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(Ministry of Earth Sciences, Govt. of India)
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PUBLIC TENDER NOTICE

Director, NCAOR invites sealed tenders in two parts (part I . Technical bid & part II Financial bid) from reputed and established firms with experience in maintenance and operation of oceanographic and analytical equipment.

Tender No.	Description	Tender fee	EMD
NCAOR/OSSG/SK/84	AMC for operation and maintenance of scientific equipment & related facilities onboard research ships Sagar Kanya, Sagar Sampada, Sagar Nidhi & Sagar Manjusha.	Rs. 2000/- (Rupees Two Thousand)	Rs. 10 lakhs (Rupees Ten Lakhs)

Date of pre-bid meeting - 4th July 2014; 1000 hrs.
Last date of issue of Tender Papers - 4th August 2014; 1700 hrs.
Last date of submission of tenders - 5th August 2014; 1200 hrs.
Opening of Technical bids - 5th August 2014; 1500 hrs.

Tender forms can be obtained from Vessel Management Division of NCAOR on all working days either by post or in person between 1000 . 1600 hours on payment of tender fee in the form of crossed Demand Draft payable at Vasco-da-gama only, from a scheduled bank drawn in favour of Director, NCAOR along with separate requisition indicating tender number. The details of tender documents are also available in our website www.ncaor.gov.in and Central Public Procurement Portal www.eprocure.gov.in. Tender fee to be enclosed with technical bid in case the tender document is downloaded from websites.

NCAOR is not responsible for any transitional/postal delays. The Director, NCAOR reserves the right to accept or reject any quotation in full or part thereof without assigning any reason.

Sd/-
For & on behalf of NCAOR

TENDER DOCUMENT

AWARD OF ANNUAL MAINTENANCE CONTRACT (AMC) FOR SCIENTIFIC EQUIPMENT ONBOARD ORV SAGAR KANYA, FORV SAGAR SAMPADA, ORV SAGAR NIDHI AND ORV SAGAR MANJUSHA

GENERAL CONDITIONS OF CONTRACT:

- 0.0 DEFINITIONS:
- 0.1 AMC:
Annual Maintenance Contract for maintenance, servicing, calibration, trials and operation of scientific equipment onboard ships at ports and at sea.
- 0.2 VESSELS:
Sagar Kanya, Sagar Sampada, Sagar Nidhi and Sagar Manjusha.
- 0.3 TENDERER:
National Centre for Antarctic & Ocean Research (NCAOR), Goa.
- 0.4 NCAOR
National Centre for Antarctic & Ocean Research, Goa (an autonomous society under ESSO-Ministry of Earth Sciences, Govt. of India).
- 0.5 CMLRE
Centre for Marine Living Resources and Ecology, Kochi (an attached office of ESSO-Ministry of Earth Sciences, Govt. of India).
- 0.6 NIOT
National Institute of Ocean Technology, Chennai (an autonomous society under ESSO-Ministry of Earth Sciences, Govt. of India).
- 0.7 INSTITUTES
NCAOR, CMLRE and NIOT as applicable.
- 0.8 ORV-SK
Oceanographic Research Vessel . Sagar Kanya.
- 0.9 FORV-SS
Fishery Oceanographic Research Vessel . Sagar Sampada.
- 0.10 ORV-SN
Oceanographic Research Vessel . Sagar Nidhi.
- 0.11 ORV-SM
Oceanographic Research Vessel . Sagar Manjusha.
- 0.12 OEM
Original Equipment Manufacturer of the equipment under AMC onboard research vessels.

1.0 BACKGROUND INFORMATION

Studies on living and non-living resources from the oceans and technology developments to tap the ocean resources are being done by Ministry of Earth Sciences onboard Govt of India owned research vessels. These vessels viz. ORV *Sagar Kanya*, FORV *Sagar Sampada*, ORV *Sagar Nidhi* and ORV *Sagar Manjusha* have number of scientific laboratories and many types of oceanographic and fishery equipment onboard, which are to be kept always in operational condition. Through this tender, NCAOR proposes to select a suitable and competitive firm for regular maintenance and

operation of all equipment listed in Annexures-I, II, III & IV respectively for Sagar Kanya, Sagar Sampada, Sagar Nidhi & Sagar Manjusha. Interested firms may submit the duly completed tenders in two parts (i) Technical Bid and (ii) Financial Bid as per the terms and conditions of this tender document.

1.1 NCAOR will identify an AMC contractor for these four vessels through a public tender and a contract shall be entered between NCAOR and the successful bidder for vessels Sagar Kanya and Sagar Sampada. Similarly, the contract for Sagar Nidhi and Sagar Manjusha shall be entered between NIOT and the successful bidder following the terms of this tender. After awarding the contract, while NCAOR, Goa shall control the execution of AMC contract for ORV Sagar Kanya, CMLRE, Kochi shall control the same for FORV Sagar Sampada. The bills for AMC services shall be submitted by the AMC contractor on quarterly basis for ORV Sagar Kanya to NCAOR, Goa and for FORV Sagar Sampada to CMLRE, Kochi. While NCAOR shall process the Sagar Kanya AMC bills for payment, CMLRE shall examine and certify the bills of Sagar Sampada and forward the certified bills to NCAOR for effecting the payment, subject to satisfactory AMC services to both vessels as per contract terms. Similarly, the contract execution and the bills processing pertaining to Sagar Nidhi and Sagar Manjusha shall be controlled by NIOT as per the contract to be signed between NIOT and the successful bidder.

2.0 SCOPE / CONTRACT

The scope under the contract includes

- (i) Repairs and Maintenance (Routine, Preventive and Breakdown) of each equipment.
- (ii) Equipment Operations for data acquisition and sampling.
- (iii) Systematic data acquisition, preliminary processing and storing.
- (iv) Submission of cruise wise metadata, raw and processed data in standard formats. The formats shall be drawn up before execution of the contract.
- (v) Periodic calibrations/ testings as per the schedules to be drawn up based on OEM guidelines / expert advises for each equipment, underwater cleaning, sea trials, renewal of spares etc.
- (vi) Submission of reports for each cruise, port-calls and maintenances during drydocking / lay-offs.
- (vii) Submission of interim reports as and when requested by Vessel Managers at NCAOR / CMLRE / NIOT for any specific equipment / facility.
- (viii) The equipment while on cruise as well as while at berth in any port in India and abroad (including dry docking period) are to be maintained so that all equipment listed (Annexures . I to IV) are always kept in operational condition under the scope of this AMC.
- (ix) Any associated job that shall be required to be done for operation and maintenance of equipment under AMC are to be considered as part of scope.
- (x) Maintenance of CTD cable, routine washing, testing the cable for conductivity parameters, identification of any discontinuity, slip ring maintenance and proper winding of cable on the drum shall also be considered as part of CTD maintenance / operation. Same applicable for similar equipment like MPN etc.
- (xi) All cables / wire ropes (related to scientific operations) status and lengths should be monitored and reported in quarterly reports.
- (xii) Any problems in winches, cranes, any machinery and any other ship's facilities, though not under this AMC, which are required for scientific operations and may affect the smooth scientific data collection / sampling, are to be brought to the notice of the institute at the earliest.
- (xiii) Any equipment under AMC that are deployed in seawater is to be washed every time with freshwater immediately on retrieval onboard.
- (xiv) All precautions to be taken that no computers onboard under AMC are infected with virus. The computers should be installed with licensed anti-virus packages (in consultation with the institute) and updated periodically so that the license would remain valid at any given time.
- (xv) AMC services shall be provided at sea during cruises and during port-calls / drydocks in Indian and foreign ports.
- (xvi) Cleaning of underwater parts utilizing divers as per clause 3.5.

- (xvii) All electronic equipment to be protected and taken care during fumigation / other pest control measures onboard.
- (xviii) AMC engineers to be provided and be available onboard during cruises, port-calls, drydock and lay-off periods as per the conditions of this tender.

2.1 OEM service support for Sagar Kanya and Sagar Sampada

- a. The bidder shall not reassign this contract to any other firm as whole and is prohibited in any manner to do so. The bidder may at their option enter into contract with OEMs of critical equipment for service support so that the each equipment downtime is reduced to minimum.
- b. It is strongly suggested that, in order to keep the equipment operational, the AMC contractor may at his option, invite OEM engineer to attend the equipment if required; as part of AMC.

2.2 OEM service support for Sagar Nidhi and Sagar Manjusha

- a. The bidder shall not reassign this contract to any other firm as whole and is prohibited in any manner to do so. The bidder shall enter into contract for AMC (back to back support) with respective equipment OEM / OEM authorized service team in India, immediately after signing of contract for the specified equipment at Annexure - V. Bidder must have good back to back support with the OEM / OEM authorized service team in India under this AMC. The assurance letter from bidder in the format at Annexure-XI for the OEM service support to be enclosed as part of Technical bid by the bidder.
- b. The bidder's AMC with OEM shall be an agreement where contractor and OEM / firm authorized by OEM shall agree to attend the call on request. The agreement shall include one essential visit of OEM engineer in a year for checking the health of the system and to advise for the critical spares. This cost shall be included in the Contract cost at respective equipment and no additional cost shall be shown.
- c. The documents of agreement with OEM stating the above OEM services shall be provided to NIOT within a month after awarding the contract. In the absence of submission of documents, deductions as stated at 10(d) shall be effected till the same is complied with.

3.0 PERIOD OF CONTRACT

This AMC shall be initially entered for a period of one year and extendable for a period of further two years on annual basis if AMC services are found satisfactory. The extension of contract is not a matter of routine and the decision of NCAOR / NIOT shall be final and binding.

3.1 WORK UNDER CONTRACT

Any work (erection/ installation/ cable routing / operation / service / maintenance / decommission / calibration / cleaning) required to keep the equipment (listed under Annexures- I to IV) operational all the time onboard the vessels is deemed as included in this contract. AMC Service engineers should always act as a part of scientific team and support various scientific works which will be executed onboard utilizing the equipment at Annexures . I to IV. One equipment or one set of equipment as listed out includes related sub-units, peripherals, transducers, transceivers, ancillary sensors, cables, interfaces, connectors, computers, monitors, digital repeaters, software online/offline, mouse, keyboards of that particular equipment.

