

Copy No.

**OPEN E-TENDER DOCUMENT FOR THE
SUPPLY OF
WATER QUALITY AUTOMATED BUOY FOR
NCCR, (FORMERLY ICMAM-PD), CHENNAI**

TENDER REF NO. MoES/NCCR/PWQ/WQAB/10/2018

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
NCCR, (ICMAM -PD)
CHENNAI, INDIA**

**NOTICE INVITING TENDER
OPEN E-TENDER NOTICE FOR VARIOUS ITEMS**

**MINISTRY OF EARTH SCIENCES
National Centre for Coastal R (Formerly ICMAM-PD), 2ND FLOOR,
NIOT CAMPUS, PALLIKARANAI, CHENNAI-600100.**

National Centre for Coastal Research, NCCR (Formerly ICMAM-PD), Chennai-600100 invites E-Procurement Tender in two bid systems, from qualified firms for the requirement of following items / services.

1. Water Quality Automated Buoy

Interested bidders may submit their quotation online at <https://eprocure.gov.in/eprocure/app> within 30 days from the date of publication of this tender notice in newspapers OR availability of tender document in the websites <https://eprocure.gov.in/eprocure/app> & <http://www.icmam.gov.in>, whichever is later. Bidders are requested to follow the instructions carefully as per the tender document and in websites. Any corrigendum / addendum regarding this tender will be available on the above said websites only.

Sd/-
Director, NCCR

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Tender Reference No.: MoES/NCCR/PWQ/WQAB/10/2018

SCHEDULE TO TENDER

1	Tender Reference No.	:	MoES/NCCR/PWQ/WQAB/10/2018
2	Name of Organisation	:	NCCR , (Formerly ICMAM-PD)
3	Type of Tender		OPEN – E-Tender
4	Description of the Item	:	Procurement of RTK Water Quality Automated Buoy
5	Quantity	:	1 No.
6	Date of Issue / Publishing	:	18.05.2018
7	Document Download/ Sale Start Date	:	18.05.2018
8	Document Download/ Sale End Date	:	18.06.2018 (17:00 hrs Indian standard time)
9	Clarification Start Date	:	19.05.2018
10	Clarification End Date	:	17.06.2018(17:00 hrs Indian standard time)
11	Last Date and Time for uploading of Bids	:	18.06.2018(17:00 hrs Indian standard time)
12	Date and Time of opening of Bids	:	19.06.2018 at 12:00 hrs, India standard time
13	Date and Time of pre – bid meeting	:	05.06.2018 at 15.00 hrs, India standard time
14a	Mode of submitting the bids	:	Online through Central Public Procurement Portal. https://eprocure.gov.in/eprocure/app
14b	Manual submission of Technical bid	:	17.06.2018 (on or before 15:00 hrs Indian standard time)
15	Tender document fee	:	Rs.500/- or US\$ 8
16	EMD	:	Rs.2,00,000/- or US \$2956 as defined in Clause 10 of Section- I of this Tender document and will be valid for 180 days from the date of opening of Tender.
17	Validity of offer	:	180 days from the date of opening of Tender.
18	Address for communication	:	Director, NCCR, (Formerly ICMAM-PD) 2 nd Floor, NIOT Campus, Pallikaranai, Chennai-600100
19	Contact Person	:	Mr.S.Kumar, ASO NCCR, (Formerly ICMAM-PD) 2 nd Floor, Room No.306, NIOT Campus, Pallikaranai, Chennai – 600100 Tel:044-66783599, email id: icmam@icmam.gov.in

SECTION I

INSTRUCTIONS TO BIDDERS

1. NCCR (Formerly ICMAM Project Directorate), Ministry of Earth Sciences invites Online OPEN E-Tender from eligible and qualified bidders (Original Equipment Manufactures (OEM) OR their Authorised Agents/Resellers/Partners) for supply, installation and commissioning of items, whose specification is given in **Appendix-2** of Tender Enquiry. All offers should be in prescribed format written in English only. All correspondence should be made only with tender inviting authority. The invitation to tender is open to all eligible bidders who meet eligibility criteria as specified in tender document.

2. Eligibility condition:- The tenders will be scrutinized to determine whether they are complete in all respects and meet the essential and important requirements, conditions, etc., as prescribed in the Tender document. The tenders which do not meet the following basic requirements, will be treated as non-responsive and will be summarily rejected.

i) Bidders should be either OEM (OR) their authorised agent/reseller/partner of OEM as per **para 17**.

ii) The relevant documents should be signed by the authorized representative of the firm.

iii) Tender should be complete with regard to specification, price, delivery period, terms of delivery, salient terms and confirm technical specification, clause wise technical compliance statement should be enclosed with technical bid.

A Tender shall be declared non-responsive and will be summarily rejected on the following grounds:

iv) Tender is unsigned or not signed by the authorized person through Tender Acceptance letter (**Appendix-1**)

v) Tender validity is shorter than required period.

vi) Required EMD (amount, validity etc.) and required tender Fee documents have not been provided as per detail, before tender opening.

- vii) Bidder has quoted for goods manufactured by other manufacturer (s) without manufacturer(s) Authorization. 100% subsidiary firm of foreign company in India cannot bid through another Indian Agent. The relation between principal / OEM and Agent or Indian Subsidiary should be clear and unambiguous and contractually established.
- viii) Goods offered are not meeting the tender enquiry specification.
- ix) Bidder has not agreed to other essential condition(s) especially incorporated in the tender enquiry like terms of payments, liquidated damages clause, warranty clause, etc.
- x) Poor/unsatisfactory past performance.
- xi) Bidders who stand de-registered by DGS&D /GeM/ banned/blacklisted by any government authority.
- xii) Bidder has not quoted for entire quantity as specified in the list of requirements.
- xiii) Bidder has not submitted duly filled in technical compliance sheet as per

Appendix - 3

3. Qualification criteria (Bidders should submit necessary supporting documents to establish the following criteria)

- i) Bidders should have supplied and successfully installed the tendered item or equivalent or higher configuration item, during last **3** years before the date of opening of tender and the item functioning satisfactorily, without any adverse report. Report from the institution to whom it has been supplied about satisfactory performance certificate must be enclosed with technical bid. The performance certificate should be in institution's/ client's letter head with proper signature and seal.
- ii) Bidder should have sufficient financial resources to meet the obligation under contract. They should submit Balance Sheet for last **02** years and bank's report for their credit worthiness. The Bidder should have a minimum annual turnover of **Rs.10 lakhs (or Equivalent currency for foreign bidders)** in each of the two financial years prior to tender opening date.
- iii) In addition to (i) & (ii) above, foreign firms quoting directly should have a service / support facility in **India** and should indicate in their offer the details

of such servicing facilities along with technical bid and otherwise the tender will be rejected.

iv) If the bidder is a dealer or reseller or partner of OEM, they should be authorized by OEM. The original letter in OEM's letter head with the signature of authorized signatory and rubber stamp/seal should be provided.

4.Price bid Evaluation Criteria & Price Bid Issues:The broad guidelines for evaluation of Bids will be as follows:

a) Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying requirements of the Tender document and are acceptable both technically and commercially (called substantially responsive bid).

b) The technical Bids forwarded by the Bidders will be evaluated by the Buyer with reference to the technical specifications of the item as mentioned in the Tender enquiry. The compliance of Technical Bids would be determined on the basis of the parameters specified in the tender document. The Price Bids of only those Bidders will be opened whose Technical Bids would clear the technical evaluation.

c) The Lowest Bid will be decided upon the lowest price quoted by the particular Bidder as per the Price bid Format given.

The consideration of taxes and duties in evaluation process will be as follows:

(i) In cases where only indigenous Bidders are competing, all taxes and duties (including those for which exemption certificates are issued) quoted by the Bidders will be considered. The ultimate cost to the Buyer would be the deciding factor for ranking of Bids.

(ii) In cases where both foreign and indigenous Bidders are competing, following criteria would be followed –

(1) In case of foreign Bidders, the DDP cost quoted by them would be the basis for the purpose of comparison of various tenders.

