately issue a 14 day termination notice.

**2.6.4 Payment
upon
Termination**

Upon termination of this Contract pursuant to Sub-Clauses 2.6.1 or 2.6.2, the Employer shall make the following payments to the Service Provider:

- (a) remuneration pursuant to Clause 6 for Services satisfactorily performed less advances or other recoveries or any taxes to be deducted at source(TDS) as per applicable law, prior to the effective date of termination;
- (b) except in the case of termination pursuant to paragraphs (a), (b), (d) of Sub-Clause 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel.

3. Obligations of the Service Provider

3.1 General

The Service Provider shall perform the Services in accordance with the Specifications and the Activity Schedule, and carry out its obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The Service Provider shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Employer, and shall at all times support and safeguard the Employer's legitimate interests in any dealings with Sub-Service Providers or third parties.

3.2 Conflict of Interest

3.2.1 Service Provider Not to Benefit from Commissions and Discounts.

The remuneration of the Service Provider pursuant to Clause 6 shall constitute the Service Provider's sole remuneration in connection with this Contract or the Services, and the Service Provider shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Service Provider shall use their best efforts to ensure that the Personnel, any Sub-Service Providers, and agents of either of them similarly shall not receive any such additional remuneration.

3.2.2 Service Provider and Affiliates Not to be Otherwise Interested in Project

The Service Provider agree that, during the term of this Contract and after its termination, the Service Provider and its affiliates, as well as any Sub-Service Provider and any of its affiliates, shall be disqualified from providing goods, works, or Services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.

3.2.3 Prohibition of Conflicting Activities

Neither the Service Provider nor its Sub-Service Providers nor the Personnel shall engage, either directly or indirectly, in any of the following activities:

- (a) during the term of this Contract, any business or professional activities in India which would conflict with the activities assigned to them under this Contract;
- (b) during the term of this Contract, neither the Service Provider nor their Sub-Service Providers shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract;
- (c) after the termination of this Contract, such other activities as may be **specified in the PCC**.

3.3 Confidentiality The Service Provider, its Sub-Service Providers, and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer's business or operations without the prior written consent of the Employer.

3.4 Insurance to be Taken Out by the Service Provider The Service Provider (a) shall take out and maintain, and shall cause any Sub-Service Providers to take out and maintain, at its (or the Sub-Service Providers', as the case may be) own cost but on terms and conditions approved by the Employer, insurance against the risks, and for the coverage, as shall be **specified in the PCC**; and (b) at the Employer's request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums have been paid.

3.5 Service Provider's Actions Requiring Employer's Prior Approval The Service Provider shall obtain the Employer's prior approval in writing before taking any of the following actions:

- (a) entering into a subcontract for the performance of any part of the Services,
- (b) appointing such members of the Personnel not listed by name in Appendix C ("Key Personnel and Sub-Service Providers"),
- (c) changing the Program of activities; and
- (d) any other action that may be **specified in the PCC**.

3.6 Reporting Obligations The Service Provider shall submit to the Employer the reports and documents specified in Appendix B in the form, in the numbers, and within the periods set forth in the said Appendix.

3.7 Documents Prepared by the Service Provider to Be the Property of the Employer All plans, drawings, specifications, designs, reports, and other documents and software submitted by the Service Provider in accordance with Sub-Clause 3.6 shall become and remain the property of the Employer, and the Service Provider shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to the Employer, together with a detailed inventory thereof. The Service Provider may retain a copy of such

documents and software. Restrictions about the future use of these documents, if any, shall be **specified in the PCC**.

Liquidated Damages

3.8.1 Payments of Liquidated Damages

The Service Provider shall pay liquidated damages to the Employer at the rate per day **stated in the PCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount **defined in the PCC**. The Employer may deduct liquidated damages from payments due to the Service Provider. Payment of liquidated damages shall not affect the Service Provider's liabilities.

Time is the essence of the contract and payment or deduction of liquidated damages shall not relieve the contractor from his obligation to complete the work as per agreed construction program and milestones, or from any of the other contractor's obligations and liabilities under the contract.

3.8.2 Correction for Over-payment

If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Service Provider by adjusting the next payment certificate. The Service Provider shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in Sub-Clause 6.5.

3.8.3 Lack of performance penalty

If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, a penalty for Lack of performance will be paid by the Service Provider. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as described in Sub-Clause 7.2 and **specified in the PCC**.

Performance Security

The Service Provider shall provide the Performance Security to the Employer no later than the date specified in the Letter of acceptance. The Performance Security shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in Indian rupees. The performance Security shall be valid until a date 28 days from the Completion Date of the Contract

4. Service Provider's Personnel

4.1 Description of Personnel

The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Service Provider's Key Personnel are described in Appendix C. The Key Personnel and Sub-Service Providers listed by title as well as by name in Appendix C are hereby approved by the Employer.

4.2 Removal and/or Replacement of Personnel

- (a) Except as the Employer may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Service Provider, it becomes necessary to replace any of the Key Personnel, the Service Provider shall provide as a replacement a person of equivalent or better qualifications.
- (b) If the Employer finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Service Provider shall, at the Employer's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Employer.
- (c) The Service Provider shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

5. Obligations of the Employer

5.1 Assistance and Exemptions

The Employer shall use its best efforts where legally warranted, to ensure that the Government shall provide the Service Provider such assistance and exemptions as **specified in the PCC**.

5.2 Taxes

The rates quoted by the Service Provider shall be deemed to be inclusive of the Vat, Sales and other taxes that the Service provider will have to pay for the performance of this Contract. The Employer will perform such duties in regard to the deduction of such taxes at source [TDS] as per applicable law.

5.3 Services and Facilities

The Employer shall make available to the Service Provider the Services and Facilities listed under Appendix F.

6. Payments to the Service Provider

6.1 Lump-Sum Remuneration

The Service Provider's remuneration shall not exceed the Contract Price and shall be a fixed lump-sum including all Sub-Service Providers' costs, and all other costs incurred by the Service Provider in carrying out the Services described in Appendix A. The Contract Price may only be increased above the amounts stated in Sub-Clause 6.2 if the Parties have agreed to additional payments in accordance with Sub-Clauses 2.4 and 6.3.

6.2 Contract Price

The price payable in Indian rupees is **set forth in the PCC**.

6.3 Payment for Additional Services, and Performance

For the purpose of determining the remuneration due for additional Services as may be agreed under Sub-Clause 2.4, a breakdown of the lump-sum price is provided in Appendix E.

Incentive Compensation	If the PCC so specify, the service provider shall be paid performance incentive compensation as set out in the Performance Incentive Compensation appendix.
Terms and Conditions of Payment	Payments will be made to the Service Provider according to the payment schedule stated in the PCC . Unless otherwise stated in the PCC , the advance payment (Advance for Mobilization, Materials and Supplies) shall be made against the provision by the Service Provider of a bank guarantee for the same amount, and shall be valid for the period stated in the PCC . Any other payment shall be made after the conditions listed in the PCC for such payment have been met, and the Service Provider have submitted an invoice to the Employer specifying the amount due.
6.5 Interest on Delayed Payments	If the Employer has delayed payments beyond fifteen (15) days after the due date stated in the PCC , interest shall be paid to the Service Provider for each day of delay at the rate specified in the PCC .
6.6 Price Adjustment	<p>6.6.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the PCC. If so provided, the amounts certified in each payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:</p> $P_c = A_c + B_c L_{mc}/L_{oc} + C_c I_{mc}/I_{oc}$ <p>Where:</p> <p>P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency “c”.</p> <p>A_c, B_c and C_c are coefficients specified in the PCC, representing: A_c the nonadjustable portion; B_c the adjustable portion relative to labor costs and C_c the adjustable portion for other inputs, of the Contract Price payable in that specific currency “c”; and</p> <p>L_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and L_{oc} is the index prevailing 28 days before Bid opening for labor; both in the specific currency “c”.</p> <p>I_{mc} is the index prevailing at the first day of the month of the corresponding invoice date and I_{oc} is the index prevailing 28 days before Bid opening for other inputs payable; both in the specific currency “c”.</p> <p>6.6.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.</p>

6.7 Dayworks

- 6.7.1 If applicable, the Daywork rates in the Service Provider's Bid shall be used for small additional amounts of Services only when the Employer has given written instructions in advance for additional services to be paid in that way.
- 6.7.2 All work to be paid for as Dayworks shall be recorded by the Service Provider on forms approved by the Employer. Each completed form shall be verified and signed by the Employer representative as indicated in Sub-Clause 1.6 within two days of the Services being performed.
- 6.7.3 The Service Provider shall be paid for Dayworks subject to obtaining signed Dayworks forms as indicated in Sub-Clause 6.7.2

7. Quality Control

7.1 Identifying Defects

7.1.1 The principle and modalities of Inspection of the Services by the Employer shall be as **indicated in the PCC**. The Employer shall check the Service Provider's performance and notify him of any Defects that are found specifying a time by which it should be corrected. Such checking shall not affect the Service Provider's responsibilities. The Employer may instruct the Service Provider to search for a Defect and to uncover and test any service that the Employer considers may have a Defect. Defect Liability Period is as **defined in the PCC**.

7.1.2 The Service Provider shall permit the Employer's Technical auditor to check the Service provider's work and notify the Employer and Service provider of any defects that are found. Such a check shall not affect the Service Provider's or the Employer's responsibility as defined in the Contract Agreement

Correction of Defects, and Lack of Performance Penalty

- (a) The Employer shall give notice to the Service Provider of any Defects (specifying a time limit by which it should be corrected) before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.
- (b) Every time notice a Defect is given, the Service Provider shall correct the notified Defect within the length of time specified by the Employer's notice.
- (c) If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, the Service Provider will pay this amount, and a Penalty for Lack of Performance calculated as described in Sub-Clause 3.8.

8. Settlement of Disputes

8.1 Amicable Settlement

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

8.2 Dispute Settlement

8.2.1 If any dispute arises between the Employer and the Service Provider in connection with, or arising out of, the Contract or the provision of the Services, whether during carrying out the Services or after their completion, the matter shall be referred to the Adjudicator/Dispute Review Expert (DRE) within 14 days of the notification of disagreement of one party to the other.

8.2.2 The Adjudicator/DRE shall give a decision in writing within 28 days of receipt of a notification of a dispute.

8.2.3 The Adjudicator shall be paid daily at the rate **specified in the BDS and PCC**, together with reimbursable expenses of the types **specified in the PCC**, and the cost shall be divided equally between the Employer and the Service Provider, whatever decision is reached by the Adjudicator/DRE. Either party may refer a decision of the Adjudicator/DRE to an Arbitrator within 28 days of the Adjudicator/DRE's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator/DRE's decision will be final and binding.