3.2.1 ROUTINE AND PREVENTIVE MAINTENANCE

All equipment listed out in Annexures . I to IV shall be serviced, maintained & operated following relevant procedures as stipulated in the respective equipment manuals and as per standard requirements mutually agreed (in consultation with respective institute) and recorded after entering into contract to ensure that all equipment are always operational and breakdowns are prevented. Equipment may be taken out from the vessel for servicing / calibration purposes with the approval of respective institute.

Any damage resulting out of negligence on the part of the tenderer shall be fully rectified by them at their own expense and to the full satisfaction of institutes.

3.2.2 BREAKDOWN MAINTENANCE

The contractor shall carryout breakdown repairs most efficiently and in shortest possible time to the desired standards and to the satisfaction of chief scientist / vessel managers. The downtime for putting back equipment into operation shall not exceed 24 hours while the vessel is on cruise and 72 hours when the vessel is in port. The AMC charges will not be paid proportionately for the downtime period if any equipment is non-functional beyond above time limits, till rectification. It is essential that the equipment and all the sub-units are fully operational always. For partially operational equipment, the Institute at its discretion will consider such equipment as operational or non-operational depending on the usefulness of the data / samples depending on the cruise objectives / chief scientistsqinputs and deductions thereof fully or proportionately. In case of repairs of equipment necessitated to be carried out at the ports, the contractor shall communicate all the details of repairs to the respective vessel manager at least one week before the expected time of arrival of the vessel. Equipment may be taken out from the vessel for repairing / calibration purposes with the approval of respective institute.

3.2.3 SPARES

If the cost of spare is less than or equal to Rs. 50,000/- per unit, the same should be absorbed by the AMC as part of AMC cost. If the cost of spare is more than Rs. 50,000/- per unit the AMC shall purchase the spare on prior intimation to NCAOR / CMLRE / NIOT and on obtaining in principle approval of NCAOR / CMLRE / NIOT and put the equipment in working condition. After the repairs, to the full satisfaction of the concerned authorities, the contractor shall submit their bills along with the invoice / bill of the supplier to NCAOR / CMLRE / NIOT. The NCAOR / NIOT shall reimburse the actual invoice amount plus customs, freight, insurance and taxes on production of original relevant documents. For all other incidentals, handling and overhead etc, 10% of spares cost as per supplier's invoice plus service tax as applicable shall be paid within 30 days of submission of claim. The bills pertaining to Sagar Kanya are to be submitted to NCAOR and the bills pertaining to spares for Sagar Sampada are to be submitted to CMLRE and CMLRE shall forward the certified bills to NCAOR for effecting the payment. The bills pertaining to Sagar Nidhi and Sagar Manjusha are to be submitted to NIOT.

3.3 PLACEMENT OF SERVICE ENGINEERS ONBOARD

The bidder shall ensure availability of services of minimum engineers as mentioned below for each vessel. Engineers shall be available during all cruises, port-calls, drydocks round-the-clock and position them permanently in the vessel. These engineers shall be qualified / OEM trained (Electronics, Mechanical, Electrical, Instrumentation and Computer Science) as per clause 4.2. Institute shall provide cruise plan in advance for each cruise to the AMC contractor to depute required discipline service engineers to suit the needs of proposed cruise. The service engineers team should be competent to service all the equipment listed in Annexures I to IV. Regular servicing as per clause 2.0 shall also be provided when the vessel is in ports and at sea round-the-clock by deploying adequate number of service engineers and technicians as per requirement. The AMC shall keep contact with NCAOR / CMLRE / NIOT to know about the respective vessel schedules. Accommodation and food shall be provided to service engineers free of charge while they are

onboard the vessels. Atleast one of the engineers sailing in any cruise shall continue into next cruise for maintaining continuity for all vessels except for Sagar Manjusha. The service engineers who shall be sailing in a particular expedition should be available in the departure port atleast one week in advance of sailing date. During portstay also, presence of minimum no of engineers as specified below onboard at any given time is essential (except in case of Sagar Manjusha where one engineer is required all the time) for the safety of equipment as well as to take care of the equipment during unexpected power shut-downs, AC failures, ship maintenance jobs in labs or any other events onboard.

Sagar Kanya	- 4 service engineers
Sagar Sampada	- 4 service engineers
Sagar Nidhi	- 2 service engineers
Sagar Manjusha	- 1 service engineer

Non-availability of minimum engineers onboard vessels as mentioned above will attract deduction of AMC claim as per penalty clause at 10(e) for the no of engineers unavailable and the period of unavailability.

3.4 ONBOARD SAMPLING / DATA COLLECTION / OPERATIONS

In addition to maintenance, the bidder is required to operate and collect regular data and samples as required by chief scientist / vessel managers and accordingly the operations listed in Annexures-I to IV while the vessel is on cruise are to be carried out. Engineers should be available to work for 24 hours a day onboard as and when it is required. At the end of each cruise, data collected has to be handed over to the respective institute authorized representative alongwith metadata. The formats for metadata, raw data and processed data shall be finalized for each equipment after entering into contract. For each equipment for which operations are required in Annexures-I to IV, operations charge for each quarter is payable if atleast one operation in that particular quarter is carried out.

As part of operation under this clause, the routine maintenance, status reporting and assistance to warranty repairs as at clause 5 are to be carried out by the bidder during the warranty period for the equipment under warranty.

3.5 UNDERWATER CLEANING OF TRANSDUCERS

While the vessel is in berth, the bidder shall carry out cleaning of all underwater transducer-faces employing trained divers whenever required as prescribed by OEM and mutually agreed. However minimum one cleaning of underwater sensors & transducers in a year is to be carried out. Any damage resulting out of negligence except the service procedure on the part of the transducer shall be fully rectified by the bidder at their expenses and to the full satisfaction of institute. The bidder must include the insurance coverage, port clearances and all related expenses to employ qualified divers in their bid. Irrespective of above routine cleanings of underwater parts, as and when need arises as part of rectification of problem, necessary divers and required services to be arranged immediately and equipment be made operational in the shortest time possible.

Failure to carry out minimum one cleaning per year shall lead to deduction of 10% of AMC charges of concerned equipments from the due date of cleaning. First cleaning has to be done within 3 months of signing the contract.

3.6 DRY DOCKING REPAIRS

The bidder shall undertake servicing, lubricating, cleaning, checking impedance / cable resistance etc of the underwater sensors / transducers whenever the ship is in dry dock in India and abroad. The required consumables, parts costing upto Rs. 50,000/- per unit are also to be borne by the AMC. The work shall also include those relating to replacement / fitment of new transducers. As per minimum requirements for respective vessel, qualified / experienced engineers shall be deputed by the bidder at AMC cost for the entire period of dry docking in India and abroad as applicable.

3.7 CALIBRATION

The bidder shall carry out calibration and performance tests of the equipment as recommended by the OEM from time to time. The schedules of calibration for each equipment / sensor to be drawn up by the bidder in line with OEM guidelines and experts' advice on entering into contract and submit to NCAOR / CMLRE / NIOT for suggestions / approval. Bidder shall inform the concerned vessel manager at least 3 months in advance for planning special calibration cruises. Bidder shall ensure the quality of data collected and report to institutes for any deviations. It is full responsibility of bidder to arrange and carry out the calibration.

A separate file containing the calibration details, validity dates and relevant documents / certificates should be always available onboard with AMC for all the equipment and sensors for the inspection of institutes / chief scientists. Necessary action to be taken in advance to carry out the calibration in time before due date. Delay to carry out the calibration in time shall cause deduction in the charges to the proportion as deemed appropriate to the extent of total AMC charges for the equipment.

The period during which any equipment is taken out from vessel for calibration / repairs and not available for use onboard shall be considered as downtime.

3.8 SEA TRIALS / TESTINGS

The bidder shall carry out sea trials after dry-docking and after carrying out major repairs and testing of any equipment or whenever required by NCAOR/CMLRE/NIOT for any equipment, in the presence of designated representative of NCAOR / CMLRE to ensure satisfactory working of equipment. It is full responsibility of bidder to arrange and carry out the sea-trials. Failure to carry out sea-trials as required within reasonable time shall cause deduction in the charges to the proportion as deemed appropriate to the extent of total AMC charges for the equipment.

3.9 MAINTENANCE OF SERVICE RECORDS / REPORTING

The bidder is advised to maintain service records / data logbooks for all equipment onboard. A detailed and comprehensive report of all works done onboard during cruise shall be submitted by the bidder to institute on the day of arrival of vessel to port with the endorsement of Chief Scientist for the works carried out. This cruise report should contain all works undertaken, repairs carried out, status of each equipment, spares used/received, data/sample collection undertaken etc. The port-call reports should be submitted within two days of sailing of vessel.

A report, comprising all events but without details, to be submitted every quarter along with the quarterly payment bill to the respective institutes. Inventory list updated in excel sheet should be submitted along with the quarterly reports.

The formats of above reports may be decided mutually by AMC and respective institutes. A soft copy may also be provided along with original reports.

3.9.1. CRUISE REPORTS

The cruise reports with the endorsement of Chief Scientist should be submitted on arrival of vessel at port on completion of each cruise. The report should comprise the following:

- a. Detailed and comprehensive on all maintenance jobs done, repairs carried out, status of each equipment, spares received/used, operation / data collection / sampling undertaken by AMC.
- b. Regular maintenance (as per maintenance schedules)
- c. Spare parts requirements.
- d. Scientific data
- e. Breakdown report for Insurance/OEM warranty if any.
- f. Damage / loss reports

3.9.2. PORT-CALL REPORTS

The port-call report comprising details of maintenance jobs carried out, items offloaded / placed onboard for AMC purposes, to be submitted to respective institute within two days of sailing of vessel from port.

3.9.3. QUARTERLY REPORTS

A brief report, comprising all events but without details of events, to be submitted every quarter within one week of completion of quarter.

- a. All problems faced / rectifications done and important maintenance events during the quarter in brief.
- b. Update of inventory
- c. Spares requirements
- d. Status of all equipment
- e. Update on validity dates of DGPS signals, consumables (like Millipore cartridges) self life expiry dates, lengths of CTD / DS Winch cables available as per log, calibration validity dates for applicable eqpt / sensors etc.
- f. Requirement of any replacements / augmentation of scientific eqpt.

3.9.4. DRYDOCK / LAY-OFF PERIOD REPORTS

- a. Prior drydock and lay-off, AMC needs to provide complete list of jobs that are planned to be carried out as part of AMC contract.
- b. Complete details on AMC repairs / maintenance jobs carried out during the drydocking and lay-off of vessel on scientific equipment and related items to be submitted within 2 days of sailing of vessel from drydocking yard / lay-off port.
- c. During the drydocking, the AMC needs to submit the daily site reports on the progress of AMC jobs to the institute through emails.