(2) In case of indigenous Bidders, excise duty on fully formed equipment would be offloaded.

(3) Sales tax and other local levies, i.e. octroi, entry tax etc. would be ignored in case of indigenous Bidders.

d) The Bidders are required to spell out the rates of Customs duty, Excise duty, GST, Service Tax, etc in unambiguous terms; otherwise their offers will be loaded with the maximum rates of duties and taxes for the purpose of comparison of prices. If reimbursement of Customs duty / Excise Duty / GST is intended as extra, over the quoted prices, the Bidder must specifically say so. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of such duties will be entertained after the opening of tenders. If a Bidder chooses to quote a price inclusive of any duty and does not confirm inclusive of such duty so included is firm and final, he should clearly indicate the rate of such duty and quantum of excise duty included in the price. Failure to do so may result in ignoring of such offers summarily. If a Bidder is exempted from payment of Customs duty / Excise Duty / GST duty up to any value of supplies from them, they should clearly state that no excise duty will be charged by them up to the limit of exemption which they may have. If any concession is available in regard to rate/quantum of Customs duty / Excise Duty / GST, it should be brought out clearly. Stipulations like, excise duty was presently not applicable but the same will be charged if it becomes leviable later on, will not be accepted unless in such cases it is clearly stated by a Bidder that excise duty will not be charged by him even if the same becomes applicable later on. In respect of the Bidders who fail to comply with this requirement, their quoted prices shall be loaded with the quantum of excise duty which is normally applicable on the item in question for the purpose of comparing their prices with other Bidders. The same logic applies to Customs duty and GST also.

e) In import cases, all the foreign quotes will be brought to a common denomination in Indian Rupees by adopting the exchange rate as BC Selling rate of the State Bank of India on the date of the opening of Price Bids.

f) 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 will prevail and the total price will be corrected. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.

g) Evaluation of offers involving more than one currency - NOT APPLICABLE.

h) The Lowest Acceptable Bid will be considered further for placement of contract / Supply Order after complete clarification and price negotiations as decided by the Buyer. The Buyer will have the right to award contracts to different bidders for being lowest in particular items. The Buyer also reserves the right to do apportionment of quantity, if it is convinced that Lowest Bidder is not in a position to supply full quantity in stipulated time.

i) Any other criteria as applicable to suit a particular case.

j) Bidder should quote the prices in the given format BOQ_XXXX in excel sheet for **online submission** for both indigenous & foreign bidders.

k) Since NCCR,(Formerly ICMAM Project Directorate) being Government organization, no advance payment will be made. Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.

l) The Lowest Price (L1) for both foreign and indigenous Bidders will be decided upon the lowest price quoted by the particular Bidder as on date of opening of tender enquiry as per the Price Format.

m) NCCR,(Formerly ICMAM Project Directorate) reserves the right to cancel / withdraw the bid without assigning any reasons for such decision. NCCR, also reserves the right to award to any bidder or cancel the orders issued to any bidder without assigning any reason thereof. Such decision will not incur any liability whatsoever on the part of NCCR.

n) Tender document is non-transferable.

5.The required annexures alongwith supporting documents as called for in the tender conditions, should be duly filled in (wherever necessary) and signed in and are SACROSANCT and scanned copy of the same should be uploaded in the online mode for considering any offer as complete offer. All the Bidders are expected to go through every detail of the tender carefully and provide all requisite details and documents / certificate, and tender documents duly

complete in all respects and digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.

6. All contracts shall be entered and acting through its designated authority. Wherever not so specified, the contractual obligations will be governed by the International contract law or the Indian Contract Law as may be applicable.

7. In case of foreign bidders, either the foreign OEM / Principals will bid in the subject tender process or any of its authorised agents as per requirements of the tender enquiry conditions. OEM / Principal or the authorised / agents enlisted with DGS&D shall not be allowed to participate in the subject tender process simultaneously.

8. NCCR reserves the right to cancel/reject entire tender process without assigning any reason.

9. EARNEST MONEY (EM) and TENDER DOCUMENT FEE

(a) The **Earnest Money Deposit (EMD) of Rs.2,00,000/-** for supply & installation of **item (specified in Appendix-2)** in the form of Banker's cheque OR Demand Draft drawn in any scheduled / Nationalised bank in favour of **Pay & Accounts Officer, IMD payable at Chennai** should be submitted on or before the due date of Technical bid opening during office working hours as a part of technical bid. Scanned copy of such document must be attached online along with the technical bid documents, failing which tender document would be rejected. The earnest money shall bear no interest.

(b) The participating bidders should pay **Rs.500/-** (Rs.Fivehundred only) as **tender fee (non-refundable)** in the form of Banker's Cheque OR Demand Draft drawn in any scheduled / Nationalised bank in favour of Pay & Accounts Officer, IMD payable at Chennai) on or before the due date of Technical bid opening during office working hours of NCCR. Scanned copy of such

document must be attached online along with the technical bid documents, failing which tender document would be rejected.

(c) **Foreign bidders shall remit Tender fee of US\$ 8 and EMD of US\$ 2956 in postal coupons/Bank Draft payable as stated above** within the stipulated dates by post / courier. Scanned copies of such documents should be submitted online along with the technical bid.

(d) Bids submitted without EMD & Tender fee and in other forms will stand rejected. No interest is payable on EMD.

(e) The EMD will be returned to the bidder(s) whose offer is not accepted by NCCR within two months from the date of placing final order on the selected bidder. In case of the bidder, whose offer is accepted, the EMD amount will be converted as security deposit till the warranty period plus 60 days.

(f) However, if the return of EMD is delayed for any reason, no interest / penalty shall be payable to the bidder.

(g) The successful bidder, on award of contract / order must send the contract / order acceptance in writing within 10 days of award of contract / order, failing which the EMD will be forfeited.

(h) The EMD shall be forfeited, if the bidder withdraws the bid during the period of bid validity specified in the tender.

(i) In case of any ambiguity / dispute in the interpretation of any of the clauses in this tender document, The Project Director. NCCR interpretation of the clauses shall be final and binding on all parties.

10. PRICE

The prices quoted should be on firm and fixed basis and shall include all elements of prices. The bidders / tenders will not be allowed to make any variations in the price bid or any amendments to commercial offers already uploaded online during the currency of tender and after the date of opening of the tender. **PRICE BID should be submitted ONLINE ONLY and no other mode of submission of price bid is acceptable.**

11. TWO BID SYSTEM

- A. Online Technical bid
- B. Online price bid

A. TECHNICAL BID: The bidder should submit the scanned copy for online submission and the same original hard copy of all the following documents as part of the Technical Bid in the stipulated format. The original hard copies should be submitted (Hard copy by manual submission) to the NCCR (contact person Mr.S.Kumar, Tel:044-66783599, email id: icmam@icmam.gov.in) on or before the due date of Technical bid opening, during office working hours. The cover containing the necessary technical bid documents should be superscribed by **"Tender Ref No:MoES/NCCR/PWQ/WQAB/10/2018 Part I Technical BID for "WATER QUALITY AUTOMATED BUOY".**The Technical bid should contain the following details:The respective original documents are to be submitted under Technical bid by **manual submission**.

i) Bidder should have sufficient financial resources to meet the obligation under contract. They should submit Balance Sheet for last 02 years OR bank's report for their credit worthiness. The bidder should have a minimum turnover of 10 lakhs or equivalent foreign currency for foreign bidders, in each of the two financial years prior to tender opening date. Necessary documents should be provided **(both online and manual submission)**.

ii) Scanned copies of Purchase orders for values not less than Rs.3.0 lakhs for a total value of min. Rs.08 lakhs, or equivalent foreign currency for foreign bidders, executed during the last two years for similar item / higher / equivalent configuration **(both online and manual submission)**.

iii) If the bidder is a dealer or reseller or partner of OEM, scanned copy of letter authorized by OEM to participate in this tender (both online and manual submission).

iv) Scanned copy of Tender Acceptance Letter as per Appendix - 1 (both online and manual submission).