8.2.4 The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in the place **shown in the PCC**.

The Arbitrator shall give a decision in writing within 120 days of start of the proceedings except otherwise agreed to by the Parties. The Arbitrators shall entertain only those issues which have been earlier referred to the Adjudicator/DRE and either party is dissatisfied with the decision given by the Adjudicator/DRE

8.2.5 Should the Adjudicator/DRE resign or die, or should the Employer and the Service Provider agree that the Adjudicator is not functioning in accordance with the provisions of the Contract; a new Adjudicator/DRE will be jointly appointed by the Employer and the Service Provider. In case of disagreement between the Employer and the Service Provider, within 30 days, the Adjudicator/DRE shall be designated by the Appointing Authority **designated in the PCC** at the request of either party, within 14 days of receipt of such request.

9. Corrupt and Fraudulent Practices

- 9.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Appendix IX to the GCC.
- 9.2 The Employer requires the Service Provider to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

APPENDIX TO GENERAL CONDITIONS
Bank's Policy- Corrupt and Fraudulent Practices

(Text in this Appendix shall not be modified)

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011:

“Fraud and Corruption:

- 1.16 It is the Bank's policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, Service Providers and their agents (whether declared or not), sub-Service Providers, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.²⁰ In pursuance of this policy, the Bank:
- (a) Defines, for the purposes of this provision, the terms set forth below as follows:
- (i) “Corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;²¹
- (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;²²

²⁰ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

²¹ For the purpose of this sub-paragraph, “another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

²² For the purpose of this sub-paragraph, “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

- (iii) “Collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;²³
- (iv) “Coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;²⁴
- (v) “Obstructive practice” is
 - (aa) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
 - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under paragraph 1.16(e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-Service Providers, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- (c) will declare mis -procurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- (d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank’s sanctions procedures,²⁵ including by publicly declaring such firm or

23 For the purpose of this sub-paragraph, “parties” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

24 For the purpose of this sub-paragraph, “party” refers to a participant in the procurement process or contract execution.

25 A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank’s sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early

individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated²⁶;

- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and Service Providers, and their sub-Service Providers, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.”

Section VIII. Particular Conditions of Contract

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.1	Purchaser and the Service Provider will make every effort to resolve amicably, by direct negotiation, any disagreement or dispute arising between them under or in connection with the agreement/order. If any dispute arises between parties on aspects not covered by this agreement, or the construction or operation thereof, or the rights, duties or liabilities under these except as to any matters the decision of which is specially provided for the general or the special conditions, such dispute will be referred to the arbitrator appointed by NWIC, and the award of the arbitration will be final and binding on both the parties. The arbitration proceedings will be held in New Delhi, India.
1.1 (c)	“Bank” means <i>International Bank for Reconstruction and Development (IBRD)</i>
1.1(e)	The contract name is Selection of Service Provider for providing professional services (IT, software development, Remote Sensing & GIS etc.) for development, improvement, operation, and maintenance of WIMS, India-WRIS, State-WRIS, GAL and ICCC.
1.1(h)	The Employer is Director, NWIC, DoWR, RD &GR, New Delhi.
1.1(m)	The Member in Charge in case of JV to be intimated by the firms as per Clause 5.4 of Section-I, ITB
1.1(p)	The Service Provider is <i>[insert name]</i>
1.4	The addresses are:

temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

26 A nominated sub-Service Provider, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

	<p>Employer: Director, NWIC, 4th Floor, Sewa Bhavan, R K Puram, New Delhi-110066 Ph: 01129583605 Email: dir-nwic-mowr@gov.in</p> <p>Service Provider:_____</p>
1.6	<p>The Authorized Representatives are: For the Employer: Director, NWIC, 4th Floor, Sewa Bhavan, R K Puram, New Delhi-110066 Ph: 01129583605 Email: dir-nwic-mowr@gov.in..... For the Service Provider:_____</p>
2.1	The date on which this Contract shall come into effect is Date of signing of Contract.
2.2.2	The Starting Date for the commencement of Services is: from the date of deployment of first professional.
2.3	The Intended Completion Date is: 11 Months from date of signing of contract or 28 th February 2025, whichever is earlier.
	<p>a) During the currency of the contract, number of professionals may vary to the extent of (+/-)10 percent of the approved number of professionals within the overall approved monthly contract cost without any extra financial implications as defined under clause 2.3 of General Conditions of Contract (GCC/PCC).</p> <p>b) The Qualifications of the professionals as mentioned in Appendix A has been specified based on present requirement. However, during the course of contract, there may be a requirement of expert with educational and professional qualification different than specified in Appendix A. The changed qualification would be accommodated in the appropriate existing designation and pay scale.</p> <p>c) The contract may be further extended beyond the intended completion date defined under clause 2.3 of GCC/PCC for a period of another 12 months or part thereof at same rates & terms & conditions with the approval of the competent authority of Employer. Performance bank guarantee shall be suitably be extended for an amount calculated on the basis of contract amount for the extended period.</p> <p>d) In case of extension of contract beyond the intended completion period, as mentioned in PCC Clause 2.3, an increment may be given</p>

	on completion of 12 months to those personnel/professionals deployed under this contract. Subject to maximum of 15 percent (%).			
3.2.3	Activities prohibited after termination of this Contract are: Use or transmit in any form of data supplied by employer or data/services provided by the contractor/service provider to the employer. The Service Provider will not use, transfer, propagate any of the deliverables, information, source code, material information, any intellectual property etc.			
3.4	<p>The risks and coverage by insurance shall be:</p> <p>(i) Employer’s liability and workers’ compensation <i>in accordance with the applicable law in India</i>;</p>			
3.5(d)	The other actions are NA			
3.7	<p>Restrictions on the use of documents prepared by the Service Provider are:</p> <p>All data, documents, reports, software developed, works carried out whether routine or IPR related, generated during the Contract shall be exclusive property of Purchaser and the Service Provider or professionals provided by service provider shall have no claims over it. The Service Provider & professionals provided by service provider shall be bound by restrictions imposed by Security Classification of such data, documents and reports.</p> <p>Service provider or professionals provided by service provider shall not retain any copy of the documents and software or any other works carried out for purchaser.</p>			
3.8.1 & 3.8.3	<p>The employer is entitled to impose liquidated damages/penalty on the service provider. Penalties shall be capped at 10% of the bill generated for that month. If any SLA is breached beyond 3 instances in any billing period, then same shall be treated as a breach of contract and the employer will have full rights to terminate the contract after giving a notice of 30 days.</p> <p><u>Penalties for Non-Compliance to Service Level Agreement</u></p> <p>Penalties will be levied on the service provider for the violation of service level agreement of the contract as mentioned in the following page:</p> <table><tr><td>#</td><td>Service level agreement</td><td>Penalty for non-compliance</td></tr></table>	#	Service level agreement	Penalty for non-compliance
#	Service level agreement	Penalty for non-compliance		

	1	Full deployment of professionals within T+15 days from date of signing of contract	<p>Upto 15 days: No Penalty</p> <p>More than 15 days: Penalty of 0.5% of the total contract value for delay of each week beyond 15 days from the date of signing of contract, with capping of 2% of contract value. Post this it will lead to contract termination.</p>
	2	Non-reporting of any professional mentioned in the contract as per the date of joining.	<p>Up to 10 Days, @0.5% per day of the total value (excluding GST etc.) of that resource mentioned in the order.</p> <p>Beyond 10 days @1% per day of the total value (excluding GST etc.) of that resource mentioned in the order.</p> <p>Beyond 30 days, NWIC will be free to cancel the order and get the work done through alternate sources at the cost and risk of the defaulting Service Provider. The order will be cancelled and order cancellation charges @10% of the work order value will be applicable.</p>
	3	Replacement/ Closure of new position to be completed within the 15 days of the employer raising the replacement request.	<ul style="list-style-type: none"> Up to 15 days no penalty Beyond 1 week, 2% of the per month resource cost every week up to T+10 weeks. Delay post 10 weeks, may lead to termination of contract.

	4.	If a professional is absent for 7 consecutive working days without any reasonable cause, then the resource will have to be replaced if required.	<p>Substitute within 7 days with equivalent resource failing which, @ 0.5% per day of the total value of the absent resources up to 15 days.</p> <p>Beyond 15 days, @1% per day of the total value of the absent resources up to 30 days.</p> <p>Beyond 30 days, cancellation of the contract with cancellation charges @ 10% of the work order value.</p>
	5.	If any professional fail to meet the performance benchmark set forth by the employer	<p>One instance by a particular professional(s): No penalty</p> <p>Two instances by a particular professional (s) : 10% of the professional(s) salary capped at 5% of the monthly bill amount of the service provider and the immediate replacement of the particular professional(s) by the service provider.</p>
T stands for date of signing of contract.			
3.9	The performance security shall be 10% of the contract amount and shall be valid beyond 60 days from the date of completion of the contract.		
5.1	The assistance and exemptions provided to the Service Provider are: The professionals deployed by the Services Provider shall be provided amenities as specified in Section VI..		
5.2	<p>Replace Clause 5.2 by</p> <p>The rates quoted by the Service Provider shall be deemed to be inclusive of the GST and other taxes that the Service Provider will have to pay for the performance of this Contract law.</p> <p>All liabilities towards GST shall have to be discharged by the Service Provider.</p>		

6.2	The amount in INR is--
6.3.2	The performance incentive paid to the Service Provider shall be: <i>Not Applicable</i>
6.4	<p>Payments shall be made according to the following schedule:</p> <ul style="list-style-type: none"> (i) Advance for Mobilization, Materials and Supplies: None (ii) Monthly payments in accordance with performance review and attendance certification by the screening committee consisting of Purchaser's officers shall be made following the process as below: <ul style="list-style-type: none"> (a) Performance of the expert will be reviewed by a committee of purchaser and the committee would submit its report along with attendance within 5 working days following the month end. (b) Based on committee's recommendation and attendance the service provider shall prepare the monthly salary bill of the professionals as per the approved gross salary specified in the contract. No deduction other than statutory deductions such as TDS on Income Tax, Professional Tax and leave beyond permitted days are allowed to be made from salary to be paid to the expert. The net salary is to be paid within 10th of the following the month for which remuneration have been claimed, irrespective of the date on which the payment is received from purchaser. (c) Monthly invoice would be submitted in triplicate by the Service Provider to the authorized representative of the Purchaser within 5 days of receipt of screening committee's recommendation & attendance clearly showing the gross salary, service charges calculated on gross salary at approved percentage and applicable GST. Along with the invoice, salary bill of all the professionals shall be enclosed clearly showing breakup of gross salary, statutory and other permitted deductions made and net salary. (d) Service provider is also required to submit along with invoice amount credited to each expert towards previous month salary (for cross verification), with details of the bank account (Bank Name, IFSC Code & account No.) & date of payment. Invoice not accompanied with this information shall be returned and not processed for payment. (e) Service Provider shall make all payments to Professionals only electronically and will provide salary slips for the corresponding month to the employee.