3.9.5. A set of all above records should be available onboard ships also.

3.10 INVENTORY / SAFETY OF EQUIPMENT / SPARES / MANUALS / DATA

The bidder shall maintain inventory of all equipment / spares, manuals, software and shall verify at the beginning and end of every cruise, and verification report to be submitted as part of cruise report. The bidder shall safeguard all the equipment, spares and other scientific facilities from misuse / pilferage during cruises as well as during port calls. The bidder shall also take into custody of new equipment, spares, manuals, accessories and consumables procured during the period of the contract. The bidder shall maintain up-to-date stock inventory registers which will be open for periodic inspection by NCAOR/CMLRE/NIOT. The bidder shall take necessary security measures in consultation with institute for security of data and scientific equipment / spares / manuals / software etc onboard. Misuse and unauthorized sharing of data / manual / software shall be viewed very seriously and appropriate penalty as deemed fit shall be levied including the termination of contract.

3.11 PROJECT MANAGER

The AMC shall designate a well experienced engineer as Project Manager for each vessel to handle all matters pertaining to AMC of the vessels and day-to-day communications. The details of the Project Manager for each vessel to be identified immediately after signing of the contract. The Project Manager should be shore-based and available 24x7 for communications. Subsequent change, if any, may be informed to NCAOR / CMLRE / NIOT vessel managers in writing. All communications pertaining to the AMC shall be through the Project Manager.

3.12 AMC MEETINGS

NCAOR / CMLRE / NIOT may call for meetings to discuss the AMC matters with the Project Managers during the port-calls of vessels or at NCAOR / CMLRE / NIOT. Other AMC engineers may also attend the meetings with the Project Manager. The Project Manager and engineers shall attend the meetings at AMC cost.

3.13 AMC CRUISE TEAM LEADER

For each cruise onboard vessels, for drydocking and long lay-off, the AMC shall designate a AMC team leader out of the team deployed for the cruise / drydocking and he shall be communicating with NCAOR / CMLRE / NIOT whenever any information is sought regarding AMC of any equipment. The team leader should be prompt in responding such communications. AMC team leader and members shall be very efficiently and promptly deal with Chief Scientist and scientific team onboard in executing the onboard maintenance and operations of equipment under AMC.

4.0 OTHER TERMS AND CONDITIONS

4.1 The following have to be arranged by the bidder as part of AMC cost including the spares / consumables which costs Rs. 50,000/- (Rupees Fifty Thousand) or less per unit.

1. Toolkits required for servicing, charger, batteries etc.
2. All spares, consumables, filters etc.
3. Chemicals / standards required for calibrations.
4. Lubricants, washers, O-ring, insulators etc.
5. Printer cartridges, hard-discs, CD, DVD and other memory devices and computer peripherals.
6. Renewal of power /data cables, connectors, antivirus software as and when required.
7. Network switches/ modem, crimping the cables and termination of CTD and hydrographic wire ropes, underwater insulations etc for the equipment under AMC.
8. Necessary arrangements / clearances for diving/cleaning the transducers.
9. Safety and personal gear for the service engineers for performing AMC tasks onboard.
10. Valid passports, Medical fitness certificate by DGS approved doctor, STCW certificate and Yellow Fever vaccination for the AMC engineers.
11. Any other items which are required for executing the maintenance, data / sample collection satisfactorily.
12. Transport / Crane arrangements for carrying the equipment in and out of vessels / port (for AMC purposes) to be made by the AMC at their expenses. Vessels cranes if available could be used without any cost to AMC.
13. Vehicles, AMC engineers port passes, sign-on, sign-off etc including medical checkup may be done through the agent with the approval of the institute and the expenditures towards the same will be borne by the bidder in all Indian ports as well as in foreign ports.

4.2 The bidder shall position service engineers with qualification and experience as follows: Diploma (3 years course) holders (Electronics, Mechanical, Electrical, Instrumentation and Computer Science) with four years experience or BE / B.Tech / M.Sc. (Electronics, Mechanical, Electrical, Instrumentation and Computer Science) with two years of experience in operation and maintenance of oceanographic survey / sampling equipment such as CTD, Sonars, Samplers, analytical equipment etc and sailing experience. The bidder shall provide list of their service engineers, qualifications, certificate of their experience and training in hardware / software. The bidder should have minimum of six trained engineers on its roll. Minimum no of engineers as required at 3.3 shall meet the above criteria and the bidder shall be permitted to embark additional personnel if berths available onboard during cruises. Details of new engineers if any joining the bidder's firm after the contract is signed and who are likely to be sailing on Sagar Kanya, Sagar Sampada, Sagar Nidhi and Sagar Manjusha for AMC to be provided to the respective institutes in advance before the engineers are deputed for the cruise. In case the Institute feels that any engineer is not found to be satisfactorily performing, the bidder should withdraw the engineer with immediate effect from the vessels. All the engineers need to obtain STCW certificate and fitness certificate by DGS approved

doctor at the bidder's cost before embarkation. Yellow fever vaccination is required in case the vessels touch any foreign port.

- 4.3 Within one month of signing the contract, the bidder shall furnish a detailed report of the condition of the equipment / systems, inventory of spares, manuals and software available onboard and maintenance schedules and procedures for each equipment and calibration schedules drawn in line with OEM guidelines and experts' advice which would be submitted for endorsement by NCAOR, CMLRE and NIOT for respective vessels.
- 4.4 Before sailing of the vessel on each cruise, bidder should ensure that all instruments / equipment are tested for their satisfactory operational condition.
- 4.5 The signing ON/OFF of engineers shall be intimated to institute and their approval obtained well in advance and institute will do the needful. Equipment may be taken out from the vessel for repairing / calibration purposes with the written approval of respective institute. NCAOR / CMLRE / NIOT shall bear the expenditure for the permissions etc through our shipping agents for offloading / loading equipment.

Transport / Crane arrangements for carrying the equipment in and out of vessels / port (for AMC purposes) to be made by the AMC at their expenses. Vessels' cranes if available, without any need to shift or turn the vessel, could be used without any cost to AMC.

Vehicles, AMC engineers port passes etc including medical checkup, sign-on and sign-off may be done through the agent with the approval of the institute and the expenditures towards the same will be borne by the contractor.

- 4.6 Engineers deputed for maintenance and operation will be given free accommodation and food onboard.
- 4.7 All engineers proposed for participation in the cruise should have the medical fitness certificate from DGS approved doctor and STCW certificate at the time of embarkation.
- 4.8. Bidder should have service facilities in India.

5.0 SERVICING OF EQUIPMENT UNDER WARRANTY

During warranty period of any equipment, the bidder shall carry out routine maintenance, onboard (on site) assistance for warranty repairs by OEM, safeguarding the equipment and regular status reporting as part of operation specified at 3.4. For this purpose, 10% AMC charges of equipment under warranty shall be payable during warranty period. The equipments under warranty and warranty period are indicated in the Annexures - I to IV wherever applicable. For equipment under procurement, the warranty period shall be informed on completion of procurement. On expiry of warranty, the equipment shall be included into comprehensive maintenance and full AMC payments shall commence.

6.0 EXPERIENCE

The bidder intending to bid shall have adequate experience in maintaining and operating the equipment.

7.0 RATES

- 7.1 The rate quoted by the bidder for each equipment shall include cost of all spares and consumables which costs upto Rs. 50000 per unit and lubricating, cleaning, testing, calibration, maintenance etc.

- 7.2 During the period of AMC, if any equipment is phased out or becomes unserviceable or beyond economic repairs, the AMC charges for that / those equipment shall be reduced proportionately from the total AMC offer.
- 7.3 The list of equipment which are likely to be procured in near future are provided at Annexure-XIII, the bidders may provide indicative AMC charges which will be considered by NCAOR when the equipment is procured and installed onboard. These indicative prices shall not be considered for financial evaluation of bids.
- 7.4 The financial bid shall consist of rates for one year including government taxes or levies as applicable and total charges.

The financial bids should be strictly in the format as provided at Annexure-VII (for Sagar Kanya), Annexure-VIII (for Sagar Sampada), Annexure-IX (Sagar Nidhi) and Annexure-X (Sagar Manjusha). The total annual cost of maintenance / operation is also should be provided in the format as at Annexure-XI.

Discounts, if any, to be included in the prices and not to be shown separately.

- 7.5 In case any equipment in the contract is replaced / added during the period of contract;
- with an equipment of the same specification / similar degree of required maintenance, the AMC charges per item remain the same;
 - with an equipment of technically much superior specification, then the AMC charges shall be mutually decided.
 - for the equipment likely to be procured in near future, the NCAOR reserves the right to consider the indicative prices offered as at 7.3 and arrive at reasonable rate for offering the equipment for AMC when the equipment is procured.
- 7.6 Bidder who has quoted lowest rate for undertaking all works under the clause-2 for all equipment will only be considered. Partial tender will not be considered and will be rejected.

8.0 MODE OF PAYMENT

- 8.1 The AMC charges shall be paid to the contractor on satisfactory services every quarter. The AMC amounts for the four vessels shall be stated separately in the contracts. NCAOR shall sign the contract for Sagar Kanya and Sagar Sampada and NIOT shall sign the contract for Sagar Nidhi and Sagar Manjusha with the identified bidder for AMC following this tender terms.

The bidder shall submit two separate bills for the quarterly maintenance / operation charges enclosing the quarterly reports to NCAOR and CMLRE for Sagar Kanya and Sagar Sampada respectively. While NCAOR shall process the bill directly for ORV Sagar Kanya, CMLRE shall examine and forward the final recommendation with certified bills to NCAOR for payment pertaining to FORV Sagar Sampada. On receipt of the bills as specified in this clause, NCAOR shall settle the same within 30 days from the date of receipt of bills subject to fulfilling the conditions of the contract.

Similarly, the bidder shall submit the bills to NIOT for Sagar Nidhi and Sagar Manjusha and NIOT shall effect the payments as per the contract to be signed between NIOT and bidder following this tender terms.

- 8.1.1. The payments shall be processed by NCAOR / CMLRE and NIOT based on the equipment performance and satisfactory deliverables.
- 8.1.2. The AMC charges will not be paid proportionately for the downtime period if any equipment is non-functional, till rectification. It is essential that the equipment and all the sub-units are fully operational always. For partially operational equipment, the Institute at its discretion will consider such equipment as operational or non-operational depending on the usefulness of the data / samples depending on

the cruise objectives / chief scientists inputs and deductions thereof fully or proportionately. The charges for operation of each equipment shall be payable if the particular equipment is operated atleast once during the quarter.