(v) Performance certificate from their client (as per clause 3 (i) of Section - I)

vi) Scanned copy of details of Products and Components of the required item as per Appendix - 4 (both online and manual submission).

vii) Scanned copy of Technical Compliance Sheet as per Appendix -3

- viii) Scanned copy of EMD fee as per detail (Online submission)
- ix) Original EMD fee as per detail (manual submission)
- x) Scanned copy of Tender document fee (online submission)
- xi) Original tender document fee as per detail (manual submission)
- xii) Any other related documents / Product brochure / web reference (both online and manual)
- xiii) Check list as per Appendix 5 - "Check List" (both online and manual)
- xiv) Any other relevant document / certificate which is required to be submitted by the firm in line with the requirement of the subject tender enquiry.
- xv) Manual submission of technical bid documents(originals) along with the relevant documents should be submitted to NCCR,(Formerly ICMAM-PD), on or before the due date of online OPEN E-Tender submission (i.e on or before 18.06.2018, 15:00hrs Indian standard time).

B.PRICE BID should comprise of the following:

- i) Bidders supplying indigenous goods shall quote only in Indian Rupees.
- ii) For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currency say US Dollar, Euro, or Yen.
- iii) FOB price and Agency commission payable to the Indian Agent should be indicated in columns provided in the price bid format for payment purpose in freely convertible currency as mentioned above,
- iv) Agency Commission will be paid by the buyer to the Indian Agent in Indian Rupees. Exchange rate of Agency commission will be taken as on date of acceptance of tender
- v) Agency commission payable to the Indian Agent should be on FOB price and should not carry any tax or levies.
- vi) As regards price(s) for allied services/equipment, if any required with the main store, the same shall be quoted in Indian Rupees only if such services are to be performed / installed in India.

vii) Tenders where prices are quoted in any other way shall be treated as non-responsive and rejected.

viii) The quoted prices for goods offered from within India and that for goods offered from abroad are to be indicated separately in the applicable currencies.

C. METHODOLOGY FOR OPENING OF THE TENDERS

i) Only the technical bid shall be opened online on the date of tender opening. Price bids of only those firms will be considered for opening whose offer would meet all tender requirements including compliance to technical specifications and has passed in all tender conditions and technical/ physical (including field trial) evaluation if required.

ii) After opening of price bids, ranking statement will be prepared and the finalization of successful bidder will be done on L-1 (the lowest price) basis. For foreign currency, and it will be with reference to exchange rate prevailed as on the date of opening of price bid.

12. Any change in Address/ Telephone/ Fax/ e-mail should be immediately informed. The state of non-communication by the firm will make the offer liable for rejection.

13. Clarification regarding contents of the bids – During the course of evaluation process, the purchasing authority, shall at its discretion, ask the bidder for clarifications or confirmation on various aspects with reference to shortcomings or deficiencies so noticed in their bids. The request for such clarification or confirmations shall be given in writing to which the bidder will be required to send their response within the time frame so prescribed in such written communications. The clarifications / confirmations shall be called only in respect of general conditions or requirements of the tender enquiry documents and not on any aspect pertaining to specifications or prices or other essential requirements of tender schedule.

14. No post bid clarification or alteration or modification on the initiative of the bidder will be entertained. However, NCCR, as its discretion ask the bidder for the clarification of its bid. The request for clarification and the response shall be in writing.

15. Integrity pact / Rejection of bids – If the bidders do not agree with the terms and conditions of tender, their offer will be summarily rejected. Contract with successful bidders will also be cancelled if they do not fulfill the terms and conditions of the contract or till contractual obligation period and their Earnest Money Deposit and Performance Security Deposit (if any) will be forfeited. Canvassing by the bidder in any form, unsolicited letter/communications and post tender corrections would invoke summary rejection of tender with forfeiture of EMD.

16. Modifications and withdrawal of bids – A bidder may modify or withdraw his bid online after submission but prior to final date of submission of tenders/date of opening of tenders. In case a supplier modifies or amends a bid already submitted online, the latest version of the bid will be accepted.

17. Entities authorised for submission of offers in Global Tender Enquiries Quotations are invited from the following entities / bidders –

(a) Original Equipment Manufacturer (OEM) / Indian / Foreign Principal or their subsidiary enterprises in India;

(b) Authorised Agents of Foreign Principals (OEMs) or Indian OEMs;

(c) Indian agents of Foreign Principal / OEMs who are enlisted with the DGS&D under the mandatory enlistment scheme of Department of Expenditure, Ministry of Finance, GOI and in accordance with Rule 143 of GFR. The enlistment certificates of Indian Agent of Foreign principals issued by DGS&D, JeevanTaraBuilding, 5-Parliament Street, New Delhi, 110001, must be enclosed.

(d) Foreign principal jointly with Indian associate with defined responsibilities and joint & severable responsibility.

(e) Indian Bidders (quoting foreign goods indicating country of origin) holding valid Indian License (IEC) warranty support of foreign manufacturer.

18. Compliance statement for specifications

i) The technical details of the models offered along with the supporting original technical Literature, leaflets, brochures etc. will be submitted, where ever necessary. The confirmation of the models(s) offered with the tender enquiry specification and the deviation(s), if any will be clearly mentioned in the technical bids.

ii) The attention of Bidders is invited to clause 1(A) of form DGS&D 231 "Instructions to Bidders" whereby they are required to furnish clause by clause compliance of specification bringing out clearly deviation from specification, if any. **The firms are advised to submit the Technical compliance sheet in the format given at Appendix - 3 along with technical bid failing which their offer will be treated as incomplete and are liable to be rejected.**

19. Bidders will be fully responsible for proper installation, commissioning and training (if any specified in tender requirement) and making the item functional before final settlement of the account.

20. The Bidder will also provide complete technical/ operating and service manual of the item, if any.

21. The decision of the purchaser shall be final as to the quality of the stores and shall be binding upon the Bidders and in case of any of the articles supplied not being found as per specification shall be liable to be rejected or replaced and any expenses or losses caused to the suppliers should be borne by the supplier and ensured by the supplier that articles supplied should be of standard specifications and free from all defects. The acceptance of articles will be made only when the articles are inspected and found up to the standard specifications and free from all defects.

22. For any change in terms and condition of tender / tender specification, the Bidders are requested to visit the website <http://www.icmam.gov.in> & Central Public Procurement Portal (CPP)

<https://eprocure.gov.in/eprocure/app>

23. SPECIAL INSTRUCTIONS FOR ONLINE BID SUBMISSION: Instructions to the Bidders to submit the bids online through the Central Public Procurement Portal for e-Procurement are at <https://eprocure.gov.in/eprocure/app>. The bidders must carefully follow the instructions.

i) Possession of valid Digital Signature Certificate (DSC) and enrolment/registration of the contractors/bidders on the e-procurement/e-tender portal is a prerequisite for e-tendering.