	(f) Payment of Local Taxes such as GST will be against valid Invoice as per GST ACT & Rules and submission of GST Registration Certificate along with declaration that GST Registration is valid and all liabilities towards GST have been discharged by the Service Provider. GST amount will be paid after 30 days of submission of valid Invoice and all required documents and declaration by Service Provider.
6.5	Payment shall be made within 30 days of receipt of the invoice and the relevant documents specified in Sub-Clause 6.4, and within 60 days in the case of the final payment.
6.6.1	No Price adjustment is allowed.
7.1	The principle and modalities of inspection of the Services by the Purchaser are as follows: The professionals provided by the Service Provider shall be inspected by the Purchaser/ authorized personnel for work performance, punctuality, conduct & work ethics in accordance with Government rules and regulations.
8.2.3	The daily fee for this proposed Adjudicator shall be INR 5000 per day all inclusive.
8.2.4	Purchaser and the Service Provider will make every effort to resolve amicably, by direct negotiation, any disagreement or dispute arising between them under or in connection with the agreement/order. If any dispute arises between parties on aspects not covered by this agreement, or the construction or operation thereof, or the rights, duties or liabilities under these except as to any matters the decision of which is specially provided for the general or the special conditions, such dispute will be referred to the arbitrator appointed by NWIC, and the award of the arbitration will be final and binding on both the parties. The arbitration proceedings will be held in New Delhi, India.
8.2.5	Appointing Authority for the Adjudicator/Dispute Review Expert: Director, NWIC Daily rate and types of reimbursable expenses to be paid to the Adjudicator/Dispute Review Expert: <i>daily fees not less than Rs.5000 per day all inclusive.</i>

Appendices

Appendix A — Job Description of the professionals sought for the services at NWIC

Job Description		
#	Parameter	Description
1.	Designation	Solution Architect
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Solution Architect will be responsible for designing, modifying and testing technical architecture. S/he should be able to provide supervision and guidance to the development teams. S/he shall also be able to assess the business impact that certain technical choices have.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Design software systems with java technologies and ensure compliance to all architecture requirements. • Ensure highest level of technical quality, security, scalability, interoperability and stability in all applications that are developed. • Experience working with complex, large scale, high-transactional applications is highly desirable. • Coordinate with various departments and analyze requirements of architectural team. • Develop solutions for various components and recommend changes for various applications. • Design architecture for various different components and validate tools. • Participate in architectural meetings and analyze all technical requirements for applications. • Establish architectural methodology of all deliverables and develop architectural principles and standards for various IT groups. • Monitor application architecture and ensure appropriate implementation of all solutions. • Coordinate with architects and analysts and maintain technical knowledge. • Investigate, analyze and document reported defects and ability to handle ambiguity and collaborate across multiple groups and disciplines • Use tools and methodologies to create representations for functions and user interface of desired product • Develop high-level product specifications with attention to system integration and feasibility. • Define all aspects of development
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> • Very strong experience in Java and Spring Boot, Spring JPA • Strong understanding of relational databases (writing SQL/Stored Procedures) • Confident in using Git and GitLab CI/CD Pipeline • Experience working with and applying Design patterns to solve problems (Design Pattern Driver Implementation). • Provide supervision and direction to team members and staff

		<ul style="list-style-type: none"> • Delegate, coach, coordinate and lead co-workers and project team members. • Knowledge of Angular 6 • Experience of using Apache Kafka, Docker and Kubernetes
6.	Desired Technical Skill Set	<ul style="list-style-type: none"> • Experience on Docker, React etc. • Expertise in problem solving and debugging complex systems. • Patient, flexible attitude, ability to perform under pressure. • A commitment to quality and a thorough approach to the work. • Ability to work well within a team or alone.
7.	Experience	Overall, 10+ years professional experience in large IT organization with at least 5+ year in cloud Architecture and implementation experience.
8.	Soft Skill Set	<ul style="list-style-type: none"> • Demonstrate problem solving, communication and organizational skills • Good written and verbal communication including documentation skills • Ability to work in a team and on an individual level.
9.	Minimum Qualification	B.E./ B.Tech. in IT/CS (or) MCA/ other equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Database Architect
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	A database architect will build and maintain a database by identifying structural and installation solutions. They work with database administrators and analysts to secure easy access to data.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Creating database solutions, evaluating requirements, and preparing design reports • Design and implement effective database solutions and models to store and retrieve company data. • Examine and identify database structural necessities by evaluating client operations, applications, and programming. • Assess database implementation procedures to ensure they comply with internal and external regulations. • Install and organize information systems to guarantee company functionality. • Prepare accurate database design and architecture reports for management and executive teams. • Oversee the migration of data from legacy systems to new solutions. • Monitor the system performance by performing regular tests, troubleshooting, and integrating new features. • Recommend solutions to improve new and existing database systems. • Educate staff members through training and individual support. Offer support by responding to system problems in a timely manner.
5.	Mandatory Technical Skill Set	PostgreSQL
6.	Desired Technical Skill Set	PostgreSQL, PostgreSQL, MS SQL Server
7.	Experience	Overall 10+ years' experience
8.	Soft Skill Set	<ul style="list-style-type: none"> • Strong knowledge of database structure systems and data mining. • Excellent organizational and analytical abilities. • Outstanding problem solver. • Good written and verbal communication skills.
9.	Minimum Qualification	Bachelors in Engineering/ Technology or any other equivalent degree or MCA with BCA / equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Database Administrator
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	A database administrator (DBA) will be the information technician responsible for directing and performing all activities related to maintaining a successful database environment.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Design, develop and implement database systems based on client requirements. • Administration of PostgreSQL Windows server administration Understanding of storage systems. • Build database systems of high availability and quality depending on each end user's specialized role • Design and implement database in accordance to end user's information needs and views • Define users and enable data distribution to the right user, in appropriate format and in a timely manner • Use high-speed transaction recovery techniques and backup data • Minimize database downtime and manage parameters to provide fast query responses • Provide proactive and reactive data management support and training to users • Determine, enforce and document database policies, procedures and standards • Perform tests and evaluations regularly to ensure data security, privacy and integrity • Monitor database performance, implement changes and apply new patches and versions when required • Optimize database systems for performance efficiency. • Perform space management and capacity planning for database systems. • Ensure data quality and integrity in databases. • Identify any issues related to database performance and provide corrective measures. • Perform data back-up and archival on regular basis. • Test databases and perform bug fixes. • Troubleshoot database related issues in a timely fashion. • Evaluate existing database and recommend improvements for performance efficiency. • Develop best practices for database design and development activities. • Coordinate & work closely with the project team to design and implement features.
5.	Mandatory Technical Skill Set	PostgreSQL
6.	Desired Technical Skill Set	PostgreSQL, MS SQL

7.	Experience	Total 8+ years of experience with minimum 5 years' experience in managing PostgreSQL
8.	Soft Skill Set	<ul style="list-style-type: none"> • Good written and verbal communication including documentation skills. • Ability to work in a team and on an individual level. • Client handling.
9.	Minimum Qualification	Bachelors in Engineering/ Technology or any other equivalent degree or MCA with BCA / equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Team Lead (Software Development) - WIMS
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Team Lead-WIMS (Software Dev) will be responsible for working on both front-end and back-end development processes of WIMS.
4.	Role & Responsibility	<ul style="list-style-type: none"> • lead the team to design, develop, and maintain fully-fledged and functioning platforms. • Staying abreast of existing and future developments in web applications and programming languages. • Collaborate with developers and project manager to create innovative software solutions. • Create new, dynamic, front-end, and backend software products and apps that are dynamic and visually appealing. • Able to develop entire architecture, responsive design, user interaction, and user experience. • The ability to use databases, proxies, APIs, version control systems, and third-party applications. • Design a plan for stability, scalability, performance optimization, and ongoing improvement. • Keep track of new development-related tools, frameworks, methods, and architectures. • The team lead is in charge of creating APIs depending on the architecture of the applications. • Providing GIS solutions for the development of applications. • Seeing through a development task from conception to finished product. • Meeting both technical and consumer needs. • Co-ordination with other teams to ensure quality and functioning of the system
5.	Mandatory Technical Skill Set	Proficiency with fundamental front-end languages such as JAVA, and database i.e., PostgreSQL, MySQL, C#, JavaScript, JQuery, Java, Java frameworks such as Spring boot, spring MVC, hibernate, Python, Angular7, Bootstrap, CSS/HTML, JSON, and RESTful services.
6.	Desired Technical Skill Set	<ul style="list-style-type: none"> • Experience in geographic platform such as ArcGIS and opensource GIS platform. • Understanding fundamental design principles behind micro services and scalable applications. • Knowledge of understanding of code versioning tools such as Git or SVN.