8.2 TDS as per IT act will be deducted.

9.0 Most of the equipment onboard is imported from different countries and a few are of indigenous origin. The bidder can inspect the equipment at the bidder's cost for ascertaining their make, type, their present status, etc. at any port after confirming the availability of the vessel at port with institute vessel managers (ORV Sagar Kanya . Dr N Anilkumar, NCAOR, Goa 0832-2525512, anil@ncaor.gov.in; FORV Sagar Sampada . Dr. A. Shivaji, CMLRE, Kochi 0484-2426163, 2are@in.com; ORV Sagar Nidhi & Sagar Manjusha . Shri. D. Rajasekhar, NIOT, Chennai 04466783500, rajasekhar@niot.res.in). Institute shall nominate authorized representative onboard vessels to assist in the inspection of the equipment by the bidder. Details of bidder's representative with photo id / visa / passport copies are to be provided to vessel managers in advance for arranging port entry permits.

10 PENALTIES

- a. In case of any complaints stating the performance of any equipment not satisfactory, upto 100% AMC cost of the respective equipment will be deducted or recovered in the subsequent bills / security deposit.
- b. Data shall be submitted in the specified format with the metadata wherever specified failing which AMC cost will be appropriately deducted or recovered in the subsequent bills. For partially operational equipment, the concerned institute shall decide at its discretion whether the output achieved is useful or not and accordingly consider whether the equipment as operational or not and deductions would be effected accordingly.
- c. No data or any information pertaining to the vessels can be shared by bidder with anybody other than chief of expedition and institute. The penalty shall be severe for such actions including the termination of contract.
- d. In case of not providing the necessary document for entering AMC with OEM as at 2.2. (c) for NIOT vessels, 40% of AMC cost of respective equipment will be deducted. This will not be refunded if the bidder fails to do so for the period not entering into AMC with OEM.
- e. Non-availability of minimum engineers onboard vessels as mentioned at 3.3 will attract deduction of AMC charges of Rs. 10,000/- per day per head for the no of engineers unavailable and the period of unavailability.
- f. For any miscellaneous services for the equipment under the AMC availed from NCAOR/CMLRE/NIOT or the vessels operators due to urgency or due to any other reasons, the expenditure incurred by NCAOR/CMLRE/NIOT or by the vessel operator shall be deducted suitably from the quarterly bills.

11.0 SECURITY DEPOSIT

SAGAR KANYA & SAGAR SAMPADA: 5% of annual contract value for Sagar Kanya and Sagar Sampada will be the security deposit with NCAOR. The EMD of successful bidder will be converted as security deposit. The required balance amount of security deposit shall be deducted from the first running bill of AMC of Sagar Kanya and Sagar Sampada to cover the total security deposit of 5% of annual contract value. If the EMD is in excess of 5% of total contract value of Sagar Kanya and Sagar Sampada, the excess money shall be refunded to the bidder alongwith first quarter payment.

SAGAR NIDHI & SAGAR MANJUSHA: 5% of annual contract value for Sagar Nidhi and Sagar Manjusha will be the security deposit and to be paid to NIOT by the bidder within 10 days of Lol.

The security deposits shall be returned to the bidder without interest on satisfactory completion of contract.

11.1 EARNEST MONEY DEPOSIT (EMD) & TENDER FEE

The bidder should submit alongwith technical bid an Earnest Money Deposit of Rs. 10,00,000/- (Rupees Ten Lakhs Only) in the form of DD drawn on NCAOR payable at Vasco-da-Gama, Goa. EMD may be forfeited without any intimation in such cases as below:-

- a) if a bidder withdraws its bid during the period of bid validity
- b) if a successful bidder fails to implement or execute the awarded contract / Lol.
- c) if a successful bidder fails to provide Performance Guarantee as stipulated at 11.2.
- d) if a successful bidder fails to comply with the Security deposit terms as at clause 11.0.

The EMD of successful bidder shall be converted as security deposit. EMD of unsuccessful bidders shall be returned without interest.

Tender fee of Rs. 2000/- should be submitted along with technical bid in the form of Demand Draft in favour of NCAOR+payable at Vasco-da-Gama, Goa.

11.2 PERFORMANCE GUARANTEE

The successful bidder, within 10 days of the date of Lol, will be required to furnish two separate Performance Guarantees for 5% of the contract value unconditional in the format provided at Annexure-XIII, in the form of a Bank Guarantee from a schedule-A commercial bank in India to NCAOR (Sagar Kanya & Sagar Sampada) and to NIOT (Sagar Nidhi and Sagar Manjusha).

Failure of the successful Bidder to provide Performance Guarantees within stipulated time shall constitute sufficient grounds for the annulment of the award of contract and forfeiture of the EMD.

These Performance BGs should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the bidder. In case of extension of AMC contract as at 3.0, the validity of the Performance Guarantee should be extended by an equivalent period with additional 60 days.

In case of failure to render contracted services (summarily non-compliance of due performance of contract by the bidder), the Performance Guarantee will be forfeited.

The Performance Security will be returned to the bidder after satisfactory completion of the contract as per terms and conditions of the mutually agreed Contract.

No interest is payable on the Performance Bank Guarantee.

12.0 TERMINATION OF CONTRACT

The NCAOR / NIOT may suspend or terminate the contract at any time without notice as found necessary if the bidder fails to comply with the terms and conditions of the agreement.

NCAOR / NIOT or the bidder may mutually terminate the contract at any time during the currency of the contract with a notice period of 3 months from either side.

13.0 ESCALATION

The rates shall be firm and fixed for the period of AMC. NCAOR / NIOT will not entertain any cost escalation.

14.0 DURATION OF CONTRACT

The AMC with the successful bidder shall be initially for a period of one year and extendable on yearly basis for a further period of two more years based on the annual performance review by NCAOR / CMLRE / NIOT with same rates and terms & conditions.

15.0 TENDER VALIDITY

The tender should be valid for 180 days from the date of opening.

16.0 SUBMISSION OF TENDERS

The tenders shall be submitted separately for Technical and Financial bids with documents as per clause 21.0 in separate sealed envelopes superscribing %Technical Bid+ and %Financial Bid+ respectively. Both technical and financial bids should be enclosed in a sealed envelope superscribed %**AMC for equipment onboard Research Vessels**+ and date and time of bid closure, should be addressed to:

**Programme Manager,
ORV Sagar Kanya,
National Centre for Antarctic & Ocean Research,
Headland Sada, Vasco-da-Gama, GOA-403 804.**

IMPORTANT DATES:

Pre-bid meeting : 4th July 2014 . 1000 hrs at NCAOR, Goa.

Last date for submission of tenders : 5th August 2014; 1200 hrs IST

Opening of Technical bid : 5th August 2014; 1500 hrs IST. (All bidders are invited to attend) at NCAOR, Goa.

Financial bids of only technically found suitable will be opened and such bidders will be invited to the opening of financial bids.

In case the above stated last date of submission / opening of technical bid is declared as unscheduled holiday for NCAOR, the next immediate working day of NCAOR shall be considered for the bid submission and technical bid opening with same timings.

16.1 All pages of Technical as well as Financial bids should be signed by the bidder with the company seal.

17.0 ACCEPTANCE OF TENDER

17.1 The NCAOR reserves the right to accept or reject the whole or any part of the tender.

17.2 Tenders which are conditional, partial, and not in accordance with the terms and conditions will be rejected summarily.

17.3 Technical Bids without EMD and tender fee shall be rejected.

18.0 CRITERIA FOR EVALUATION OF TENDER DOCUMENTS

The evaluation will be based clause 18.1

18.1 QUALIFICATION CRITERIA:

1. Bidder should have at least six engineers who have qualifications and experience as specified at 4.2 in the relevant area of installation, commission, operation and maintenance of electronic / mechanical oceanographic equipment and sailing experience at sea for each engineer. Copies of certificates in proof of qualifications and experience for minimum six engineers are to be submitted alongwith the technical bid. These engineers should be in the roll of bidder's firm on the date of bid closure and relevant Provident Fund or ESI certificates copies for each of above

engineer with their name clearly indicated in the certificates to be submitted with the technical bid.

2. Bidder should have average annual turnover of Rs. 25,00,000/- (Rupees Twenty Five Lakhs) during the last three years for which, as documentary proof, copies of audited financial statement of profit and loss account and balance sheet are to be submitted with technical bid.
3. The assurance letter from bidder in the format at Annexure-XI for the OEM service support for NIOT vessels to be enclosed as part of Technical bid by the bidder.

4. Financial Evaluation:

Financial bids (Annexures VII, VIII, IX, X and XI) of technically qualified bidders shall be evaluated and the bidder who has quoted lowest rate for undertaking all works listed in this tender for all equipment will only be considered. The financial bids should be strictly in the format as provided at Annexure-VII (for Sagar Kanya), Annexure-VIII (for Sagar Sampada), Annexure-IX (for Sagar Nidhi) and Annexure-X (for Sagar Manjusha). Discounts, if any, to be included in the prices and not to be shown separately. The total annual cost of maintenance / operation is also should be provided in the format as at Annexure-XI to arrive at L1 bidder.

The L1 will be arrived by adding following items as at Annexure-XI:

- One year total AMC rates for all equipment in Annexure VII for items from 1 to 4.
- One year total operations rates for items for operations in Annexure VII (5).
- 10% of total AMC rates for equipment under warranty for the items in Annexure VII (6)
- One year total AMC rates for all equipment in Annexure VIII for items from 1 to 11.
- One year total operations rates for items for operations in Annexure VIII (12).
- One year total AMC rates for all equipment in Annexure- IX for items from 1 to 32.
- One year total operations rates for all equipment in Annexure-IX for items from 33 to 48.
- One year total AMC rates for all equipment in Annexure- X for items from 1 to 7.
- One year total operations rates for all equipment in Annexure- X for items from 8 to 14.
- Service tax as applicable for above 9 items.
- Any other taxes to be stated in price bid by the bidder.