- ii) Bidder should do the enrolment in the e-Procurement site using the "Click here to Enroll" option available on the home page. Portal enrolment is generally free of charge. During enrolment/registration, the bidders should provide the correct/true information including valid e-mail-id. All the correspondence shall be made directly with the contractors/bidders through e-mail-id provided.
- iii) Bidder need to login to the site through their user ID/ password chosen during enrolment/registration.
- iv) Then the Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by NIC/SIFY/TCS/nCode/eMudra or any Certifying Authority recognized by CCA India on e-Token / Smart Card, should be registered.
- v) The DSC that is registered only should be used by the bidder and should ensure safety of the same.
- vi) Contractor/Bidder may go through the tenders published on the site and download the required tender documents/ Annexures for the tenders he/she is interested.
- vii) After downloading / getting the tender document/ Annexures/ Appendices, the Bidder should go through them carefully and then submit the documents as asked, otherwise bid will be rejected.
- viii) If there are any clarifications, this may be obtained online through the tender site, or through the contact details. Bidder should take into account the corrigendum / addendum published before submitting the bids online.
- ix) Bidder then logs in to the site through the secured log in by giving the user id/ password chosen during enrolment/registration and then by giving the password of the e-Token/ Smart Card to access DSC.
- x) Bidder selects the tender which he/she is interested in by using the search option & then moves it to the 'my tenders' folder.
- xi) From my tender folder, he selects the tender to view all the details indicated.
- xii) It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender Annexures

and appendices carefully and upload the documents as called for; otherwise, the bid will be rejected.

xiii) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/ Annexure and generally, they can be in PDF/xls/rar/zip/dwf formats. If there is more than one document, they can be clubbed together and can be provided in the requested format. Each document to be uploaded through online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through zip/rar and the same can be uploaded, if permitted. Bidders Bid documents may be scanned with 100 dpi with black and white option. However if the file size is less than 1 MB the transaction uploading time will be very fast.

xiv) Bidder should take into account the corrigendum / addendum published from time to time before submitting the online bids.

xv) The Bidders can update well in advance, the documents such as certificates, annual report details etc., under My Space option and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.

xvi) Bidder should submit the Tender Fee/ EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission due date & time for the tender. Scanned copy of the instrument should be uploaded as part of the offer.

xvii) While submitting the bids online, the bidder reads the terms & conditions and accepts the same to proceed further to submit the bid packets.

xviii) The bidder has to select the payment option as offline to pay the Tender FEE/ EMD as applicable and enter details of the instruments.

xix) The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise submitted bid will not be acceptable.

xx) The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for

downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.

xxi) The bidder has to upload the relevant files required as indicated in the covered content. In case of any irrelevant files, the bid will be rejected.

xxii) If the price bid format is provided in a spread sheet file like BoQ_xxxx.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Price Bid/ BOQ template must not be modified/replaced by the bidder, else the bid submitted is liable to be rejected for this tender.

xxiii) The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.

xxiv) After the bid submission (i.e after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number, given by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening date.

xxv) The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.

xxvi) All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening.

xxvii) Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public

keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

xxviii) The confidentiality of the bids is maintained since the secured Socket Layer 128 bit encryption technology is used. Data storage encryption of sensitive fields is done.

xxix) The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) exit option in the browser.

xxx) For any queries regarding e-tendering process, the bidders are requested to contact as provided in the tender document. Parallely for any further queries, the bidders are asked to contact over phone as mentioned in the CPP website or send an email to – cppp-nic@nic.in.

NCCR

SECTION II

SCOPE OF WORK

1. Scope: The bidder has to supply the required item in accordance with the specifications mentioned in [Appendix-2](#). The bidder shall ensure the successful installation, configuration, testing and commissioning of required item at NCCR, Chennai.

2. Warranty Period of Support: The bidder has to provide warranty support period for a minimum period as declared by OEM / specified in the tender document from the date of successful installation and acceptance by NCCR.

3. Delivery / Execution of Order: Bidder has to supply all the required items at NCCR within 3-4 weeks from the date of issue of purchase order. The installation, configuration, testing and commissioning should be completed by the bidder within two weeks upon the supply of items as per PO provided by NCCR.

4. The end to end supply, installation & commissioning need to be completed within 3-4 weeks from the date of receipt of PO. In case of delay, penalty clause shall be applicable as per prevailing norms. (0.5% of PO cost per week with maximum of 4 weeks delay). Delay beyond 14 weeks lead to cancellation of PO, forfeiture of EMD and disallowing of participation of future NCCR tenders.

5. Relevant catalogues / literatures/drawings/brochure for the offered items should be uploaded and enclosed with the technical offer.

6. Performance Security: The supplier shall require to submit the performance security in the form of irrevocable bank guarantee issued by any Indian Nationalized Bank for an amount which is equal to the 5% of FOB value within 21 days from the date of receipt of the purchase order and should be kept valid for a period of 60 days beyond the date of completion of warranty period.

SECTION III

GENERAL CONDITIONS

1. Custom / Excise Duty NCCR is exempted in paying from customs duty.

2. Insurance Delivered Duty Paid (DDP) price offered by the bidder will be inclusive of all insurance charges payable till delivery of stores at consignee location, its installation and commissioning of the store. In case of orders placed on FOB/FCA basis, the purchaser shall arrange insurance fee. If orders placed on CIF/CIP basis, the insurance should be up to NCCR, Chennai.

3. Taxes and Duties

Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc. incurred until delivery of the contracted goods to the purchaser. However, GST in respect of the transaction between the purchaser and the supplier shall be payable extra, if so stipulated in the order.

4. Payment

Payment will be made through irrevocable Letter of Credit (LC) and this will be established in favour of foreign supplier after the submission of performance security. The LC will be established on the exchange rates as applicable on the date of establishment.

i) For Indigenous supplies, 100% payment shall be made by the purchaser against delivery, inspection, successful installation, commissioning and acceptance of item at NCCR in good condition and to the entire satisfaction of the purchaser and on production of unconditional performance bank guarantee.

ii) For Imports, LC will be opened for 100% FOB/CIF value. 80% of LC amount shall be released on presentation of complete and clear shipping documents and 20% of the LC amount shall be released after the installation of the item at NCCR in faultless working condition for a period of 30 days from the date of satisfactory installation and subject to the production of unconditional performance bank guarantee.

iii) Indian Agency commission (IAC), if any shall be paid after satisfactory installation and commissioning of items at NCCR at the exchange rate prevailing on the date of negotiation of LC document.

iv) All the bank charges within India will be borne by NCCR and outside India will be borne by the supplier.

5. Risk Purchase: In the event of a contract being cancelled for any breach committed and the purchaser effecting re-purchase of the stores at the risk and the cost of the contractor, the purchaser is not bound to accept the lower offer of any allied or sister concern of the contractor.

6. Liquidated Damages (LD): In case the firm does not complete the supply within the delivery period, action will be taken against the firm as per Para 14.7 of DGS&D 68(Revised) of Ministry of Commerce, Deptt of Commerce of the General condition of the contract for imposition of LD charges.

7. Defective store:

In case of any defects in supply or manufacturing or workmanship, observed during survey at consignee location or later during the warranty period, the Bidder will be liable to replace the defective store at the cost of supplier. The purchase proceed to take remedial action as may be necessary at the supplier's risk and expense and without any prejudice to any other right which the purchase may have under the contract.

8. ARBITRATION:

a) In the event of the Arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason, on his award being set aside by the court for any reason, shall be lawful for the Director, NCCR Chennai to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid.

c) It is further a term of this contract that no person other than the person appointed by the Director NCCR as aforesaid should act as arbitrator and that, if for any reason that is not possible, the matter is not to be referred to Arbitration at all.

d) The arbitrator may from time to time with the consent of all the parties to the contract enlarge the time for making the award.

e) Upon every and any such reference, the assessment of the costs incidental to the reference and award respectively shall be in the discretion of the arbitrator.

f) Arbitration shall be held in Chennai, India and conducted in accordance with the provision of Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof.

9. PATENT AND OTHER INDUSTRIAL/INTELLECTUAL PROPERTY RIGHT

The prices quoted in the present tender shall be deemed to include all amounts payable for the use of patents, copyright, registration charges, trademarks and payment for any other industrial property rights. The Bidder shall indemnify the Purchaser against all claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or the use. The Bidder shall be responsible for the completion of the supplies, irrespective of the fact of infringement of any or all the rights mentioned above.

10. TRANSFER AND SUB-LETTING

The Bidder has no right to give, bargain, sell, assign or sublet or otherwise dispose of the resultant contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the resultant contract or any part thereof.

11. Purchaser reserves the right to change the quantity of stores.

12. Purchaser reserves the right to get the manufacturing capacity of all firms re-verified irrespective of the registration status.