7.	Experience	10+ Years professional experience in large IT organization
8.	Soft Skill Set	<ul style="list-style-type: none"> • Demonstrate problem solving, communication and organizational skills • Good written and verbal communication including documentation skills. • Ability to work in a team and on an individual level.
9.	Minimum Qualification	B.E./ B.Tech. in IT/CS with MCA/M-tech or other equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Team Lead (Software Development) - India-WRIS
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Team lead will be responsible for managing development & O&M activities and utilize experience in identifying and resolving team issues to meet development goals.
4.	Role & Responsibility	<ul style="list-style-type: none"> Team lead will be responsible for managing development & O&M activities and utilize experience in identifying and resolving team issues to meet development goals. Responsible for technical design specifications in alignment with software principles, standards, guidelines, blueprints, existing frameworks, and components. Identification and documentation of solutions of various components of development Will Perform code reviews to ensure quality, performance, and security, gathering of technical requirements, gathering of additional business requirements, coding and performance testing in development server as needed. Provides PoC's when necessary: to identify and mitigate areas of technical risk; to provide contrast and analysis of differing technical approaches and ensure compliance with established architecture, design patterns, policies, standards, and best practices. Responsible for working on both front-end and back-end development processes. This person will lead the team to design, develop, and maintain fully-fledged and functioning platforms. Able to develop entire architecture, responsive design, user interaction, and user experience. The team lead is in charge of creating APIs depending on the architecture of the applications. Providing GIS solutions for the development of applications.
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> Proficiency with fundamental front-end languages such as HTML, CSS, and JavaScript. Proficiency with Angular JS, Python and database i.e., PostgreSQL, MySQL, PostgreSQL etc,
6.	Desired Technical Skill Set	<ul style="list-style-type: none"> Familiarity with code versioning tools such as Git hub, SVN. Knowledge in ESRI JavaScript APIs
7.	Experience	10+ Years professional experience in large IT organization
8.	Soft Skill Set	<ul style="list-style-type: none"> Demonstrate problem solving, communication and organizational skills Good written and verbal communication including documentation skills. Ability to work in a team and on an individual level.
9.	Minimum Qualification	B.E./ B.Tech. in IT/CS with MCA/M-tech or other equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Team Lead - Remote Sensing & GIS
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Responsible for Prepare project timelines, resource allocation to projects, manage escalations and ultimately timely delivery with technical knowledge of GIS solutions to best support project/client requirements.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Perform work distribution and management of team members • Follow development/production and implementation procedures, including the development and execution of test plans, change control in ARC GIS server and also ArcGIS portal, Arc Enterprise server, Database management • Effectively manage multiple task and clients simultaneously while continuing to provide high quality delivery and support • Help to provide high quality, timely GIS advanced technical support for project team • Leads others in adhering to existing system processes and contributing to the app's improvement • Develop, maintain, and administer task automation workflows for GIS analysis, production and data management
5.	Mandatory Technical Skill Set	Image Processing: ERDAS Imagine, Geomatica, ENVI GIS Software: ArcGIS map, ARCGIS pro, MapInfo, ArcSWAT, QGIS, ARC GIS Enterprise Database: Postgres, ArcGIS datastore
6.	Desired Technical Skill Set	Functional knowledge of Python, non-RDBMS solutions like MongoDB, Cassandra, QGIS, Geo-Server
7.	Experience	Minimum, 10+ Years of research & development experience in core Remote Sensing and GIS and its in different branches of Natural Resources like Surface/ Ground Water, Administrative, Demographic, climatic parameters including rainfall, temperature, Soil, Irrigation, Forestry, Land Resource, Agriculture, Hydrology, Urban Planning and water resource assets etc.
8.	Soft Skill Set	<ul style="list-style-type: none"> • Excellent written and verbal communication skills. • Strong initiative and solid judgment abilities/skills • Problem Solving and Critical Thinking • Leadership, Communication skills, Time Management
9.	Minimum Qualification	Masters or equivalent degree in Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field Candidates with professional certification from ERDAS, ArcGIS ESRI is preferred.
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	ICCC (Services) Team lead
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	The ICCC In – charge’s primary objective is to rapidly resolve technology issues that are reported through the ticketing system, Chatbot, Mail and Call. The position requires a hands-on technical leader who is responsible for delivering a world class support experience to all the Stakeholders of the System.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Manage All Help Desk Operations • Deliver frontline technical support for the users of the system and other stakeholders within MoJS . • Foster positive end-user relationships and drive stakeholder’s satisfaction. • Promote continuous improvement of Tier 1 support, desktop administration for all stakeholders • Service Request / Call / Incident Management <ul style="list-style-type: none"> ○ Logging, categorizing, and prioritizing all calls ○ Providing first-line investigation and problem diagnosis ○ Resolving incidents or service requests when first contacted or whenever possible ○ Escalation and resolution of software issues to the information systems/development team ○ Closing resolved incidents, requests, and other calls • Monitoring ticket volume and performance metrics while supporting the team in exceeding expectations, including corrective action if necessary • Gather and report operational metrics, accomplishments, and priorities for weekly EPMC meeting(s) • Establish and implement ITIL standards • Define team goals and lead staff to achieving desired results, and while being accountable for team performance. • Develop and maintain Technical Support/knowledge base.
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> • MS Office Suite
6.	Desired Technical Skill Set	<ul style="list-style-type: none"> • Any Helpdesk software COTS product • Knowledge of Chatbot services
7.	Experience	<ul style="list-style-type: none"> • 10 Years professional experience in large IT organization • Proven experience in Service Request, Call, Incident Management
8.	Soft Skill Set	<ul style="list-style-type: none"> • Strong verbal and written communication skills. • Effectively works in teams as well as independently.
9.	Minimum Qualification	<ul style="list-style-type: none"> • B.E./ B. Tech/ M. Tech/ MCA or other equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Senior Software Developer
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	A Full-Stack developer will be a professional responsible for working on both front-end and back-end development processes. They design, develop, and maintain fully-fledged and functioning platforms with databases or servers.
4.	Role & Responsibility	<ul style="list-style-type: none"> Responsibilities include designing user interactions on websites, developing servers, and databases for website functionality, and coding for mobile platforms. Staying abreast of developments in web applications and programming languages. Collaborate with development teams and product managers to create innovative software solutions. Keeping up with the latest advancements in programming languages and server apps. Create new, dynamic, front-end, and backend software products and apps that are dynamic and visually appealing. Able to develop entire architecture, responsive design, user interaction, and user experience. The ability to use databases, proxies, APIs, version control systems, and third-party applications. Offer suggestions for ongoing improvement, and add or remove features as necessary. Design a plan for stability, scalability, performance optimization, and ongoing improvement. Keep track of new development-related tools, frameworks, methods, and architectures. The developer is in charge of creating APIs depending on the architecture of the production application. Knowledge of MVC frameworks. Web based GIS Applications with ESRI ArcGIS Providing GIS solutions for both external and internal clients. All operating systems, including Windows, macOS, and Linux, must support applications without issues. Seeing through a project from conception to finished product. Meeting both technical and consumer needs.
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> Proficiency with fundamental front-end languages such as HTML, CSS, and JavaScript. Familiarity with JavaScript frameworks such as Angular JS, VueJS, Semantic UI.

		<ul style="list-style-type: none"> • PL/SQL query languages • Familiarity with GIS based applications • Proficiency with server-side languages such as Python, Ruby, PHP and .Net • Familiarity with database technology such as PostgreSQL • Familiarity with code versioning tools such as Github, SVN.
6.	Desired Technical Skill Set	ArcGIS, Java or .Net
7.	Experience	Overall 9+ years' experience
8.	Soft Skill Set	<ul style="list-style-type: none"> • Excellent organizational and analytical abilities. • Outstanding problem solver. • Good written and verbal communication skills.
9.	Minimum Qualification	<ul style="list-style-type: none"> • Bachelors in Computer Science Engineering/ Technology or any other equivalent degree <p style="text-align: center;">or</p> <ul style="list-style-type: none"> • MCA with BCA / equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Junior Software Developer
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Junior Software Developers will assist the development team with all aspects of software design and coding. Their primary role is to learn the codebase, attend design meetings, write basic code, fix bugs,
4.	Role & Responsibility	<ul style="list-style-type: none"> • Staying abreast of developments in web applications and programming languages. • Writing and maintaining code. • Keeping up with the latest advancements in programming languages and server apps. • Offer suggestions for ongoing improvement, and add or remove features as necessary. • Knowledge of MVC frameworks. • Web based GIS Applications with ESRI ArcGIS • Providing GIS solutions for both external and internal clients. • Designing new software programs, websites, and applications. • Writing advanced programming code. • Reviewing updated software systems.
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> • Proficiency with fundamental front-end languages such as HTML, CSS, and ESRI JavaScript. • Familiarity with JavaScript frameworks such as Angular JS, VueJS, Semantic UI. • PL/SQL query languages • Familiarity with GIS based applications • Proficiency with server-side languages such as Python, Ruby, PHP and .Net
6.	Desired Technical Skill Set	<ul style="list-style-type: none"> • ArcGIS, Java or .Net, • Familiarity with code versioning tools such as Github, SVN.
7.	Experience	Total 7+ years' experience
8.	Soft Skill Set	<ul style="list-style-type: none"> • Basic programming experience. • Knowledge of databases and operating systems. • Ability to learn new software and technologies quickly. • Ability to follow instructions and work in a team environment. • Detail-oriented. • Excellent organizational and analytical abilities. • Outstanding problem solver. • Good written and verbal communication skills.
9.	Minimum Qualification	<ul style="list-style-type: none"> • Bachelors in Computer Science Engineering/ Technology or any other equivalent degree or • MCA with BCA / equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	IT Quality Assurance Manager
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	The Quality Assurance Lead will have responsibility for performing regular quality audits based on established standards to ensure quality service to customers is consistently met, according to department service metrics. The QAL will facilitate calibration sessions with Team leads generate timely and accurate reports on a daily, weekly, and monthly basis perform quality analysis and be capable of identifying root causes and corresponding action items to improve and or sustain performance.
4.	Role & Responsibility	<ul style="list-style-type: none"> Leads and manages the day-to-day activities of QA Engineers and is in charge of all quality aspects of the system Works with the end users, Business Analysts (BAs), Designers and Development Team to define/iterate the test coverage plan to ensure the test scenarios and test cases are scalable and sufficient Provide testing effort estimation for sprint features. Work with the Development Team and Operations Team to plan for complete and thorough execution of System Integration Testing (SIT) Works with end users to ensure complete and thorough execution of User Acceptance Testing (UAT). Coordinate with Development Team to ensure bugs are resolved timely and identifies bug root cause Analyses bugs trend and fine tune QA processes to improve overall quality of the product, share the findings/improvements with the team and end users. Works with end users to ensure that the quality metrics is reviewed, closed and agreed upon and prepare acceptance documentation Defining processes for test plan and several phases of testing cycle. Set Quality standards for the teams in various new testing technologies in the industry. This may include finding new strategies for automation testing and day to day work processes like agile and scrum. Familiar with Agile tools (e.g. JIRA/Confluence/Zephyr)
5.	Mandatory Skill Set	<ul style="list-style-type: none"> Total 6+ years of experience with at least 3 years of experience in software manual or automation testing with at least 2 years being QA Lead Specialist or Manager. Experience in Automated Testing Tools like NUnit, JUnit and Selenium etc. Test data preparation (PostgreSQL) Must be conversant in both English & Hindi. Must possess anyone (1) valid certification as given below Certified Test Engineer (CSTE)