18.2 OTHER INFORMATION TO BE PROVIDED BY THE BIDDER

1. Service facilities, technical expertise and trained manpower for carrying out annual maintenance and operation contract for various scientific equipment onboard Sagar Kanya and Sagar Sampada. Suitability of the engineers in maintenance and handling of the equipment.
2. Experience of the company and the individuals in maintenance / breakdown repairs at sea / preventive and routine maintenance of similar equipment.
3. Experience in operation / data collection of the specific equipment and software.

18.3. PRE-BID MEETING

- 18.3.1 Interested bidders may attend the pre-bid meeting to be held on 4th July 2014 at 1000 hrs (IST) at NCAOR, Goa, wherein NCAOR's position on the issues raised by the bidders will be discussed / clarified. All the terms and conditions would be frozen after the pre-bid meeting. No change in TENDER conditions will be permissible thereafter.
- 18.3.2 The bidders are requested to submit any query / clarification (if any) on bidding document, by e-mail or fax to reach NCAOR on or before 2nd July 2014 for deliberation in the pre-bid meeting.
- 18.3.3 Non-attendance at the pre-bid conference shall not be a cause for disqualification of a bidder. Every effort will be made to provide deliberation of pre-bid meeting proceedings to the best possible

communication skill. Every bidder may avail the opportunity of pre-bid meeting to get first hand details of the proceedings, in their own interest.

18.3.4 The following discipline will be adopted during pre-bid meeting:

- All seriously interested Bidders shall provide list of queries in writing on or before 2nd July 2014 Bidder's queries must be organized in the same order as that of TENDER document.
- Any modification of TENDER document, decided during the pre-bid meeting will be notified within 4 working days of pre-bid meeting to all bidders those who attended and will be posted on NCAOR website. Subsequent to the pre-bid meeting, all terms and conditions will be treated as frozen. If there are no modifications envisaged in pre-bid meeting, there will not be any update in the website.

19.0 ARBITRATION

All matters relating to disputes and differences of opinion shall be settled mutually as far as possible. Any disputes arising under this contract shall be settled in India in accordance with the provisions of Arbitration and Conciliation Act 1996 or any statutory modifications or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings. All questions and disputes relating to the AMC services and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the contract or after the cancellation, termination, completion or abandonment thereof shall be referred to a sole arbitrator for adjudication through arbitration. The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act 1996 or any statutory modifications or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings. An officer not below the rank of Director, preferably drawn from the panel of Arbitrators drawn by the Government, if any, may be appointed to act as arbitrator by an appointing authority. Director, NCAOR (Sagar Kanya & Sagar Sampada contract) and Director, NIOT (Sagar Nidhi & Sagar Manjusha contract) shall be the appointing authorities.

20.0 FORCE MAJEURE

If the execution of any work under this AMC is delayed beyond the period, stipulated in the agreement as a result of outbreak of hostilities, declaration of any embargo or blockage or fire, any act of God such as flood, earthquake, volcanic eruption or storm and other contingency beyond the supplier's control then NCAOR / CMLRE / NIOT may allow such additional time as it considers to be justified by the circumstances of the case and its decision shall be final. If and when additional time is granted as above, the contract shall be read and understood as if it had contained from its inception the duration of the contract as extended. If it is not possible, the delay for this force majeure clause continues for a longer period of say one or two months, the parties may sort out this issue through mutual discussion and / or cancel the contract after giving a notice of one month to the other party.

21.0 DOCUMENTS TO BE ATTACHED

- a. Compliances statements (as per Annexure-VI) as part of technical bid.
- b. Documents indicating the experience, technical competence, human resources and infrastructure available with the bidder as part of technical bid.
- c. Experience certificate in carrying out installation and maintenance of oceanographic equipment similar to the ones listed in the Annexures-I to IV, as part of technical bid.
- d. Tech and Fin bids in envelopes properly superscribed titles. Financial bids should include AMC charges for each equipment, operations cost as well as total charges as per financial bid formats.
- e. Copies of audited financial statement of profit and loss account and balance sheet as part of technical bid.

- f. Assurance letter from bidder in the format at Annexure-XI for the OEM service support for NIOT vessels to be enclosed as part of Technical bid by the bidder.
- g. All supporting documents for clause 18.1 as part of technical bid.
- h. EMD and Tender fee as part of technical bid.
- i. Unpriced financial bid copy to be enclosed as part of technical bid.

ANNEXURES:

- I Lists of equipment onboard and operations required onboard ORV Sagar Kanya
- II Lists of equipment onboard and operations required onboard FORV Sagar Sampada
- III Lists of equipment onboard and operations required onboard ORV Sagar Nidhi
- IV Lists of equipment onboard and operations required onboard ORV Sagar Manjusha
- V List of equipment onboard NIOT vessels for which OEM support is required.
- VI Techno Commercial bid compliance statement
- VII Price bid format . Sagar Kanya
- VIII Price bid format . Sagar Sampada
- IX Price bid format . Sagar Nidhi
- X Price bid format . Sagar Manjusha
- XI Quoted Annual cost of maintenance / operation
- XII Format of assurance letter for OEM service support
- XIII Equipment under procurement
- XIV Format of Performance Bank Guarantee

ORV SAGAR KANYA

Length : 100m
 Normal cruise duration : 30 to 35 days

LIST OF EQUIPMENT (SAGAR KANYA)

Sr No	Name of the Equipment	Qty	Make
1. Chemical /Analytical Instruments			
1.1	UV oxidation Unit	1	La-Lolla SCI Co
1.2	Oxygen Titration Unit (865 Dosimat Plus)	1	Dosimat
1.3	Water Purifying System + Elix 3 Filtration unit	1 set	Millipore
1.4	Vacuum pumps (for filtration)	2	Millipore
1.5	pH meter	1	Indian
1.6	Fume cupboards	2 Nos	Port & Starboard Wet labs
1.7	UV Lamp	1 no	Port Wet lab
2. Geological/Geophysical Instruments			
2.1	Gravity corer	2	Norinco
2.2	Hydraulic Piston Corer	1	Georesource BV
2.3	Rock Saw	1	
2.4	Core Liner Cutters	2	Indian
2.5	Rock Mill	1	Sieberteknik
2.6	Bottom Grab (Small)	2	Indigenous
2.7	Bottom Grab (Large)	4	Indigenous
2.8	Pipe dredge	3	
2.9	Side-scan sonar system	1	Geoacoustics
2.10	Pingers	2	IX Sea
2.11	Shallow-water Echosounder	1	Marimatech
2.12	Multibeam Echosounder with all data acquisition / recording / preliminary processing / plotting sub-units / softwares (including SSV Sensor, SVP, DGPS, Motion sensor etc).	1 set	L3-Elac
2.13	Sub-Bottom Profiler	1	Geoacoustics
2.14	Spade Corer	2	Indigenous
2.15	Chain bag Dredges	1	Indigenous
2.16	Core subsampling station / rollers	1	Stbd. Wet
2.17	Tension meter for Deep Sea Winch	1	
2.18	Sieve Shaker / Sieves (set of 7)	1	Indian
3. Oceanography/Meteorology/Biology Equipment			
3.1	Multi Plankton Net (Automatic plankton Sampler / Std. Pressure meter / Buckets / Flow meter etc)	1 set	Hydro-Bios
3.2	XBT System	1	Sippican
3.3	CTD Profiling System & Rossette water sampler	1	SBE USA
3.4	CTD Profiling System & Rossette water sampler	1	Idronaut Italy
3.5	Niskin Water samplers 1.7 ltrs	60	
3.6	Niskin Water samplers 5 ltrs	10	
3.7	Niskin Water samplers 10 ltrs	18	
3.8	Niskin Water samplers 30 ltrs	1	

3.9	Go-Flo Water samplers 30 ltrs	6	
3.10	Go-Flo Water samplers 12 litres	1	
3.11	Bucket Thermometers	2	Th.Friedrichs
3.12	Barometer	1	Friedricks
3.13	Thermosalinograph	1	SBE USA
3.14	Auto.Weather station	1	INCOIS
3.15	Rotary Shaker	1	Indigenous
4. Auxiliary / General Equipment			
4.1	GPS + Power Supply	1	Magellan
4.2	CCTV System	1 set	
4.3	Refrigerators (Chem., multi, Stbd. Wet)	3	
4.4	Dry Ovens	3	Heraeus-2, Ind.-1
4.5	Deep freezer (Stabd. Wet)	2	Indigenous
4.6	Meter wheel units (for CTD / Net operations)	2	
4.7	Personal Computer/Server & Peripherals (12 CPUs, 15 monitors)	12	
4.8	Local Area Network	1 set	
4.9	Printers	9	
4.10	External CD writer	1	
4.11	Scanner	1	HP
4.12	Plotter HP Designjet 1050 C plus	1	HP
4.13	Autoclave	1 no	Indigenous
4.14	LCD Projector	1	
4.15	Dynamic Positioning System & sub-units	1 set	Kongsberg
4.16	HiPaP System & sub-units	1 set	Kongsberg
5. List of equipment under warranty			
5.1	Deep sea Echosounder	1	SyQwest (under warranty till Aug 2016)
5.2	Laboratory Salinometer	1	Guildline (under warranty till Mar 2016)
6. List of Equipment for operation / sample / sub-sampling / data collection			
6.1	Gravity corer		
6.2	Hydraulic Piston Corer		
6.3	Rock Saw		
6.4	Liner Saw		
6.5	Rock Mill		
6.6	Grab (Small & Large)		
6.7	Pipe dredge		
6.8	Side-scan sonar system		
6.9	Proton Magnetometer		
6.10	Pinger operation		
6.11	Sub-Bottom Profiler		
6.12	Multibeam Echosounder		
6.13	Coring (Gravity & Spade)		
6.14	Chain bag Dredging		
6.15	XBT System		
6.16	CTD Profiling System / Rosette		
6.17	Acoustic Doppler Current Profiler		
6.18	Thermosalinograph		
6.19	CTD & Hydrographic Winch Operation		
6.20	Deep Sea Winch operation		

6.21	Single Beam Echosounder (Deep)
6.22	Single Beam Echosounder (Shallow)
6.23	Multi-Plankton, Bongo and other nets
6.24	CCTV

7. EQUIPMENT UNDER PROCUREMENT

7.1	Magnetometer	1
7.2	Auto analyser (for high precision measurements of nutrients)	1
7.3	ADCP	1
7.4	Filtration Unit	1
7.5	Microscope	1

FORV SAGAR SAMPADA

Length : 71m

Normal cruise duration : 15 to 20 days

LIST OF EQUIPMENT (SAGAR SAMPADA)