13. Purchaser reserves the right to cancel/reject or Scrap any or all the tenders without assigning any reason.

14. FORCE MAJEURE CLAUSE

If at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts or act of God (hereinafter referred to "events")

provided, notice of the happening of any such event is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance, and deliveries under the contract. The contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and the decision of the Purchaser as to whether the deliveries have been so resumed or not, shall be final and conclusive, PROVIDED FURTHER that if the performance in whole or part or any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, either party may at its option terminate the contract provided also that if the contract is terminated under this clause, the purchaser shall be at liberty to take over from the contractor at a price to be fixed by the Purchaser, which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture in the possession of the contractor at the time of such termination or such portion thereof as the purchaser may deem fit excepting such materials, bought out components and stores as the contractor may with the concurrence of the purchaser elect to retain.

15. TERMINATION OF CONTRACT

The Purchaser shall have the right to terminate this Contract without any notice in part or in full in any of the following cases:

- a) The delivery of the material is delayed for causes not attributable to **Force Majeure** after the scheduled date of delivery.
- b) The Seller is declared bankrupt or becomes insolvent.
- c) The delivery material is delayed due to causes of **Force Majeure** by more than 21 days.

16. Government Regulations

It shall also be confirmed that, there are no Govt. restrictions or limitations in the country of the supplier or countries from which sub-components are being procured and/or for the export of any part of the system being supplied. Suppliers/Contractors shall provide a certificate to this effect.

17. Clarification of Bid Document

A prospective Bidder requiring any clarification of the Bid documents may raise his point of clarification through Bid Management window after successfully logging to the e-procurement website <https://eprocure.gov.in/eprocure/app>. The bidder may seek clarification by posting query in the relevant window after clicking "Seek Clarification" option in the view tender details window for tender which can be selected through my tender option of bid submission menu. The clarification will be replied back by the tendering Authority through the e-procurement website which can be read by the bidder through the "Clarification" option under Bid Submission menu. The tendering authority may also respond to clarifications raised by the prospective bidders on purchaser's e-mail address icmam@icmam.gov.in or the bidder may also write to The Director, NCCR for seeking clarifications by mentioning the tender reference details.

19. Any dispute relating to purchase of goods between NCCR and Bidder shall be subjected to the jurisdiction of a court of law situated in Chennai, Tamil Nadu, India.

NCCR

SECTION IV

SPECIAL CONDITIONS

1. Delivery Period and terms of Delivery:

a. The Delivery Period for the stores

Delivery of goods should be made within a maximum of 2-3 weeks from the date of purchase order and the opening of LC. Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by telex/fax/email, the full details of the shipment including contract number, receipt number / AAP etc, date, description of goods, quantity, name of consignee, invoice etc. Please note that Contract can be cancelled unilaterally by the Buyer in case items are not received within the contracted delivery period.

b. Terms of Delivery – Delivered Duty Paid at consignee location.

2. Installation, commissioning and training– The seller has to make deployment of the instrument with full configuration from sea deployment to acquisition of the data at receiving station. Mooring accessories, sinkers and boat service will be provided by NCCR. Seller has to provide free training to at least two Scientists at the time of installation as required by the Scientists to enable them to effectively operate the equipment.

3. Pre Despatch Inspection (PDI): There shall be no PDI in the subject tender process but bidder should ensure that stores are despatched along with Manufactures works test certificate conforming to specification.

4. PAYMENT TERMS:-

A.PAYMENT TERMS FOR BOTH INDIGENOUS AND FOREIGN SUPPLIERS – 100% of payment of stores will be made on receipt of items in good condition by the consignee against consignee note with manufacturers work test / warranty certificate, on installation and successful commissioning at NCCR. The payments will be released on submission of Bills in prescribed formats along with the requisite consignee / Inspection note, Bank Guarantee of 10% contract value valid till warranty period completion.

B.MODE OF PAYMENT

i. **Foreign seller** - The payment to the foreign supplier / contractor will be made through irrevocable Letter of Credit (LC) opened through State Bank of India. In case supplier desires Letter of Credit(LC) to be confirmed by designated foreign bank, such confirmation charges will be payable by him. The payment to foreign supplier will be made as per the payment terms at 4(A) above. The payment will be made on submission of relevant documents to be intimated on order confirmation.

ii. **Indigenous Sellers** - For indigenous suppliers all payments will be released electronically to the account of the Indigenous firm who will be required to provide Banker details along with IFSC code and account number along with their bids to facilitate e-payments.

5. Packing: The supplier will ensure that the items are securely packed to avoid damage in transit by sea/air/rail/road occasioned by any defect in packing and shipping documents should also show the name of the ultimate consignee. The supplier shall insert in each case packing list fully item-wise to show the case number, contents, gross and net weight and cubic measurement and dimensions. Four copies of each packing list shall be supplied to the Forwarding Agent.

6. Marking: Each case shall have shipping marks stenciled on two opposite side and on the top. In addition, the gross weight/net weight and cubic measurements should also be indicated on the packages. The marks shall also be shown on invoices, packing lists and on rail/road Bills of lading or mailing certificates exactly as they appear on the cases.

7. Period of Guarantee / Warranty: - Unless otherwise specified by OEM or specified in the technical specifications, the guarantee / warranty period of item should be minimum 01 year from the date of successful installation/commissioning of equipment to the entire satisfaction of the Consignee. Performance Security Deposit, if any will only be returned the firm only after completion of warranty period and on certification from the user/consignee that there is no warranty claim against the firm.

8. Bidders will be fully responsible for proper installation, testing and making the equipment functional before final settlement of account.

APPENDIX - 1

TENDER ACCEPTANCE (OFFER) LETTER

(To be submitted online duly signed format (scanned copy) by the authorized signatory on bidder's company letter head.

Date.....

To

The Director, NCCR

(Formerly ICMAM-PD)

2nd Floor, NIOT Campus

Pallikaranai, Chennai – 600100

Subject: Acceptance in respect of terms and conditions of tender document for supply, installation, testing and commissioning of _____
(specify item name) at NCCR, Chennai.

Ref: Tender Ref No.....,..... dated.....

Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned tender from the web site <https://eprocure.gov.in/eprocure/app>.
2. I / We hereby certify that I / We have read all the terms and conditions of tender document from page No. _____ to _____ (including all annexure / Forms / appendixes, paras, etc.,) which shall part of the contract agreement and I / we shall abide hereby by all the terms and conditions contained therein.
3. The corrigendum(s) issued from time to time by your organization has also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept all the terms and conditions of above mentioned tender document and corrigendum(s) as applicable.

5. In case any provisions of this letter are found violated, then your department / organization shall without prejudice to any other right or remedy be at liberty to reject my bid including the forfeiture of EMD.
6. I / We confirm that our bid shall be valid up to 180 days from the date of opening of Technical Bid.
7. I / We hereby certify that all the statements made and information supplied in the enclosed appendix, annexure / Forms / paras etc., furnished herewith are true and correct.
- 8/ I / We have furnished all information and details necessary for demonstrating our qualification and have no further prominent information to supply.
9. I / We understand that you are not bound to accept the lowest or any bid you may receive.
10. I / We certify / confirm that we comply with the eligibility requirements as per bid documents.
11. In case any provisions of this tender are found violated, NCCR shall be at liberty to reject this tender, including the forfeiture of the full said EMD and we shall not have any claim against NCCR in satisfaction of this condition.

Yours faithfully,

Signature of the Bidder

Name:

Designation:

Rubber-stamp of the firm

APPENDIX - 2

TECHNICAL SPECIFICATIONS

SPECIFICATIONS: BUOY WITH AUTOMATED WATER QUALITY SENSOR

Qty: 1 No.