		<ul style="list-style-type: none"> • Certified Software Quality Analyst (CSQA) • Certified Associate in Software Testing (CAST) • CMSQ (Certified Manager of Software Quality) • ISTQB (International Software Testing Qualifications Board)
6.	Desired Skill Set	<ul style="list-style-type: none"> • Knowledge of Database concept and testing using SQL or other platforms. • Knowledge of test cycles including test approach and case review and project life cycle. • Experience developing test deliverables like test plans, test cases, test data, traceability matrix;
7.	Experience	The applicant must have minimum 06 years of experience out of which at least 03 years' experience in QA Lead Specialist or Manager.
8.	Soft Skill Set	<ul style="list-style-type: none"> • Strong verbal and written communication skills. • Effectively works in teams as well as independently.
9.	Minimum Qualification	Bachelors in Engineering/ Technology or any other equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Test Engineer
2.	Job Type	Contractual for 11 months which can be extended depending on project requirements and performance of the candidate.
3.	Job Objective	The Test Engineer will be responsible for the quality of software development and deployment. The Test Engineer will also be involved in performing automated and manual tests to ensure the software created by developers is fit for purpose.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Maintain the company's standards and keep an eye on the safety measures during the production or development stages. • Collaborate with other departments to understand the product goals and, as a result, create a high-quality product. • Create a testing framework and define testing parameters based on input from the product design team. • Monitor the process using the testing framework, keep detailed progress records, and troubleshoot as needed. • Create multiple test cases and the necessary testing environments to determine how well the product works. • Make improvements to the product in question. • Ensure that all quality standards are met in accordance with the wishes of the team and the client. • Analyse the data based on the test results.
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> • Technical knowledge of QMS & SDLC • Knowledge of engineering and testing procedures • Know how to use testing tools such as Selenium and Test Complete • Deep understanding of materials, circuits, and equipment function
6.	Desired Technical Skill Set	<ul style="list-style-type: none"> • CAST (Certified Associate in Software Testing) • Certified Software Tester (CSTE) • Jira • Stryka • Apache JMeter • LabVIEW • Mantis
7.	Experience	4+ years
8.	Soft Skill Set	<ul style="list-style-type: none"> • Good written and verbal communication including documentation skills. • Ability to work in a team and on an individual level. • Client handling.
9.	Minimum Qualification	Bachelors in Computer Science Engineering/ Technology or any other equivalent degree or MCA with BCA
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	IT Hardware and Networking Expert
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	<ul style="list-style-type: none"> • Manage and monitor all installed systems and infrastructure to ensure the highest levels of systems and infrastructure availability. • Continuously analyze platform behavior and give recommendation for improvements. • Follow infrastructure sizing (capacity management). • Maintain security, backup and redundancy strategies. • Write and maintain custom scripts for maximum automation.
4.	Role & Responsibility	<ul style="list-style-type: none"> • To research, build, test, and document state-of-the-art IoT solutions with integrated electronics and firmware development. • To develop local IoT device software that includes monitoring, execution, and self-healing processes. • To design innovative IoT services that communicate with server-side technologies and develop MEAN stack solutions wherever necessary. • To learn the functioning of and implement new state-of-the-art tools/techniques to showcase experience in quick prototyping methods and structured implementation. • To design and develop platform solutions for cloud-to-edge IoT applications with customizable configuration abilities for deployment to different clients with different needs. • To work with dynamic IoT, Computer Vision, and MEAN technology stack to find solutions to complex real-world problems. • To plan and build efficient tools to optimize support QA, deployment, and support services. • To manage the backup system and develop a system that can easily pass through the self-healing process. • To create an optimized solution backup program and provide support services to all customers. • Should have hands-on experience in coding in multiple programming languages, including Embedded-C, Embedded C++, and Python. • In-depth understanding of Linux OS and its process management, device management, and connectivity features. • Well-versed in embedded software architecture – prior experience in working with UML use-case diagram, class-diagram, and sequence diagram to accurately depict system architecture is highly valued.

		<ul style="list-style-type: none"> • Technical knowledge in working with 32-bit ARM cortex M3/M4 controllers. • Prior experience in working with wireless stacks like Zigbee or Thread or BLE-Mesh. • Expert knowledge and be proficient in writing business logic on embedded environments using test-driven methodology on RTOS and non-RTOS platforms. • Must be proficient in widely used Communication protocols like MQTT, CoAP, SOAP, I2C, SPI, 1-wire, UART, MODBUS, DALI etc.
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> • Should have hands-on experience in coding in multiple programming languages, including Embedded-C, Embedded C++, and Python. • In-depth understanding of Linux OS and its process management, device management, and connectivity features. • Well-versed in embedded software architecture – prior experience in working with UML use-case diagram, class-diagram, and sequence diagram to accurately depict system architecture is highly valued. • Technical knowledge in working with 32-bit ARM cortex M3/M4 controllers. • Prior experience in working with wireless stacks like Zigbee or Thread or BLE-Mesh. • Expert knowledge and be proficient in writing business logic on embedded environments using test-driven methodology on RTOS and non-RTOS platforms. • Must be proficient in widely used Communication protocols like MQTT, CoAP, SOAP, I2C, SPI, 1-wire, UART, MODBUS, DALI etc.
6.	Experience	Overall, 6+ years professional experience in Hardware and Networking implementation in Service industry.
7.	Soft Skill Set	<ul style="list-style-type: none"> • Demonstrate problem solving, communication and organizational skills • Good written and verbal communication including documentation skills. • Ability to work in a team and on an individual level.
8.	Minimum Qualification	B.E./ B.Tech. in computer science, or any other equivalent degree
9.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	IoT Engineer
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	<ul style="list-style-type: none"> Design, build and configure applications to meet business process and application requirements.
4.	Role & Responsibility	<ul style="list-style-type: none"> To research, build, test, and document state-of-the-art IoT solutions with integrated electronics and firmware development. To develop local IoT device software that includes monitoring, execution, and self-healing processes. To design innovative IoT services that communicate with server-side technologies and develop MEAN stack solutions wherever necessary. To learn the functioning of and implement new state-of-the-art tools/techniques to showcase experience in quick prototyping methods and structured implementation. To design and develop platform solutions for cloud-to-edge IoT applications with customizable configuration abilities for deployment to different clients with different needs. To work with dynamic IoT, Computer Vision, and MEAN technology stack to find solutions to complex real-world problems. To plan and build efficient tools to optimize support QA, deployment, and support services. To manage the backup system and develop a system that can easily pass through the self-healing process. To create an optimized solution backup program and provide support services to all customers.
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> Should have hands-on experience in coding in multiple programming languages, including Embedded-C, Embedded C++, and Python. In-depth understanding of Linux OS and its process management, device management, and connectivity features. Well-versed in embedded software architecture – prior experience in working with UML use-case diagram, class-diagram, and sequence diagram to accurately depict system architecture is highly valued. Technical knowledge in working with 32-bit ARM cortex M3/M4 controllers. Prior experience in working with wireless stacks like Zigbee or Thread or BLE-Mesh. Expert knowledge and be proficient in writing business logic on embedded environments using test-driven methodology on RTOS and non-RTOS platforms.

		<ul style="list-style-type: none"> Must be proficient in widely used Communication protocols like MQTT, CoAP, SOAP, I2C, SPI, 1-wire, UART, MODBUS, DALI etc.
6.	Desired Technical Skill Set	Python, JavaScript, AI/ML, Big Data, Node.js
7.	Experience	<ul style="list-style-type: none"> Total experience of 5+ years with overall 3+ years professional experience in IoT implementation in Service industry.
8.	Soft Skill Set	<ul style="list-style-type: none"> Demonstrate problem solving, communication and organizational skills Good written and verbal communication including documentation skills. Ability to work in a team and on an individual level.
9.	Minimum Qualification	B.E./ B.Tech. in computer science, or any other equivalent
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Business Analyst
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Business Analyst is required to gather software requirements /business rules and ensure alignment with development team. The stakeholder requirements are required to be converted into tangible deliverables like functional specifications, user cases, user stories, workflow / process diagrams, data flow / data model diagrams.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Interaction with stakeholders in government department and development team to identify and define the needs by analyzing, defining and formalizing business processes and requirements. • Perform analysis and elicit detailed business requirements from Government & Business stakeholders • Document Requirement Traceability Matrix (RTM), Product Backlog, DPR, SRS, FRS, Workflow, Use Case documentation, Screen Mock-ups, User Manuals etc. • Collaborate with technical resources to provide solutions that are aligned with and support the business strategy and objectives of the departments. • Work with stakeholders in Government Departments to develop Project Acceptance Criteria and respond to queries from technical project team and review Project Deliverables including, Test Plan and User Acceptance Test (UAT). • Manage requirements throughout the Agile Model including Change Management. • Understand and incorporate industry best practices, standards and methodologies as project artefacts for design, development and documentation • Translating and simplifying requirements and helping with versioning. • Collaborate & Implement Government Process Re-Engineering
5.	Mandatory Skill Set	<ul style="list-style-type: none"> • Hands on Experience of creating Product Backlog, Requirement Traceability Matrix, SRS & FRS documentations • Must be conversant in both English & Hindi • Proactive self-starter with demonstrable high level of productivity • Extensive experience with requirement capturing.
6.	Desired Skill Set	<ul style="list-style-type: none"> • Exposure of working under ISO/CMMI
7.	Experience	<ul style="list-style-type: none"> • Minimum 4+ years of total experience. • 02+ years of prior experience of working in Water Sector.