SI.No	Name of Equipment	Make & Type	Qty
1.00 WHEEL HOUSE			
1.01	Echosounder 50 KHz with a) Control Unit b) Display Unit c) Transceiver Unit d) Colour display Unit e) Slave Display	Skipper GDS-101	1 No.
1.02	Echosounder 49KHz with a) Control Unit b) Recorder Unit	Simrad ET-102 Simrad MV 106 Simrad AR 801	1 No.
1.03	Doppler Speed Log 270 KHz with a) Main Control Unit b) Tranceiver Unit c) 3 Slave displays at various locations d) Gate Valve e) Transdicer and related equipments	Skipper DL-850	1 No.
1.04	Cableless Trawl sonde with a) Control& VGA unit b) Transceiver c) Temperature sensor d) Depth sensor e) Height sensor f) Catch sensor g) Spread sensor h) Fast charger unit and all related items i) Interface PCB j) Ethernet card	Simrad ITI	1 No. 1 No. 1 No. 1 No. 1 No. 1 No. 3 Nos 2 Nos 1 No. 1 No.
1.05	Integrated Fish Finding System with PC Intel D845EBT2, Pentium IV, 2.8 GHz, 256 MB, 120GB HDD, 17+LCD Monitor (2 Nos.) & MC-71 Processor Unit	Simrad CM-60	1 No.
1.06	Sonar SX90 1. TFT monitor & Operating panel. 2. Beam former unit 3. Processor unit 4. Interface unit 5. Motor control unit 6. Transceiver unit with heat exchanger. 7. Hull unit	Simrad	1 No. 1 No. 1 No. 1 No. 1 No. 1 No. 1 No. 1 No.
2.00 METEOROLOGICAL LABORATORY			
2.01	Aspiration Psychrometer	Wilh Lambrecht 761	1 No.
2.02	Aneroid Barometer	Wilh Lambrecht J/501106	1 No.

2.03	Marine Barograph	Wilh Lambrecht 290S9	1 No.
2.04	Marine Mercury Barometer	Wilh Lambrecht 604	1 No.
2.05	Automatic Weather Station with a) Zenith PC, Pentium-IV, 3 GHZ, 256 MB DDR, 80 GB HDD, FDD, CD Writer, 17+Color Monitor, Keyboard and Mouse b) Mechanical Unit c) Electronic Unit d) Sensor Frame e) Wind speed & direction sensor f) Air temperature Sensor g) Pressure sensor h) Rain Guage	Zenith	1 No.
3.00 EDP ROOM			
3.01	HP Server E5504, LED Monitor LE1902X, Intel Xeon Dual Core Processor, LED Monitor LE1902X, DVD, Ethernet Card, Keyboard, Mouse and standard accessories	HP E-5504	1 No.
3.02	HP Desktop 3000 Pro 3090MT, 18.5+LED Monitor, Intel Core 2 Duo Processor, DVD Writer, Mouse Keyboard, 0.65 KVA UPS Supra, Printer HP LJP 2055DN, HP Flatbed ADF Scanner and standard accessories	HP-3000 Pro 3090 MT	1 No.
3.03	LAN System complete with 12 Port LAN Hub, interconnections in all laboratories, LAN cabling and standard accessories		1 No.
4.00 ACOUSTIC DETECTION ROOM			
4.01	Echosounder 38/120/200 Khz unit with a) GPT b) Processor Unit c) Transducers d) Transceiver and other related accessories e) Pentium Computer, 1.44 MB Floppy Drive, CD-ROM Writer, Inkjet printer HP-960, 32 port Ethernet switch, MC-71/BI-60 post processing software, Keyboard, Mouse and related accessories	Simrad EK-60	1 No.
4.02	Acoustic Doppler Current Profiler with a) Deck Unit b) 75 Khz transducer and related equipments c) HP Deskjet 3000 Series PC with Intel Core 2 Duo Processor, 2.03 GHz, 2 GB RAM, 300 GB HDD, 18.5+LED Monitor, Keyboard, Mouse, DVD Writer, MS OS Windows 7 and other standard features.	RD Instruments HP Pro 3090 MT	1 No.
4.03	EA-600 Echosounder along with GPT 12KHz/2KW, PC HOS 192, Keyboard,	Simrad	1 No.

	Mouse, Printer HP Deskjet 5940, DVD Writer and accessories		
4.04	Depth display units at various locations	Skipper IR-300	3 Nos
4.05	Depth display unit	Skipper IR-301	1 No.
4.06	Differential Global Positioning System (DGPS) with Display unit and all accessories	Simrad GN-30	1 No.
4.07	Portable Echosounder EY-60 with GPT 12 KHz, Transducer 12 KHs, Laptop HP Compaq NC6220, Intel Pentium M, 1.86 GHz, 1 GB RAM, 60GB HDD	Simrad EY-60	1 No.
5.00 C-14 LABORATORY			
5.01	Isotope Fume Cupboard	DB type SR 150-18/8	1 No.
5.02	Refrigerator	Gram K-130	1 No.
5.03	Incubator	Elab Electronic IM-10	1 No.
6.00 DRY CHEMICAL LABORATORY			
6.01	6-Channel Autoanalyser system with a) Sampler b) Proportioning pump c) Manifold d) Autovalve e) Calorimeters f) Recorders g) Pentium III Computer, Monitor, Mouse, Keyboard, DVD Drive and other accessories	SKALAR Compaq Deskpro EN	1 Unit
6.02	pH meter	Merck/Inolab	1 No.
6.03	Titration	Metrohm Dosimat 655	1 No.
6.04	Salinometer	Autosal 8400A/B	2 Nos.
6.05	CTD/Rosette Sampler with a) Underwater unit with sensors b) Niskin Bottles c) Deck unit and related equipments d) Triggering unit e) HP Deskjet 3000 Series PC with Intel Core 2 Duo Processor, 2.03 GHz, 2 GB RAM, 300 GB HDD, 18.5+LED Monitor, Keyboard, Mouse, DVD Writer, MS OS Windows 7 and other standard features. f) Multifunction I/O	Sea Bird Electronics/ General Oceanics HP Pro 3090MT Microsoft PCL 812	1 No.
6.06	Fume Cupboard	DB Type 10	1 No.
6.07	Refrigerator	Gram K-130	1 No.
6.08	Expendable Bathy Thermograph unit with HP Deskjet 3000 Series PC with Intel Core 2 Duo Processor, 2.03 GHz, 2 GB RAM, 300 GB HDD, 18.5+LED Monitor, Keyboard, Mouse, DVD Writer, Printer HP LJP2055DN, MS OS Windows 7 and other standard features.	Sippican Inc.MK-12 HP Pro 3090MT	1 No.

6.09	HP Deskjet 3000 Series PC with Intel Core 2 Duo Processor, 2.03 GHz, 2 GB RAM, 300 GB HDD, 18.5+LED Monitor, Scanner HP2410, Keyboard, Mouse, DVD Writer, MS OS Windows 7 and other standard features.	HP Pro 3090MT	1 No.
6.10	System Digital Clock	Navitronic SDC-4	1 No.
6.11	Underwater Camera		1 No.
6.12	Dual Beam Spectrophotometer HP Compaq, Intel Pentium IV, 2.8 GHz, 256 MB, 80GB HDD, LG CD Writer and standard accessories Inkjet Printer HP 5748	Perkin Elmer Lambda 25	1 No.
7.00	WET CHEMICAL LABORATORY		
7.01	Water purifying plant with Prefiltration unit	Millipore Elix-10 & Milli-Q Gradient A10	1 Set
7.02	Insulated water samplers	General Oceanics	12 Nos
7.03	Deep Sea Pressure protected reversing thermometer		06 Nos
7.04	Deep Sea Pressure unprotected reversing thermometer		12 Nos
7.05	Incubator	Heraeus T5042E	1 No.
7.06	Muffle Furnace	Heraeus MR250E	1 No.
7.07	Fume cupboard	BD Type 10	2 Nos.
7.08	Multiple Plankton Net Spare nets and buckets	Hydro Bios	1 No.
7.09	Bongo net		1 No.
8.00	Microbiology Laboratory		
8.01	Fume cupboard	BD Type 10	1 No.
8.02	Incubator	Heraeus B5050	1 No.
8.03	Refrigerator 190 lit.	BPL 195FF	1 No.
8.04	Electronic Marine Balance	Eilersen Electric 10Kg.	2 Nos.
8.05	Electronic Marine Balance	Eilersen Electric 0.5Kg.	1 No.
8.06	Electronic Marine Balance	Eilersen Electric	1 No.
8.07	Binocular Microscope	Nikon SMZ-10	2 Nos
8.08	Stereoscopic Microscope	Olympus SMZ-III	2 Nos.
8.09	Stereoscopic Microscope	Olympus SZ-TR	2 Nos
8.10	Binocular Microscope	Reichert-Lung Neovar-2	1 No.
8.11	Fluorescent Trinocular Microscope with Digital Camera and HP Deskjet 3000 Series PC with Intel Core 2 Duo Processor, 2.03 GHz, 2 GB RAM, 300 GB HDD, 18.5+LED Monitor, HP LJP2055DN, 0.65 KVA UPS, Keyboard, Mouse, DVD Writer, MS OS Windows 7 and other standard features. Inkjet Printer UPS HCL 500 VA	Nikon Eclipse E600 HP Pro 3090MT	1 No.