S.NO	SPECIFICATION	COMPLIANCE	REMARK
1.0	General Buoy Features & Specification		
	The multi-parameter water quality sensor to be deployed using a floating buoy on a moonpool arrangement for access/retrieval without having to completely removal of buoy out of water.		
	It will be deployed in 8-12 m depth range in relatively more wave amplitudes compared to open ocean conditions. The Tidal variation is 2 meter max.		
	Buoy Structure Stability Calculations should be provided in the bid document to prove it's suitability for deployment in a significant wave height of ~5m condition.		
	A power budget calculation for complete system for 21 days of power autonomy should be provided to explain the battery capacity and solar panel sizing for the complete system.		
	The buoy Hull material made of rotationallymoulded UV stabilized polyethylene with seamless hull, filled with marine grade foam; stainless steel suitable for harsh conditions with proper mooring frame and other component suitable for integrating all sensors.The buoy manufacturer should be registered with IALA. The buoy should not fade in colour and no painting of the buoy surface should be ever required for the lifetime of the buoy.		
	The buoy should be light weight (should not exceed 400 Kg).		
	It should be able to be deployed by 15 m length boats to deploy the buoy in water body.		
	The buoy should have a top (lantern) light to warn & avoid collision. The lantern should at least be 3NM range and self-contained and compliant to IALA guidelines.		
	The buoy should have other navigational AIDS such as RADAR reflector, Top Mark, Marine Beacon and GPS receiver. Also, feasible to integrate AIS into the buoy at a later date. AIS integration option should be quoted optionally.		

	It should have 2 mooring points and 2 lifting points and load test certification for mooring and lifting points should be provided.		
	Seller has to execute the deployment of fully configured instrument and acquisition of the data at receiving station. Mooring accessories, sinkers and boat service will be provided by NCCR.		
2.0	Sensor Requirement & Specification		
	<p>Meteorological Sensors</p> <p>Air temperature and relative humidity</p> <ul style="list-style-type: none"> • Temperature range: - 40 ° C to + 60 ° C • Resolution: 0.1 ° C • Accuracy: ± 0.3° C • Relative humidity range: 0.-100% R.H. • Resolution: 1% • Accuracy: ±2% RH <p>Barometric pressure</p> <ul style="list-style-type: none"> • Range: 300 to 1100 hPa • Resolution: 0.1hPa • Accuracy: ±0.5hPa <p>Wind speed & Direction</p> <ul style="list-style-type: none"> • Type: Ultrasonic • Wind speed range: 0 to 60 m/s • Wind speed resolution: 0.01 m/s • Wind speed accuracy: ±5% Wind direction range: 0 to 359 ° • Wind direction resolution: 1 ° • Wind direction accuracy: ±5° <p>Precipitation</p> <ul style="list-style-type: none"> • Range: 0 to 50 mm • Resolution: 1 mm • Accuracy: ±1 mm <p>Global Solar Radiation</p> <ul style="list-style-type: none"> • Wavelength Sensitivity- 300 to 3000 nm • Output Range- 0 to 1600 W/m⁻² • Resolution- 1 W/m⁻² 		
	Water Quality Sensors		

	Temperature	Range: 0 to 45 °C Accuracy: ± 0.1 °C Resolution: 0.01 °C		
	Conductivity	Range: 0 to 70 mS/cm (0 to 70,000 µS/cm) Accuracy: ± 0.01mS/cm (10µS/cm) Resolution: 0.001 mS/cm (1 µS/cm)		
	Dissolved Oxygen	Range: 0 to 200% surface/air saturation in all-natural waters (fresh and salt) Accuracy: ± 1% of the reading. Resolution: 0.01 ml/L (1µmol/L)		
	pH	Range: 0-14 pH Accuracy: ± 0.1 pH Resolution: 0.01 pH		
	Chlorophyll	Range: 0 - 400 µg/L Accuracy: ± 3% of reading Resolution: 0.05µg/L Sensitivity: 0.03µg/L Wavelength: ex/em 470-695 nm		
	Turbidity	Range: 0 to 3000 NTU Accuracy: ± 2 % of reading Resolution: 0.01 NTU Sensitivity: 0.01 µg/L		
	Blue Green Algae	Range: 0 to 230 ppb Sensitivity: 0.1 ppb Linearity: 0.99 R squared		
	Memory	Suitable Non-volatile Flash Memory		
	Power	12VDC operated with as low power consumption as possible.		
	Weight	Not more than 7 Kg in air		
Physical Oceanography Sensors				
	<i>In-situ</i> water currents Current Speed: Range: 0-3m/s Resolution: 0.1mm/s Mean Accuracy: ±0.15cm/s Relative: ± 1% of reading			

	<p>Current Direction: Range: 0–360° Resolution: 0.01° Accuracy: ±5° for 0-15° tilt ±7.5° for 15-35° tilt</p>		
	<p>Wave Parameters</p> <p>Wave Height: Range: 0-10m Resolution: < 0.01m Accuracy: ±0.05m or ±1% of the reading</p> <p>Wave Period: Range: 1 - 30s Resolution: <0.1s Accuracy: < 1%</p> <p>Wave Direction: Range: 0 to 360° Resolution: <1° Accuracy: <3°</p>		
Sensor Features			
	<p>The instrument should be ideally suited for extended deployments in remote, biologically rich environments with field proven sensors ensure long term data stability.</p>		
	<p>The equipment should have good bio-fouling protection (Central wiper or UV type bio fouling control for long-term in-situ measurements).</p>		
	<p>The system should use EPA-approved anti-fouling devices.</p>		
	<p>C,T,D &Tu, pH, CHL and BGA sensors preferable to be smart, which should be field swappable, minimizing the need for field calibration and for less turn around (option)</p>		
	<p>Each instrument should be factory calibrated in a temperature-controlled bath that operates at 2-4 times the accuracy of the instrument.</p>		
	<p>No in-field calibrations required, common deployment duration of three plus month.</p>		
	<p>The system should have internal memory and should also be capable of integrating with an external data logger with Data transmission system to transmit the data to the</p>		

	department using GSM/GPRS.		
	The water quality sensors Conductivity, Temperature, Optical Dissolved Oxygen, pH, Turbidity, Salinity, TSS, and Chlorophyll should come with 1 year standard warranty + 3 years extended warranty		
	On-board processing of wave parameters resulting in lower demands for bandwidth and power. Distinguish direction of swells and wind driven waves. Measure accurate wave characteristics ; High sampling rate and mechanical dampening, ensuring low noise.		
3.0	Floating buoy with telemetry		
	The complete water quality instrument is to be deployed in a self-powered floating buoy equipped with data logger electronics, GSM/GPRS Telemetry, Solar Panels, Solar charge controllers and batteries with adequate back up.		
	Hull material made of Rotationally UV stabilized polyethylene, filled with marine grade foam; Galvanized steel core suitable for harsh conditions.		
	Hull diameter 2 m \pm 0.5m		
	Galvanized steel ballast		
	PVC sonde deployment tube or Moon Pool arrangement		
	Powder-coated aluminium tower with MET sensor mounting ring and mounting bracket		
	3 x 24 Watt solar panels		
	Suitable enclosure including Electronics mounting bracket Internal temperature/humidity sensor Diagnostic cable and connector		
	Suitable enclosure including:(2) 12V batteries; Solar regulator Electronics and power enclosures mounted on top of hull and are removable for easy maintenance and repair		
	External antenna system		
	Integral underwater cable assembly included for water quality sonde.		
	Marine grade underwater connectors standard.		
	Two point or single point mooring options standard.		
	Expandable payload can easily accommodate additional water quality sensors.		
	System can be serviced without the need for divers.		