8.	Soft Skill Set	<ul style="list-style-type: none"> • Strong verbal and written communication skills. • Effectively works in teams as well as independently.
9.	Minimum Qualification	• B.E./ B. Tech (IT/CS/ equivalent) / MCA
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Data Analyst
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	The Data Analyst will be expected to have experience of analytical tool and approaches, planning, design and implementation of BI systems, data collection, analysis, and reporting.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Design and development of analytical dashboards and reports using BI tools. • Write queries in analytical tool for development of dashboards. • Create and customize visualizations, hierarchies, drill-down connecting to BI data sources • Build Logical Data model design, measures, calculated tables, calculated columns etc. as per requirement • Deploy Analytical Dashboard and Reports using on-premises-report server/cloud environment
5.	Mandatory Skill Set	<ul style="list-style-type: none"> • Minimum of 8 years of relevant work experience on Business Intelligence Projects, Data Analytics and Data Modelling projects. • At least 2 Years' Hands-On Experience in Design and development of analytical dashboards for government clients.
6.	Desired Skill Set	<ul style="list-style-type: none"> • Certification in BI (Power BI/Tableau/Qlik).
7.	Experience	<ul style="list-style-type: none"> • Minimum of 8+ years of relevant work experience on Business Intelligence Projects, Data Analytics and Data Modelling projects. • Prior Experience of working with government department/s. • Sound understanding of BI, data analytics, and database concepts • Knowledge of data warehousing and ETL processes • Expert in reporting, dashboard UI/UX, and analysis • Proven experience with data warehouse tools/databases/modern BI solutions • Ability to present key findings and spot trends that help in decision making • Subject matter expert on SQL querying • Knowledge of data warehousing, SQL, database programming, ETL, OLAP and data modeling • Implement data security whenever required • Maintain reports and knowledge of all types of reporting formats like charts, tabular, matrix, and others • Design, implement, and present complex analysis solutions
8.	Soft Skill Set	<ul style="list-style-type: none"> • Strong verbal and written communication skills in English and Hindi • Effectively works in teams as well as independently.
9.	Minimum Qualification	<ul style="list-style-type: none"> • B.E/B.Tech in IT/CS or equivalent degree
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Customer Care Executive
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Call Executive will be responsible for the maintenance of helpdesk and provide assistance to the customers on their technical issues. S/he should be responsible for the timely updation of the internal database in case of technical issue.
4.	Role & Responsibility	<ul style="list-style-type: none"> Respond to user/officials queries in a timely and accurate way, via phone, email. Maintenance of helpdesk email id and updating master data sheet Identify user needs and help users to user specific features Update our internal databases with information about technical issues and useful discussions with users. Monitor customer complaints on social media and reach out to provide assistance. Inform users about new features and functionalities. Follow up with customers to ensure their technical issues are resolved. Gather customer feedback and share with other team members. Resolving customer complaints brought to your attention. Creating policies and procedures. Planning the training and standardization of service delivery. Conducting quality assurance surveys with customers and providing feedback to the staff. Possessing excellent product knowledge to enhance customer support. Maintaining a pleasant working environment for your team.
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> Knowledge of MS Office Knowledge of CRM systems. Computer skills
6.	Experience	3+ years' experience as customer care executive or related work
7.	Soft Skill Set	<ul style="list-style-type: none"> Excellent interpersonal and written and oral communication skills. Good written and verbal communication skills to collaborate with various stakeholders Team spirit Knowledge of CRM systems. Computer skills.
8.	Minimum Qualification	<ul style="list-style-type: none"> Bachelor's degree in any field
9.	Location	Delhi NCR

Job Description		
#	Item	Description
1.	Designation	Hydrologist
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Hydrologist will be responsible for data analysis, methodology development, and technical guidance to the IT team for DSS development and contribute to technical-design documentation. He/She may also require providing technical training to the concern agencies and stakeholders.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Understating of river system in India and interpret the gauging station reading • Hydrological Data analysis (River water level & Discharge, Reservoir storage & water level, Surface water quality) • Hydro-meteorological Data analysis (Soil Moisture, Evapotranspiration, Rainfall) • Development of the methodology for hydrological data validation and technical guidance in the development of tools for primary and secondary data validation • Water Availability and Demand Assessment at various scale • Water Auditing and foot-printing at different water demand sectors • Develop and Design water budget plan • Develop the correlation between various hydrological and hydro-meteorological data • Methodology development and technical guidance for development of decision support system related to surface water theme of WARIMS • Methodology development and technical guidance for development of GIS based user interface for data visualization and extraction under various theme of WARIMS • Designing the data collection and visualization mobile application for general users • Technical guidance for the integration of the analytical and mathematical models • Understating of standard BDR and technical/scientific report writing • Must be acquainted with the latest state and national policies, guidelines/Rules/Legislations etc. • Work collaboratively in teams and across the organization • Providing technical training to the concerned agencies and other stakeholders

		<ul style="list-style-type: none"> • In-person and teleconference collaborative meetings, project summaries to leadership, public presentations, web page updates, etc. • Provide input and actively problem solve project issues and regulatory approach • Mentor entry level staff
5.	Mandatory Skill Set	<ul style="list-style-type: none"> • Experience in Hydrological data handling and analysis • Time series hydrological data validation (Primary & Secondary) • Field experience and experimental skill set • Knowledge of GIS based platform (ArcGIS, QGIS, MapInfo, ERDAS) • Experience in hydrological model simulation (SWAT, HEC-RAS) and scenario analysis • Profound knowledge of Statistical tools • Critical analysis and bug finding on the software modules being developed • Advance knowledge of MS office tools • Strong communication skills and leadership quality • Contribute to technical-design documentation
6.	Desired Skill Set	Programming skill
7.	Experience	<ul style="list-style-type: none"> • Total 9+ Years of professional experience. The time duration for completion of PhD will be counted in work experience. <i>(In water resources studies and modeling, its occurrence, movement and relationship with components of the environment along with expertise in handling multiple datasets in hydrology and its analysis)</i> • Prior working experience with government will be a plus
8.	Soft Skill Set	<ul style="list-style-type: none"> • Good written and verbal communication including documentation skills • Ability to work in a team and on an individual level
9.	Minimum Qualification	<p>Essential M.E/MTech/M.Sc. in Hydrology/Water Resources/Natural Resource Management/Geo-informatics or any other equivalent qualification</p> <p>Desired Preference to Ph.D. in Hydrology/Water Resources Management with professional experience in water sector or any other equivalent qualification</p>
10.	Location	Delhi NCR

Job Description		
#	Item	Description
1.	Designation	Hydrogeologist
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Hydro-geologist will be responsible for data analysis, methodology development, and technical guidance to the IT team for DSS development and contribute to technical-design documentation. He/She may also require providing technical training to the concern agencies and stakeholders.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Data analysis (Groundwater level, trend, fluctuations, Groundwater quality, Groundwater exploration and prospecting, Drilling details, Geophysical logging, Lithological data and correlation between various hydrogeological and hydro-meteorological data) • Understating of aquifer system in India and development of its geological cross section and 3D visualization • Understanding and interpretation of Aquifer performance test, step drawdown test, etc. • Understating of standard BDR and technical/scientific report writing • Development of the methodology for hydro-geological data validation • Technical guidance in the development of tools for primary and secondary data validation • Methodology development and Technical guidance for development of decision support system related to groundwater • Methodology development and Technical guidance for development of GIS based user interface for data visualization and extraction • Designing the data collection and visualization mobile application for general users • Technical guidance for the integration of the analytical and mathematical models • Work collaboratively in teams and across the organization • Providing technical training to the concerned agencies and other stakeholders • In-person and teleconference collaborative meetings, project summaries to leadership, public presentations, web page updates, etc. • Mentor entry level staff • Provide input and actively problem solve project issues and regulatory approach