8.12	Vacuum Pump		1 No.
8.13	Hot Air Oven	Labline	1 No.
8.14	BOD Incubator	REMI	1 No.
8.15	Laminar Flow	Labline	1 No.
8.16	Vertical Deep Freezer	Labline	1 No.
8.17	Colony Counter		1 No.
8.18	Laboratory Autoclave with Foot Lifting Arrangement	Kumar	1 No.
9.00 WET FISH LABORATORY			
9.01	Fume cupboard	BD Type 10	1 No.
9.02	Electronic Marine Balance	Eilersen Electric. 100kg	2 Nos.
9.03	Electronic Marine Balance	Eilersen Electric-20kg	1 No.
9.04	Electronic Marine Balance	Eilersen Electric-10 tons	1 No.
9.05	Ice Machine	Ziegra VBE-220	1 No.
9.06	Mincing Machine	Baader 694	1 No.
9.07	Peeling Machine		1 No.
10.00 AQUARIA			
10.01	Aquaria	Linatex	12 Nos
10.02	Gravity Tank	BS Plastic	1 No.
10.03	Reservoir Tank	EA Wilson	1 No.
10.04	Heating element for the reservoir tank	SANGZ 15KW	1 No.
10.05	Cooling Element for reservoir tank	Sabroe 205357-1	1 No.
10.06	Air Cooler	Sabroe FSS	1 No.
10.07	Circulation Pump	Iwaki MDH-32-CM	2 Nos
10.08	Seawater pump	Iwaki MDH-25-CV	1 No.
11.00 MISCELLANEOUS			
11.01	Oscilloscope	Philips	1 No.
11.02	Power Supply unit	Danica TPS-23A	1 No.
11.03	Power Supply unit	B&O RT-12	1 No.
11.04	Megger		1 No.
11.05	Digital Flow Meter	Hydro Bios	1 No.
11.06	Current Meter	Valeport DNC-3	1 No.
11.07	Smith Mc-Intyre Grab		3 Nos.
11.08	Dredge		1 No.
11.09	Box Corer		1 No.
11.10	HP Deskjet 3000 Series PC with Intel Core 2 Duo Processor, 2.03 GHz, 2 GB RAM, 300 GB HDD, 18.5+LED Monitor, Flatbed Scanner ADF, Keyboard, Mouse, DVD Writer, MS OS Windows 7 and other standard features.	HP Pro 3090MT	2 Nos.
11.11	Oscilloscope Infinium	Agilent Technologies	1 No.
11.12	Saw Microtome	Leica SP-1600	1 No.

11.13	Fluorescent Trinocular Microscope with digital camera, HP Deskjet 3000 Series PC with Intel Core 2 Duo Processor, 2.03 GHz, 2 GB RAM, 300 GB HDD, 18.5+LED Monitor, Printer LJP2055DN, Scanner HP 2410, Keyboard, Mouse, DVD Writer, MS OS Windows 7 and other standard features.	Leica DM4000B HP Pro 3090MT	1 set
11.14	Stereo Microscope with high resolution camera Canon Powershot S50, HP Deskjet 3000 Series PC with Intel Core 2 Duo Processor, 2.03 GHz, 2 GB RAM, 300 GB HDD, 18.5+LED Monitor, Keyboard, Mouse, DVD Writer, MS OS Windows 7 and other standard features.	Leica MZ-16 HP Pro 3090MT	1 set
11.15	Portable ADCP	RD Instruments	3 Nos.
11.16	Fluorometer		1 No.
11.17	Quartz Distillation Plant		1 No.
12. List of Equipment for operation / sample / sub-sampling / data collection			
12.1	1.05 Integrated Fish Finding System		
12.2	1.06 Sonar SX90		
12.3	2.05 Automatic Weather Station		
12.4	4.01 Echosounder 38/120/200 Khz unit		
12.5	4.02 Acoustic Doppler Current Profiler		
12.6	4.03 EA-600 Echosounder		
12.7	6.05 CTD/Rosette Sampler		
12.8	10.00 AQUARIA		
12.9	CTD and Hydrographic Combination winch with Winch wire and counter and A-Frame		
12.10	Split Trawl Winches (PORT and STBD side) with winch wire and counters		
12.11	Plankton Winch with winch wire and counter		
12.12	Box Corer Winch with A-Frame, wire rope and counter		
12.13	Gilson Winch with wire rope		
12.14	Sweep Trawl Winches with wire rope		
12.15	Upper and Lower Net Drums		
12.16	Fish Hatch and Conveyor System in Wet Fish Laboratory		
13. New Equipment proposed to be procured / installed			
13.1	Auto Trawl System		1 No
13.2	6-Channel autoanalyser		1 No
14.3	XCTD		1 No
13.4	Spectrophotometer		1 No

ORV SAGAR NIDHI

Length : 103 m
 Normal cruise duration : 25 to 35 days

LIST OF EQUIPMENT (SAGAR NIDHI)

S.No	Name of the equipment	Qty	Make/ Model
1.	Deep Water Multi-beam Echo Sounder	1 Set	RESON / SeaBat 7150
2.	Shallow Water Multi-beam Echo Sounder	1 Set	RESON / SeaBat 7111
3.	Deep/ Shallow water Single-beam Echo Sounder with Pinger (Altimeter) / Digital Repeaters	1 Set	Kongsberg Maritime / EA-600
4.	Acoustic Doppler Current Profiler	1 Set	RD Instruments / Ocean Surveyor
5.	Sub-Bottom Profiler	1 Set	INNOMAR / SES 2000 Deep
6.	Deep sea CTD with Rosette	1 Set	Idronaut / General oceanic
7.	Deep sea CTD with Rosette	1 Set	Seabird Electronics / 911 Plus
8.	CTD Winch along with cables/slip rings & related systems	1 Set	Kley France
9.	Hydrographic Winch along with cables/slip rings & related systems	1 Set	Kley France
10.	Marine Data Management System	1 Set	Kongsberg Maritime / MDM400
11.	Thermo Salinograph (SST)	1 Set	Seabird-SBE21
12.	Scientific Weather Station	1 Set	Vaisala
13.	Fluorimeter	1 Set	Skalar Netherland
14.	Auto-Salinometer	1 Set	TSKI Japan
15.	Four Channel Auto analyzer	1 Set	Skalar Netherland
16.	Microscope	2 Set	Leica/Towa
17.	Millipore Plant with vacuum pump & manifold	1 Set	Millipore
18.	Spectrophotometer	1	Leica
19.	Centrifuge	1	Remi
20.	Incubator	2	Binder
21.	BOD Incubator	2	Naren Instruments
22.	Laminar-flow	1	
23.	Autoclave	1	Indigenous
24.	Acoustic Positioning System Operating Console	1 Set	Kongsberg Maritime
25.	HiPAP 500	1 Set	Kongsberg Maritime
26.	HPR LF400	1 Set	Kongsberg Maritime
27.	Transponders (MPT)	11	Kongsberg Maritime
28.	Transponders (MST)	5	Kongsberg Maritime
29.	Computers	22	HP/Dell/Acer
30.	Plotters	2	HP
31.	Printers	5	HP
32.	UPS	1	APC
List of Equipment for Operation / Sample / Sub-sampling / Data collection			
33.	Deep Water Multi-beam Echo Sounder		

34.	Shallow Water Multi-beam Echo Sounder
35.	Deep/ Shallow water Single-beam Echo Sounder with Pinger (Altimeter) / Digital Repeaters
36.	Acoustic Doppler Current Profiler
37.	Sub-Bottom Profiler
38.	Deep sea CTD with Rosette (Seabird)
39.	Deep sea CTD with Rosette (Itronaut / General oceanic)
40.	CTD Winch
41.	Hydrographic Winch
42.	Marine Data Management System
43.	Thermo Salinograph (SST)
44.	Scientific Weather Station
45.	Corer 1.5m
46.	Corer 6m
47.	Grab
48.	Plankton net

ORV SAGAR MANJUSHA

Length : 60 m
 Normal cruise duration : 10 to 15 days

LIST OF EQUIPMENT (SAGAR MANJUSHA)

Sl. No.	Name of equipment	Qty
1.	Spectro photometer	1 set
2.	Multi beam Echo sounder (Reson . Seabat7111) Frequency 100 kHz , Sound Velocity profiler AML, Motion Sensor-IXSEA-III, DGPS Fugro.	1 set
3.	Single beam Echo sounder (Knudsen . Chirp 3260) Frequencies 12 kHz / 200 kHz, DGPS Hemisphere	1 set
4.	Fluoimager	1 set
5.	Zoom Stereo Microscope	1 set
6.	4 channel Auto Analyzer (Ammonia, Phosphate, Silicate, Nitrate + Nitrite)	1 set
7.	CTD (SBE 25Plus)	1
List of Equipment for Operation / Sample / Sub-sampling / Data collection		
8.	Gravity Corer (6m)	
9.	Sediment Grab	
10.	Sachi disc	
11.	Zoo Plankton Net	
12.	Multi beam Echo sounder (Reson . Seabat7111) Frequency 100 kHz , Sound Velocity profiler AML, Motion Sensor-IXSEA-III, DGPS Fugro.	
13.	Single beam Echo sounder (Knudsen . Chirp 3260) Frequencies 12 kHz / 200 kHz, DGPS Hemisphere	
14.	CTD (SBE 25Plus)	

Equipments that need OEM service support (refer clause 2.2 (a))
(For Sagar Nidhi & Sagar Manjusha only)

A.SAGAR NIDHI

S.No	Name of the equipment	Qty	Make/ Model
1.	Deep Water Multi-beam Echo Sounder	1 Set	RESON / SeaBat 7150
2.	Shallow Water Multi-beam Echo Sounder	1 Set	RESON / SeaBat 7111
3.	Deep/ Shallow water Single-beam Echo Sounder with Pinger (Altimeter) / Digital Repeaters	1 Set	Kongsberg Maritime / EA-600
4.	Acoustic Doppler Current Profiler	1 Set	RD Instruments / Ocean Surveyor
5.	Sub-Bottom Profiler	1 Set	INNOMAR / SES 2000 Deep
6.	Deep sea CTD with Rosette	1 Set	Idronaut / General oceanic
7.	Deep sea CTD with Rosette	1 Set	Seabird Electronics / 911 Plus
8.	CTD Winch along with cables/slip rings & related systems	1 Set	Kley France
9.	Hydrographic Winch along with cables/slip rings & related systems	1 Set	Kley France
10.	Marine Data Management System	1 Set	Kongsberg Maritime / MDM400
11.	Thermo Salinograph (SST)	1 Set	Seabird-SBE21
12.	Scientific Weather Station	1 Set	Vaisala
13.	Fluoimager	1 Set	Skalar Netherland
14.	Auto-Salinometer	1 Set	TSKI Japan
15.	Four Channel Auto analyzer	1 Set	Skalar Netherland
16.	Microscope	2 Set	Leica/Towa
17.	Millipore Plant with vacuum pump & manifold	1 Set	Millipore
18.	Spectrophotometer	1	Leica
19.	Acoustic Positioning System Operating Console	1 Set	Kongsberg Maritime
20.	HiPAP 500	1 Set	Kongsberg Maritime
21.	HPR LF400	1 Set	Kongsberg Maritime
22.	Transponders (MPT)	11	Kongsberg Maritime
23.	Transponders (MST)	5	Kongsberg Maritime
24.	Plotters	2	HP
25.	Printers	5	HP
26.	UPS	1	APC