	Yellow in color to signify an environmental monitoring system.		
4.0	Data Logger / Communication Features & Specification		
	High performance data logger & communications device for unattended, remote, real-time data acquisition & control, is a multi-tasking logger capable of making measurements & transmitting multiple communications simultaneously.		
	Data Logger with user friendly user interface for the setup & configure the system or remotely.		
	Data Logger should enables to configure Digital inputs to trigger measurement processing, including logging & telemetry.		
	Should have the option for Analog and digital I/O sensor modules that plug into RS232, RS485, SDI-12.		
	Each measurement should be independently scheduled with Sample intervals from 1 sec. to 24 hours, in 1 sec. increments.		
	System events should be logged independently of measurement data with built-in functions for min, max, average, & accumulation calculations.		
	Changes made to logging setup should not affect logged data and logged data is compressed.		
	Should have the inbuilt memory and option for the storage expansion via removable SD card.		
	Data logger should have option for data transfer through USB devices or SD cards or MMC cards.		
	System events logged independently of measurement data.		
	The system should have the option for integrating additional sensors like Phosphate and Nitrate in future.		
	Specification		
	Measurement Interval	1.0 second to 24 hours (programmable)	
	Measurements Supported	Unlimited	
	Analog Channels	8	
	Input Voltage	-0.1 to 5V with respect to ground,	

		single ended or differential		
	Resolution	12 bits or more		
	Expandable	via SDI-12		
	Digital Inputs	6 (2 Bi-Directional)		
	Telemetry	System supports data output to RS-232/485 lines, modems and cellular phones (SMS, GPRS, 3G), radio-modems and satellites.		
	Operating Temperature	0°C to +60°C		
	Memory			
	Built-In	RAM: 32MB – 128 MB Non-volatile: 65MB (1 -3,000,000 readings)		
	SD Card	2 to 8 GB For download data & read/write setups or additional log memory		
	Power Requirements	10-16VDC (20VDC max)		
	Current Drain	Typically 3mA standby, 70mA active		
	Communication Protocols Supported	FTP server, FTP client, HTTP server, telnet, SMTP, SMTPS, MODBUS RS485		
5.0	Software Specification			
	Software should allow any PC to remotely setup & operate data logger without using the front panel.			
	Software should automatically displays the graphic display of the data logger.			
	Easy file transfer for up/downloading of setups, programs, data files.			
	Automatically prompts for login account & password when needed			
	Displays system information on running processes, threads, & memory usage			
6.0	Accessories			

	The buoy system should be capable of operating in a self-powering mode from an internal power supply using a set of rechargeable batteries that are available for purchase in the local market		
	The buoy system should also have the capability of being powered by an external DC power supply fitted with sufficient number of Solar panels. The solar panels should be sufficient to keep the ocean buoy system working for long-term (6 months) deployments.		
	The complete water quality instrument is to be deployed in a self-powered floating buoy equipped with data logger electronics, GSM/GPRS Telemetry, Solar Panels, Solar charge controllers and batteries with adequate back up.		
	The data measured by the multi-parameter sensor compartment should be transmitted in near-real time using GPRS/GSM telemetry to a PC/workstation.		

NCCR

APPENDIX - 3

TECHNICAL COMPLIANCE SHEET

(Bidders are requested to give Compliance of each Specification whether equipment being offered by them is complying with Specification or otherwise)

ITEM:BUOY WITH AUTOMATED WATER QUALITY SENSOR Qty: 1 No.

MAKE_____

MODEL_____

S.NO	SPECIFICATION	COMPLIANCE	REMARK
1.0	General Buoy Features & Specification		
	The multi-parameter water quality sensor to be deployed using a floating buoy on a moonpool arrangement for access/retrieval without having to completely removal of buoy out of water.		
	It will be deployed in 8-12 m depth range in relatively more wave amplitudes compared to open ocean conditions. The Tidal variation is 2 meter max.		
	Buoy Structure Stability Calculations should be provided in the bid document to prove it's suitability for deployment in a significant wave height of ~5m condition.		
	A power budget calculation for complete system for 21 days of power autonomy should be provided to explain the battery capacity and solar panel sizing for the complete system.		
	The buoy Hull material made of rotationallymoulded UV stabilized polyethylene with seamless hull, filled with marine grade foam; stainless steel suitable for harsh conditions with proper mooring frame and other component suitable for integrating all sensors.The buoy manufacturer should be registered with IALA. The buoy should not fade in colour and no painting of the buoy surface should be ever required for the lifetime of the buoy.		
	The buoy should be light weight (should not exceed 400Kg).		

	It should be able to be deployed by 15 m length boats to deploy the buoy in water body.		
	The buoy should have a top (lantern) light to warn & avoid collision. The lantern should at least be 3NM range and self-contained and compliant to IALA guidelines.		
	The buoy should have other navigational AIDS such as RADAR reflector, Top Mark, Marine Beacon and GPS receiver. Also, feasible to integrate AIS into the buoy at a later date. AIS integration option should be quoted optionally.		
	It should have 2 mooring points and 2 lifting points and load test certification for mooring and lifting points should be provided.		
	Seller has to execute the deployment of fully configured instrument and acquisition of the data at receiving station. Mooring accessories, sinkers and boat service will be provided by NCCR.		
2.0	Sensor Requirement & Specification		
	<p>Meteorological Sensors</p> <p>Air temperature and relative humidity</p> <ul style="list-style-type: none"> • Temperature range: - 40 ° C to + 60 ° C • Resolution: 0.1 ° C • Accuracy: ± 0.3° C • Relative humidity range: 0.-100% R.H. • Resolution: 1% • Accuracy: ±2% RH <p>Barometric pressure</p> <ul style="list-style-type: none"> • Range: 300 to 1100 hPa • Resolution: 0.1hPa • Accuracy: ±0.5hPa <p>Wind speed & Direction</p> <ul style="list-style-type: none"> • Type: Ultrasonic • Wind speed range: 0 to 60 m/s • Wind speed resolution: 0.01 m/s • Wind speed accuracy: ±5% Wind direction range: 0 to 359 ° • Wind direction resolution: 1 ° • Wind direction accuracy: ±5° <p>Precipitation</p> <ul style="list-style-type: none"> • Range: 0 to 50 mm 		

	<ul style="list-style-type: none"> Resolution: 1 mm Accuracy: ± 1 mm <p>Global Solar Radiation</p> <ul style="list-style-type: none"> WavelengthSensitivity- 300 to 3000 nm Output Range- 0 to 1600 W/m-2 Resolution- 1 W/m-2 		
Water Quality Sensors			
Temperature	<p>Range: 0 to 45 °C</p> <p>Accuracy: ± 0.1 °C</p> <p>Resolution: 0.01 °C</p>		
Conductivity	<p>Range:</p> <p>0 to 70 mS/cm (0 to 70,000 μS/cm)</p> <p>Accuracy: ± 0.01mS/cm (10μS/cm)</p> <p>Resolution: 0.001 mS/cm (1 μS/cm)</p>		
Dissolved Oxygen	<p>Range: 0 to 200% surface/air saturation in all-natural waters (fresh and salt)</p> <p>Accuracy: 1% of the reading.</p> <p>Resolution: 0.01 ml/L (1μmol/L)</p>		
pH	<p>Range: 0-14 pH</p> <p>Accuracy: ± 0.1 pH</p> <p>Resolution: 0.01 pH</p>		
Chlorophyll	<p>Range: 0 - 400 μg/L</p> <p>Accuracy: +/- 3% of reading</p> <p>Resolution: 0.05μg/L</p> <p>Sensitivity: 0.03μg/L</p> <p>Wavelength: ex/em 470-695 nm</p>		
Turbidity	<p>Range: 0 to 3000 NTU</p> <p>Accuracy: +/- 2 % of reading</p> <p>Resolution: 0.01 NTU</p> <p>Sensitivity: 0.01 μg/L</p>		
Blue Green Algae	<p>Range: 0 to 230 ppb</p> <p>Sensitivity: 0.1 ppb</p> <p>Linearity: 0.99 R squared</p>		
Memory	Suitable Non-volatile Flash Memory		
Power	12VDC operated with as low power consumption as possible.		
Weight	Not more than 7 Kg in air		
Physical Oceanography Sensors			