5.	Mandatory Skill Set	<ul style="list-style-type: none"> • Experience in Hydrogeological data handling and analysis • Field experience and experimental skill set • Knowledge of GIS based platform (ArcGIS, QGIS, MapInfo, ERDAS) • Statistical tools • Experience in mathematical model simulation and scenario analysis • Critical analysis and bug finding on the software modules being developed • Advance knowledge of MS office tools • Strong communication skills and leadership quality • Contribute to technical-design documentation
6.	Desired Skill Set	Programming skill
7.	Experience	<ul style="list-style-type: none"> • Total 9+ Years of experience in Hydro-geology. The time duration for completion of PhD will be counted in work experience. • Prior working experience with government will be a plus
8.	Soft Skill Set	<ul style="list-style-type: none"> • Good written and verbal communication including documentation skills • Ability to work in a team and on an individual level
9.	Minimum Qualification	<p>Essential</p> <p>M.E/M.Tech/M.Sc in Geology/Hydrogeology or other related fields</p> <p>Desired</p> <ul style="list-style-type: none"> • Preference to PhD in Hydrogeology or other related fields
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Sr. Remote Sensing & GIS Expert
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Responsible for GIS Data Creation, Quality Checking, Database management, Converting Non-Spatial to GIS environment, GIS performing analysis, Image interpretation
4.	Role & Responsibility	GIS layer analysis, feature extraction using multiple source data, handling/analysis water related resources applications- like Surface/ Ground Water, Administrative, Demographic, Legacy data, water allied themes etc.
5.	Mandatory Technical Skill Set	Image Processing: ERDAS Imagine, ENVI GIS Software: ArcGIS map, ARCGIS pro, MapInfo, ArcSWAT, QGIS, ARC GIS Enterprise, Global Mapper
6.	Desired Technical Skill Set	Basic knowledge of ArcGIS portal, Arc Enterprise server, Postgres database
7.	Experience	Minimum 8+ Years of research & development experience in core Remote sensing and GIS and its application in different branches of Natural Resources like Surface/ Ground Water, Administrative, Demographic, climatic parameters including rainfall, temperature, Soil, Irrigation, Forestry, Land Resource, Agriculture, Hydrology, Urban Planning and water resource assets etc.
8.	Soft Skill Set	<ul style="list-style-type: none"> • Work in under pressure, product delivery time management • Written skills, Communication skills • Creative problem solving and innovation
9.	Minimum Qualification	Masters or equivalent degree in Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field. Candidates with professional certification from ERDAS, ArcGIS ESRI is preferred.
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Jr. Remote Sensing & GIS Expert
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Responsible for GIS Data Creation, Quality Checking, Database management, Converting Non-Spatial to GIS environment, GIS performing analysis, Image interpretation
4.	Role & Responsibility	GIS layer analysis, feature extraction using multiple source data, handling/analysis water related resources applications- like Surface/ Ground Water, Administrative, Demographic, Legacy data, water allied themes etc.
5.	Mandatory Technical Skill Set	Image Processing: ERDAS Imagine, ENVI GIS Software: ArcGIS map, ARCGIS pro, MapInfo, ArcSWAT, QGIS, ARC GIS Enterprise, Global Mapper
6.	Desired Technical Skill Set	Basic knowledge of ArcGIS portal, Arc Enterprise server, Postgres database
7.	Experience	Minimum 6+ Years of research & development experience in core Remote sensing and GIS and its application in different branches of Natural Resources like Surface/ Ground Water, Administrative, Demographic, climatic parameters including rainfall, temperature, Soil, Irrigation, Forestry, Land Resource, Agriculture, Hydrology, Urban Planning and water resource assets etc.
8.	Soft Skill Set	<ul style="list-style-type: none"> • Work in under pressure, product delivery time management • Written skills, Communication skills • Creative problem solving and innovation
9.	Minimum Qualification	Masters or equivalent degree in Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field Candidates with professional certification from ERDAS, ArcGIS ESRI is preferred.
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	GIS Application Modeler
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Modeler is responsible for a diagram, flowchart, or workflow that chains together sequences of processes and geoprocessing tools, using the output of one process as the input to another process. It provides advanced methods for extending GIS functionality by allowing you to create and share your models as tools
4.	Role & Responsibility	GIS Data Creation, analysis, feature extraction using multiple sources data, Letter drafting, Documentation, Excel data validation & Updation
5.	Mandatory Technical Skill Set	GIS Software: ArcGIS map, ARCGIS pro, Arc Python, Model builder, ArcSWAT Application Software: MS Office (Word, Excel, Publisher, PowerPoint, MS access)
6.	Desired Technical Skill Set	ArcGIS 3d scene, HECRAS, DHI mike
7.	Experience	<ul style="list-style-type: none"> • Overall 6+ years of experience conducting water quality, hydrologic, sediment modeling, and computational fluid dynamics studies using public and proprietary domain tools. Experience with SWMM is required. Experience with Info Works ICM and SWAT is beneficial. • Knowledge of computer programming language; R and Python experience preferred • Familiarity with water quality and biological monitoring and sampling techniques preferred • Proficiency in MS Word, MS Excel and ArcGIS • Strong written and oral communication skills • Demonstrated interest in emerging topics in water resources
8.	Soft Skill Set	<ul style="list-style-type: none"> • Excellent written and verbal communication skills. • Must be responsible, self-motivated, self-starter, personable and well organized
9.	Minimum Qualification	B. Tech in engineering or Bachelor's degree or Master's degree in water resources, Hydrology, Agriculture or civil/environmental engineering
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	GIS Quality Assurance Expert
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Responsible for Defining quality parameters for GIS project deliverables should be done as part of project planning, automates, simplifies, and improves data quality control workflows to enable the delivery of geospatial data you can trust.
4.	Role & Responsibility	Processes or methods to help prevent errors from being introduced into the data. - Examples: - Data Model, Industry-specific Editing Templates, Attribute Assistant/ Attribute Rules, data-specific editing tools. Quality Control– Processes or tools to identify errors that are already in the data, responsible for planning and executing test plan in the most efficient and effective manner
5.	Mandatory Technical Skill Set	Windows/Linux OS Experience in Testing GIS Tools/Software - ArcGIS, Quantum GIS, MapInfo, Google Earth, ArcGIS Data Reviewer, Arc Workflow manager Good understanding on different GIS files formats. Experience working on Bug reporting tool, Test management tool.
6.	Desired Technical Skill Set	Tableau, Shell, Python, JavaScript
7.	Experience	Minimum 6+ years of experience QA QC and map digitization / vectorization, GIS data management, GIS dataset knowledge, GIS and Remote Sensing technologies with core focus on quality analysis, control, tracking and improvement
8.	Soft Skill Set	Excellent written and verbal communication skills. Proactive and having good response to request skills. Must be responsible, self-motivated, self-starter, personable and well organized.
9.	Minimum Qualification	BE, B. Tech, MSc, MCA or equivalent degree in Computer Science/ Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Google Earth Engine Expert
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Responsible for GIS Data Creation from google earth engine API's, Google Earth Engine is a cloud-based geospatial analysis platform that enables users to visualize, analyze & extracted satellite images outcomes of our India.
4.	Role & Responsibility	The concerned will be responsible for handling all kind of Remote sensing and GIS data present on the repository of google earth engine, it includes both satellite imagery and other types of geospatial data like Flood, Water, Agriculture, Climate, Reservoir, LULC, Timeseries data
5.	Mandatory Technical Skill Set	Individual should have knowledge of programming language like Python and JavaScript GIS Software: ArcGIS map, ARCGIS pro
6.	Desired Technical Skill Set	Imagine: ERDAS software Application Software: MS Office (Word, Excel, Publisher, PowerPoint, MS access)
7.	Experience	Minimum 8+ Years of experience in Google Earth Engine, GIS technology
8.	Soft Skill Set	<ul style="list-style-type: none"> • Work in under pressure, product delivery time management • Documentation of methodology for extracted product from GEE
9.	Minimum Qualification	B. Tech/M. Tech in engineering or Bachelor equivalent degree in Geoinformatics / Remote Sensing / Geology/ Environmental Science/ Geography / any relevant field
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Image Analyst
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Responsible for Thematic Data Creation from various Imagery data sources with multiple themes based derived outcomes
4.	Role & Responsibility	Processing and analysis of Satellite Imagery for creating products like Land Use Land use/ land Cover, Surface Water extent, Evapotranspiration, DEM, chlorophyl, NDWI, NDVI, Drainage, Soil Moisture, Watershed Delineation etc.
5.	Mandatory Technical Skill Set	Image Processing Software: ERDAS Imagine, ERDAS Apollo, LPS, ENVI GIS Software: ArcGIS map, ARCGIS pro
6.	Desired Technical Skill Set	ERDAS Markup Language, Python, GRASS
7.	Experience	Minimum, 4+ Years of experience in Thematic Data Creation from various Imagery data sources, Digital Image Processing
8.	Soft Skill Set	<ul style="list-style-type: none"> • Work in under pressure, product delivery time management • Documentation of Image processing methodology
9.	Minimum Qualification	<ul style="list-style-type: none"> • Masters or equivalent degree in Geoinformatics / Remote Sensing / Geology / Environmental Science/ Geography / Water Resource/ Hydrology/ any relevant field • Candidates with professional certification from ERDAS, ArcGIS ESRI is preferred.
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Digitizer (GIS)
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	Responsible for GIS Data Creation, Converting Non-Spatial to GIS environment, Geo-referencing
4.	Role & Responsibility	GIS Data Creation, analysis, feature extraction using multiple sources data, Letter drafting, Documentation, Excel data validation & Updation
5.	Mandatory Technical Skill Set	GIS Software: ArcGIS map, ARCGIS pro Application Software: MS Office (Word, Excel, Publisher, PowerPoint, MS access)
6.	Desired Technical Skill Set	Tableau, graphic software
7.	Experience	Total 3+ Years of experience in GIS digitization, GIS dataset knowledge
8.	Soft Skill Set	Documentation
9.	Minimum Qualification	B. Tech in engineering or Bachelor equivalent degree in Geoinformatics / Remote Sensing / Geology/ Environmental Science/ Geography / any relevant field
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Technical Content Writer
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	A Technical Writer is a professional, responsible for creating documentation that clarifies the features and benefits of the topic. They work on requirements like content strategy to ensure all necessary information has been included for users to understand what they're reading quickly.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Create compelling, innovative, entertaining, and scientific written content • Working on technical content writing, research content writing • Writing for web pages and bulletins, and for social media, brochures, reports, and newsletters. • Writing content for social media posts • Consistently deliver compelling work that enhances client's ideas • Write in accordance with specified format, tone, and brand voice, Work on strategizing the content. • Self-edit work for spelling, grammatical, and punctuation errors before initial submission • Writing and proof-reading content to make it user-friendly, Revise work based on feedback • Research intended topic thoroughly to gain vital background information • Always utilize trustworthy and valid sources • Ensure all written work is authentic and original. • Producing high-quality documentation that is appropriate for its intended audience • Working with internal teams on product and documentation requirements
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> • Excellent written skills in English • Strong working knowledge of Microsoft Office
6.	Desired Technical Skill Set	Knowledge of Water Sector
7.	Experience	4+ years' experience in creating content for research industries or relevant scientific field preferably water resources.
8.	Soft Skill Set	<ul style="list-style-type: none"> • Excellent interpersonal and written and oral communication skills • Good written and verbal communication skills to collaborate with various stakeholders • Team spirit • Knowledge of CRM systems

		<ul style="list-style-type: none"> • Computer skills • Knowledge of mediation and conflict resolution techniques is preferable
9.	Minimum Qualification	<ul style="list-style-type: none"> • Bachelors or equivalent degree in Marketing, English, Journalism/Mass Communication or relevant field
10.	Location	Delhi NCR

Job Description		
#	Parameter	Description
1.	Designation	Media Executive
2.	Job Type	Contractual for 11 months and extendable depends on project requirement and candidate performance.
3.	Job Objective	A Media Executive to oversee our organization's presence on a multitude of public platforms. The social media executive should create gripping content, analyze public feedback, and report on the effects of each key undertaking. He/she should also keep track of all credentials of the social media handles.
4.	Role & Responsibility	<ul style="list-style-type: none"> • Develop Creative and Engaging Social Media Strategies. • Manage the day-to-day handling of all social media channels such as LinkedIn, Facebook, Twitter and Instagram adapting content to suit different channels and oversee, plan and deliver content across different platforms using scheduling tools such as Sprinklr, Hootsuite, Asana and Olapic. • Analyse Competitor activity. • Develop, launch and manage new competitions and campaigns that promote our organisation and brand. • Creating written pieces that are sharp, memorable, and effective at prompting readers to take action. • Optimizing content for publication across various social media sites. • Scheduling copy for release at optimal times. • Monitoring users' engagement with and feedback on every post. • Analyzing and reporting on the effects of publications. • Monitor, Track, Analyse and Report performance on Social Media platforms using tools. • Research and evaluate the latest trends and techniques in order to find new and better ways of measuring social media activity. • Manage a budget for social media activities. • Maintaining a secure database of all login credentials. • Remaining abreast of changes to all pertinent social media applications. • Exploring the potential value of social media sites that are not yet in our repertoire. • Set targets to increase brand awareness and increase customer engagement
5.	Mandatory Technical Skill Set	<ul style="list-style-type: none"> • Excellent written skills in English • Strong working knowledge of Microsoft Office

6.	Desired Technical Skill Set	Knowledge of Water Sector
7.	Experience	4+ years of work experience in content creation for government departments, bodies or companies / research think tanks / NGOs / educational or professional institutes / marketing, news or PR agencies.
8.	Soft Skill Set	<ul style="list-style-type: none"> • Excellent interpersonal and written and oral communication skills. • Good written and verbal communication skills to collaborate with various stakeholders • Team spirit • Computer skills.
9.	Minimum Qualification	<ul style="list-style-type: none"> • Bachelors or equivalent degree in Marketing, Mass Communication or relevant field
10.	Location	Delhi NCR

Appendix B—Schedule of Payments and Reporting Requirements

1. Schedule of payments have been specified in Clause 6.4 of PCC
2. For all issues related to contract Management the Service Provider will report to the Director, NWIC OR his designated authorized representative.