	<p><i>In-situ</i>water currents</p> <p>Current Speed: Range: 0-3m/s Resolution: 0.1mm/s Mean Accuracy: ± 0.15cm/s Relative: $\pm 1\%$ of reading</p> <p>Current Direction: Range: 0–360° Resolution: 0.01° Accuracy: $\pm 5^\circ$ for 0-15° tilt $\pm 7.5^\circ$ for 15-35° tilt</p>		
	<p>Wave Parameters</p> <p>Wave Height: Range: 0-10m Resolution: < 0.01m Accuracy: ± 0.05m or $\pm 1\%$ of the reading</p> <p>Wave Period: Range: 1 - 30s Resolution: <0.1s Accuracy: < 1%</p> <p>Wave Direction: Range: 0 to 360° Resolution: <1° Accuracy: <3°</p>		
Sensor Features			
	The instrument should be ideally suited for extended deployments in remote, biologically rich environments with field proven sensors ensure long term data stability.		
	The equipment should have good bio-fouling protection (Central wiper or UV type bio fouling control for long-term in-situ measurements).		
	The system should use EPA-approved anti-fouling devices.		
	C,T,D &Tu, pH, CHL and BGA sensorspreferable to be smart, which should be field swappable, minimizing the need for field calibration and for less turn around (option)		
	Each instrument should be factory calibrated in a temperature-controlled bath that operates at 2-4 times the		

	accuracy of the instrument.		
	No in-field calibrations required, common deployment duration of three plus month.		
	The system should have internal memory and should also be capable of integrating with an external data logger with Data transmission system to transmit the data to the department using GSM/GPRS.		
	The water quality sensors Conductivity, Temperature, Optical Dissolved Oxygen, pH, Turbidity, Salinity, TSS, and Chlorophyll should come with 1 year standard warranty + 3 years extended warranty		
	On-board processing of wave parameters resulting in lower demands for bandwidth and power. Distinguish direction of swells and wind driven waves. Measure accurate wave characteristics; High sampling rate and mechanical dampening, ensuring low noise.		
3.0	Floating buoy with telemetry		
	The complete water quality instrument is to be deployed in a self-powered floating buoy equipped with data logger electronics, GSM/GPRS Telemetry, Solar Panels, Solar charge controllers and batteries with adequate back up.		
	Hull material made of Rotationally UV stabilized polyethylene, filled with marine grade foam; Galvanized steel core suitable for harsh conditions.		
	Hull diameter 2 m \pm 0.5m		
	Galvanized steel ballast		
	PVC sonde deployment tube or Moon Pool arrangement		
	Powder-coated aluminium tower with MET sensor mounting ring and mounting bracket		
	3 x 24 Watt solar panels		
	Suitable enclosure including Electronics mounting bracket Internal temperature/humidity sensor Diagnostic cable and connector		
	Suitable enclosure including:(2) 12V batteries; Solar regulator Electronics and power enclosures mounted on top of hull and are removable for easy maintenance and repair		
	External antenna system		

	Integral underwater cable assembly included for water quality sonde.		
	Marine grade underwater connectors standard.		
	Two point or single point mooring options standard.		
	Expandable payload can easily accommodate additional water quality sensors.		
	System can be serviced without the need for divers.		
	Yellow in color to signify an environmental monitoring system.		
4.0	Data Logger / Communication Features & Specification		
	High performance data logger & communications device for unattended, remote, real-time data acquisition & control, is a multi-tasking logger capable of making measurements & transmitting multiple communications simultaneously.		
	Data Logger with user friendly user interface for the setup & configure the system or remotely.		
	Data Logger should enables to configure Digital inputs to trigger measurement processing, including logging & telemetry.		
	Should have the option for Analog and digital I/O sensor modules that plug into RS232, RS485, SDI-12.		
	Each measurement should be independently scheduled with Sample intervals from 1 sec. to 24 hours, in 1 sec. increments.		
	System events should be logged independently of measurement data with built-in functions for min, max, average, & accumulation calculations.		
	Changes made to logging setup should not affect logged data and logged data is compressed.		
	Should have the inbuilt memory and option for the storage expansion via removable SD card.		
	Data logger should have option for data transfer through USB devices or SD cards or MMC cards.		
	System events logged independently of measurement data.		
	The system should have the option for integrating additional sensors like Phosphate and Nitrate in future.		

Specification			
Measurement Interval	1.0 second to 24 hours (programmable)		
Measurements Supported	Unlimited		
Analog Channels	8		
Input Voltage	-0.1 to 5V with respect to ground, single ended or differential		
Resolution	12 bits or more		
Expandable	via SDI-12		
Digital Inputs	6 (2 Bi-Directional)		
Telemetry	System supports data output to RS-232/485 lines, modems and cellular phones (SMS, GPRS, 3G), radio-modems and satellites.		
Operating Temperature	0°C to +60°C		
Memory			
Built-In	RAM: 32MB – 128 MB Non-volatile: 65MB (1 -3,000,000 readings)		
SD Card	2 to 8 GB For download data & read/write setups or additional log memory		
Power Requirements	10-16VDC (20VDC max)		
Current Drain	Typically 3mA standby, 70mA active		
Communication Protocols Supported	FTP server, FTP client, HTTP server, telnet, SMTP, SMTPS, MODBUS RS485		
5.0	Software Specification		
	Software should allow any PC to remotely setup & operate data logger without using the front panel.		
	Software should automatically displays the graphic display of the data logger.		
	Easy file transfer for up/downloading of setups, programs,		

	data files.		
	Automatically prompts for login account & password when needed		
	Displays system information on running processes, threads, & memory usage		
6.0	Accessories		
	The buoy system should be capable of operating in a self-powering mode from an internal power supply using a set of rechargeable batteries that are available for purchase in the local market		
	The buoy system should also have the capability of being powered by an external DC power supply fitted with sufficient number of Solar panels. The solar panels should be sufficient to keep the ocean buoy system working for long-term (6 months) deployments.		
	The complete water quality instrument is to be deployed in a self-powered floating buoy equipped with data logger electronics, GSM/GPRS Telemetry, Solar Panels, Solar charge controllers and batteries with adequate back up.		
	The data measured by the multi-parameter sensor compartment should be transmitted in near-real time using GPRS/GSM telemetry to a PC/workstation.		

Signature of the Bidder

Name:

Designation:

Rubber-stamp of the firm

APPENDIX - 4

COMPONENTS AND PRODUCTS

(In response to technical requirement kindly fill up the details of component & products pertaining to the item requirement, in the following format).

Sl. No	Brand Name and Name of the OEM	Product name of Proposed Model	Quantity	Currency Quoted	Remarks

NCCER

Signature of the Bidder

Name:

Designation:

Rubber-stamp of the firm

APPENDIX - 5

CHECK LIST

(Following documents are to be submitted online and manual as a part of Technical bid. Bidders are requested to put a ✓ mark for ensuring submission of document in the appropriate one)

Sl. No	Description	Online submission	Manual submission
1	Details for annual turnover of the bidder for the last 2 years. Scanned copies of audited financial report for the last two years should be submitted (Section I, 12.A.(i))	Submitted / Not Submitted	Submitted / Not Submitted
2	Copies of Purchase orders for values not less than min Rs..3.0 lakhs for a total value of min. Rs.08 lakhs, executed during the last two years. (Section I, 12.A.(ii))	Submitted / Not Submitted	Submitted / Not Submitted
3	Authorisation letter by OEM (original by manual and scanned copy by online) for participating this tender (Section I, 12.A.(iii))	Submitted / Not Submitted	Submitted / Not Submitted
4	Scanned copy of Tender Acceptance Letter by online and original by manual (Section I, 12.A.(iv))	Submitted / Not Submitted	Submitted / Not Submitted
5	Scanned copy of Performance Certificate from the client by online and original by manual(Section I, 12.A.(v))	Submitted / Not Submitted	Submitted / Not Submitted
6	Details of Products and Components (Section I, 12.A.(vi))	Submitted / Not Submitted	Submitted / Not Submitted

Sl. No	Description	Online submission	Manual submission
7	Technical Compliance sheet (Section I, 12.A.(vii))	Submitted / Not Submitted	Submitted / Not Submitted
8	EMD fee as per detail (scanned copy by online and original by manual)	Submitted / Not Submitted	Submitted / Not Submitted
9	Tender Fee as per detail (scanned copy by online and original by manual)	Submitted / Not Submitted	Submitted / Not Submitted
10	Any other relevant document (scanned copy by online and original by manual)	Submitted / Not Submitted	Submitted / Not Submitted
11	This Check list (scanned copy by online and original by manual)	Submitted / Not Submitted	Submitted / Not Submitted

Signature of the Bidder

Name:

Designation:

Rubber-stamp of the firm

NCCR