Appendix C—Key Personnel and Sub-Service Providers

The bidder is required to nominate a nodal officer as Contract Manager (HR Expert) with minimum five years' experience in dealing with services of supplying professionals in the field of Software development, Database, IT & Networking related field. His/her remuneration deemed to be included in the overheads and profit of the firm and covered under service charges quoted in price schedule.

The Nodal officer would coordinate with purchaser for project execution and day to day management of contract and should have sufficient experience of managing the contracts of similar nature. Nodal officer shall function from the premises of the bidder. Desired CVs of Professionals to be provided under this contract are specified in Appendix A.

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Appendix D—Breakdown of Contract Price in Foreign Currency(ies) –
Not used.

Appendix E—Services and Facilities Provided by the Employer

For services & facilities provided by the purchaser pls refer Section VI.

Appendix F—Performance Incentive Compensation Appendix

Not Applicable

Appendix G— Work experience-wise payment structure for equivalent nature of work (as approved by NICSI for Tier – I cities)

Minimum Work Experience (Number of years)	Level	Minimum Renumeration (MR: in INR)	Operating Margin (In INR) (OM: 44.44%)	Total (In INR) (MR + OM)
3 years	5	70000	31108	101108
4 years	6	80000	35552	115552
5 years	7	100000	44440	144440
6 years	8	110000	48884	158884
7 years	9	120000	53328	173328
8 years	10	130000	57772	187772
9 years	11	160000	71104	231104
10 years	13	190000	84436	274436

Appendix H-Appointment of Adjudicator/Dispute Review Expert

Suggested Draft of Letter of Appointment of Adjudicators in contracts

Sub: _____ (Name of the Contract)

To

Name and address of the Adjudicator

We hereby confirm your appointment as adjudicator for the above contract to carry out the assignment specified in this Letter of Appointment.

For administrative purpose _____ (*name of the officer representing the employer*) has been assigned to administer the assignment and to provide the Adjudicator with all relevant information needed to carry out the assignment on behalf of both the employer and the Service Provider. The services will be required during the period of contract for the Services (Name of the Contract) _____.

The Adjudicator shall visit the site once in 3 (three) months till the completion of the Services indicated above or as specifically requested by employer/service provider for the period upto the end of defects liability period with prior intimation to the employer and the service provider. The duration of each visit shall ordinarily be for one day only. These durations are approximate and (*Name of the employer and Name of the Service Provider*) may find it necessary to postpone or cancel the assignment and/or shorten or extend the duration.

The appointment will become effective upon confirmation of letter by you. The appointment of Adjudicator shall be liable for termination under a 30 (thirty) days written notice from the date of issue of the notice, if both Employer and the Service Provider so desire. Also the appointment shall automatically stand terminated 14 days after the defect notice / correction period as stated in Clauses 7.1 of GCC/PCC is over.

The Adjudicator will be paid a fee of Rs. _____ (Rupees _____ only) per each day of visit at the worksite. The actual expenses for boarding and traveling in connection with the assignment will be reimbursed to the Adjudicator. The Adjudicator will submit a pre-receipted bill in triplicate to the employer indicating the date of the visit, fees for the visit and a proof in support of the actual expenditure [only for items valued above Rs200 each] incurred by him against boarding, lodging and traveling expenses after performing the visit on each occasion. The Employer will make the admissible payment (both the Employer's and the Service Provider's share) to the Adjudicator within 30 days of the receipt of the bill. The Service Provider's share on this account (half the paid amount) will be recovered by the Employer from the Service Provider's bills for the Services.

In accepting this assignment, the Adjudicator should understand and agree that he is responsible for any liabilities and costs arising out of risks associated with travel to and from the place of emergency repatriation, loss or damage to personal/professional effects and property. The Adjudicator is advised to effect personal insurance cover in respect of

such risks if he does not already have such cover in place. In this regard, the Adjudicator shall maintain appropriate medical, travel, accident and third-party liability insurance. The obligation under this paragraph will survive till termination of this appointment.

Procedures for resolution of disputes by the Adjudicator is described in the contract of _____(name of the contract) between the employer and the Service Provider vide clause 8 of GCC/PCC. Your recommendation should be given in the format attached, within 28 days of receipt of a notification of dispute.

The Adjudicator will carry out the assignment in accordance with the highest standard of professional and ethical competence and integrity, having due regard to the nature and purpose of the assignment, and will conduct himself in a manner consistent herewith. After visiting the site, the Adjudicator will discuss the matter with the Employer and if necessary, with the Service Provider before arriving at any decision.

The Adjudicator will agree that all knowledge and information not within the public domain, which may be acquired while carrying out this service shall be all time and for all purpose, regarded as strictly confidential and held in confidence, and shall not be directly or indirectly disclosed to any party whatsoever, except with the permission of the employer and the Service Provider. The Adjudicator's decision should be communicated in the form of a speaking order specifying the reasons.

The Adjudicator will agree that any manufacturing or construction or consulting firm with which he might be associated with, will not be eligible to participate in bidding for any goods or works or consultant services resulting from or associated with the project of which this consulting assignment forms a part

Read and Agreed

Name of Adjudicator
Signature

Place:

Date:

Name of Employer

Signature of authorized representative of Employer

Name of the Service Provider

Signature of authorized representative of Service Provider

Attachment: Copy of contract document between the employer and Service Provider and format for recommendation.

SUMMARY OF ADJUDICATOR'S RESPONSIBILITIES

The Adjudicator has the following principal responsibilities:

1. Visit the site periodically.
2. Keep abreast of job activities and developments.
3. Encourage the resolution of disputes by the parties.
4. When a dispute is referred to it, conduct a hearing (no legal presentation), complete its deliberations, and prepare a recommendations in a professional and timely manner (as per sample format)

Sample Format of Adjudicator's Recommendation

[Project Name] **Recommendation of Adjudicator**

Dispute No. XX [NAME OF DISPUTE]

Hearing Date: _____

Dispute

Description of dispute. A one or two sentence summation of the dispute.

Service Provider's Position

A short summation of the Service Provider's position as understood by the Adjudicator.

Employer's Position

A short summation of the Employer's position as understood by the Adjudicator.

Recommendation

The Adjudicator's specific recommendation for settlement of the dispute. (*The recommended course is consistent with the explanation*).

Explanation

(*This section could also be called Considerations, Rationale, Findings, Discussion, and so on.*)

The Adjudicator's description of how each recommendation was reached.

Respectfully submitted,

Date : _____

Date : _____

Date : _____

Section IX. Performance Specifications and Drawings

Section X. Security Forms

Samples of acceptable forms of Bid, Performance, and Advance Payment Securities are provided in this Section XI. Bidders shall not complete the Performance and Advance Payment Security forms at this stage of the procurement process. Only the successful Bidder shall be required to provide these two securities.

Forms of Securities

Acceptable forms of securities are annexed. Bidders should not complete the Performance and Advance Payment Security forms at the time. Only the successful Bidder will be required to provide Performance and Advance Payment Securities in accordance with one of the forms, or in a similar form acceptable to the Employer.

Annex A :	Bid Security (Bank Guarantee)
Annex B :	Performance Bank Guarantee
Annex C :	Bank Guarantee for Advance Payment

Form of Bid Security (Bank Guarantee)-Annexure A

[Guarantor letterhead]

Beneficiary:

[Insert name and address of the Employer]

Invitation for Bids No: *[Insert reference number for the Invitation for Bids]*

Date: *[Insert date of issue]*

BID GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[insert name of the Bidder, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof]* (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its bid (hereinafter called "the Bid") for the execution of *[insert description of contract]* under Invitation for Bids No. *[insert number]* ("the IFB").

Furthermore, we understand that, according to the Beneficiary's conditions, bids must be supported by a bid guarantee.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in letters]* (*insert amount in numbers*)²⁷ upon receipt by us of the Beneficiary's complying supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating either that the Applicant:

- (a) has withdrawn its Bid during the period of bid validity specified by the Applicant in the Letter of Bid, or any extension thereto provided by the Applicant; or
- (b) having been notified of the acceptance of its Bid by the Beneficiary during the period of bid validity, (i) fails to execute the Contract Agreement or (ii) fails to furnish the performance security, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's bidding document.
- (c) does not accept the correction of the Bid Price pursuant to Clause 28.

This guarantee will expire: (a) if the Applicant is the successful Bidder, upon our receipt of copies of the contract agreement signed by the Applicant and the performance security issued to the Beneficiary upon the instruction of the Applicant; and (b) if the Applicant is

²⁷ The Bidder should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 17.1 of the Instructions to Bidders.

not the successful Bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the bidding process; or (ii) twenty-eight days after the Validity Period, which date shall be established by presentation to us of copies of the Letter of Bid and any extension(s) thereto, accompanied by the bidding document; or (c) three years after the date of issue of this guarantee.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

[signature(s)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

PERFORMANCE BANK GUARANTEE - ANNEXURE B

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Employer]*

Date: *_ [Insert date of issue]*

PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *_ [insert name of Service Provider, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Service Provider") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the execution of *_ [insert name of contract and brief description of Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Service Provider, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____) *[insert amount in words]*²⁸, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Service Provider is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...,29 and any demand for payment under it must be received by us at this office indicated above on or before that date.

[signature(s)]

28An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.

29Insert the date twenty-eight days after the expected date of issue of the Certificate of Completion

BANK GUARANTEE FOR ADVANCE PAYMENT-ANNEXURE C

[Guarantor letterhead or SWIFT identifier code]

Date: *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

To:

_____ [name of Employer]
_____ [address of Employer]
_____ [name of Contract]

Gentlemen:

In accordance with the provisions of the Conditions of Contract, sub clause 6.4 (“Advance Payment”) of the above-mentioned Contract, _____ [name and address of Service Provider] (hereinafter called “the Service Provider”) shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of guarantee]³⁰ _____ [in words].

We, the _____ [bank or financial institution], as instructed by the Service Provider, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ [name of Employer] on his first demand without whatsoever right of objection on our part and without his first claim to the Service Provider, in the amount not exceeding _____ [amount of guarantee] _____ [in words].

We further agree that no change or addition to or other modification of the terms of the Contract or of Services to be performed thereunder or of any of the Contract documents which may be made between _____ [name of Employer] and the Service Provider, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer] receives full repayment of the same amount from the Service Provider.

Yours truly,

Signature and seal of the guarantor _____
Name of Bank/Financial Institution _____
Address _____
Date _____

³⁰An amount shall be inserted by the bank representing the amount of the Advance Payment, and denominated in Indian Rupee