B.SAGAR MANJUSHA

Sl. No.	Name of equipment	Qty
1.	Spectro photo meter	1 set
2.	Multi beam Echo sounder (Reson . Seabat7111) Frequency 100 kHz, Sound Velocity profiler AML, Motion Sensor-IXSEA-III, DGPS Fugro.	1 set
3.	Single beam Echo sounder (Knudsen . Chirp 3260) Frequencies 12 kHz / 200 kHz, DGPS Hemisphere	1 set
4.	Fluoimager	1 set
5.	Zoom Stereo Microscope	1 set
6.	4 channel Auto Analyzer (Ammonia, Phosphate, Silicate, Nitrate + Nitrite)	1 set
7.	CTD (SBE 25Plus)	1

Techno-commercial bid compliance statement

(Supporting documents to be enclosed for each particular)

Sl. No.	Particulars	Details of supporting documents enclosed
1	Name, Address, Telephone, Fax Number and Email ID of the bidder company	
2	Year of company incorporation (Please enclose company registration certificate, memorandum of association and a write up/profile of your company along with information brochure)	
3	Infrastructure and facilities available	
4	Annual turnover for last 3 years	
5	Number of years of experience of company in oceanographic equipment installation, commission, operation and maintenance	
6	Number of contracts executed/ under execution during last 7 years. Work orders, contract copies of all the works executed must be attached. Satisfactory contract completion certificate from the clients to be enclosed.	
7	Details of qualified manpower with the company for shore based office / technical management and onboard equipment maintenance at sea, their biodata / CV, relevant experience, years of employment with the bidder to be submitted by way of appropriate orders/ wages disbursements etc., (Please attach separate sheets)	
8	Logistic modalities and detailed plan of execution of the work (Please attach separate sheet)	
9	Organization structure and addresses of Directors.	
10	Legal declaration: The Bidder/Company should also declare whether at any time they have been prosecuted by any court in India or abroad for violation of any specific rule either in India or abroad laid down for execution of work/contract or at any time subjected to Industrial Disputes Act for violation of said provisions of the Act. Declaration to be enclosed.	
11	Any other information in support of the bidder's capability, etc. particularly with information on accidents, mishaps etc. encountered.	
12	Unpriced bid (unconditional) as per price bid format to be enclosed	
13	EMD details	
14	Tender fee details	

We understand that false declaration shall result in total rejection of bid, though qualified otherwise.
We declare that all the information furnished above is true

We also agree to all terms and conditions and workscope as detailed in the tender document.

Authorized Signatory

Company Seal:

Price bid format – ORV Sagar Kanya

Sr No	Name of the Equipment	Qty	AMC per unit per year (Rs)	Total AMC per year (Rs)
1. Chemical /Analytical Instruments				
1.1	UV oxidation Unit	1		
1.2	Oxygen Titration Unit (865 Dosimat Plus)	1		
1.3	Water Purifying System + Elix 3 Filtration unit	1 set		
1.4	Vacuum pumps (for filtration)	2		
1.5	pH meter	1		
1.6	Fume cupboards	2 Nos		
1.7	UV Lamp	1 no		
2. Geological/Geophysical Instruments				
2.1	Gravity corer	2		
2.2	Hydraulic Piston Corer	1		
2.3	Rock Saw	1		
2.4	Core Liner Cutters	2		
2.5	Rock Mill	1		
2.6	Bottom Grab (Small)	2		
2.7	Bottom Grab (Large)	4		
2.8	Pipe dredge	3		
2.9	Side-scan sonar system	1		
2.10	Pingers	2		
2.11	Shallow-water Echosounder	1		
2.12	Multibeam Echosounder with all data acquisition / recording / preliminary processing / plotting sub-units / softwares (including SSV Sensor, SVP, DGPS, Motion sensor etc).	1 set		
2.13	Sub-Bottom Profiler	1		
2.14	Spade Corer	2		
2.15	Chain bag Dredges	1		
2.16	Core subsampling station / rollers	1		
2.17	Tension meter for Deep Sea Winch	1		
2.18	Sieve Shaker / Sieves (set of 7)	1		
3. Oceanography/Meteorology/Biology Equipment				
3.1	Multi Plankton Net (Automatic plankton Sampler / Std. Pressure meter / Buckets / Flow meter etc)	1 set		
3.2	XBT System	1		
3.3	CTD Profiling System & Rossette sampler	1		
3.4	CTD Profiling System & Rossette sampler	1		
3.5	Niskin Water samplers 1.7 ltrs	60		
3.6	Niskin Water samplers 5 ltrs	10		
3.7	Niskin Water samplers 10 ltrs	18		
3.8	Niskin Water samplers 30 ltrs	1		
3.9	Go-Flo Water samplers 30 ltrs	6		
3.10	Go-Flo Water samplers 12 litres	1		
3.11	Bucket Thermometers	2		
3.12	Barometer	1		
3.13	Thermosalinograph	1		
3.14	Auto.Weather station	1		

3.15	Rotary Shaker	1	
4. Auxiliary / General Equipment			
4.1	GPS + Power Supply	1	
4.2	CCTV System	1 set	
4.3	Refrigerators (Chem., multi, Stbd. Wet)	3	
4.4	Dry Ovens	3	
4.5	Deep freezer (Stabd. Wet)	2	
4.6	Meter wheel units (for CTD / Net operations)	2	
4.7	Personal Computer/Server & Peripherals (12 CPUs, 15 monitors)	12	
4.8	Local Area Network	1 set	
4.9	Printers	9	
4.10	External CD writer	1	
4.11	Scanner	1	
4.12	Plotter HP Designjet 1050 C plus	1	
4.13	Autoclave	1 no	
4.14	LCD Projector	1	
4.15	Dynamic Positioning System & sub-units	1 set	
4.16	HiPaP System & sub-units	1 set	
One year total AMC rates for all equipment in Annexure IV for items at 1 to 4. TOTAL			
5. List of Equipment for operation / sample / sub-sampling / data collection			Per year rate (Rs.)
5.1	Gravity corer		
5.2	Hydraulic Piston Corer		
5.3	Rock Saw		
5.4	Liner Saw		
5.5	Rock Mill		
5.6	Grab (Small & Large)		
5.7	Pipe dredge		
5.8	Side-scan sonar system		
5.9	Pinger operation		
5.10	Sub-Bottom Profiler		
5.11	Multibeam Echosounder		
5.12	Coring (Gravity & Spade)		
5.13	Chain bag Dredging		
5.14	XBT System		
5.15	CTD Profiling System / Rosette		
5.16	Thermosalinograph		
5.17	CTD & Hydrographic Winch Operation		
5.18	Deep Sea Winch operation		
5.19	Single Beam Echosounder (Deep)		
5.20	Single Beam Echosounder (Shallow)		
5.21	Multi-Plankton, Bongo and other nets		
5.22	CCTV		
One year total operations rates for items for operations in Annexure IV (5). TOTAL			
6. List of equipment under warranty			
6.1	Deep sea Echosounder	1	
6.2	Laboratory Salinometer	1	
Total AMC rates for equipment under warranty for the items in Annexure IV (6)			

Price bid format – FORV Sagar Sampada

Sl.No	Name of Equipment	Quantity	AMC per unit per year (Rs)	Total AMC per year (Rs)
1.00	WHEEL HOUSE			
1.01	Echosounder 50 Khz	1 No.		
1.02	Echosounder 49Khz	1 No.		
1.03	Doppler Speed Log 270 KHz	1 No.		
1.04	Cableless Trawl sonde	1 set		
1.05	Integrated Fish Finding System	1 No.		
1.06	Sonar SX90	1 set		
2.00	METEOROLOGICAL LABORATORY			
2.01	Aspiration Psychrometer	1 No.		
2.02	Aneroid Barometer	1 No.		
2.03	Marine Barograph	1 No.		
2.04	Marine Mercury Barometer	1 No.		
2.05	Automatic Weather Station	1 No.		
3.00	EDP ROOM			
3.01	HP Server E5504	1 No.		
3.02	HP Desktop 3000 Pro 3090MT	1 No.		
3.03	LAN System complete	1 No.		
4.00	ACOUSTIC DETECTION ROOM			
4.01	Echosounder 38/120/200 Khz unit	1 No.		
4.02	Acoustic Doppler Current Profiler	1 No.		
4.03	EA-600 Echosounder	1 No.		
4.04	Depth display units at various locations	3 Nos		
4.05	Depth display unit	1 No.		
4.06	Differential Global Positioning System	1 No.		
4.07	Portable Echosounder EY-60	1 No.		
5.00	C-14 LABORATORY			
5.01	Isotope Fume Cupboard	1 No.		
5.02	Refrigerator	1 No.		
5.03	Incubator	1 No.		
6.00	DRY CHEMICAL LABORATORY			
6.01	6-Channel Autoanalyser system	1 Unit		
6.02	pH meter	1 No.		
6.03	Titration	1 No.		
6.04	Salinometer	2 Nos.		
6.05	CTD/Rosette Sampler	1 No.		
6.06	Fume Cupboard	1 No.		
6.07	Refrigerator	1 No.		
6.08	Expendable Bathy Thermograph unit	1 No.		
6.09	HP Deskjet 3000 Series PC	1 No.		
6.10	System Digital Clock	1 No.		
6.11	Underwater Camera	1 No.		
6.12	Dual Beam Spectrophotometer	1 No.		
7.00	WET CHEMICAL LABORATORY			
7.01	Water purifying plant with Prefiltration unit	1 Set		
7.02	Insulated water samplers	12 Nos		
7.03	Deep Sea Pressure protected reversing thermometer	06 Nos		
7.04	Deep Sea Pressure unprotected reversing	12 Nos		

	thermometer			
7.05	Incubator	1 No.		
7.06	Muffle Furnace	1 No.		
7.07	Fume cupboard	2 Nos.		
7.08	Multiple Plankton Net Spare nets and buckets	1 No.		
7.09	Bongo net	1 No.		
8.00	Microbiology Laboratory			
8.01	Fume cupboard	1 No.		
8.02	Incubator	1 No.		
8.03	Refrigerator 190 lit.	1 No.		
8.04	Electronic Marine Balance	2 Nos.		
8.05	Electronic Marine Balance	1 No.		
8.06	Electronic Marine Balance	1 No.		
8.07	Binocular Microscope	2 Nos		
8.08	Stereoscopic Microscope	2 Nos.		
8.09	Stereoscopic Microscope	2 Nos		
8.10	Binocular Microscope	1 No.		
8.11	Fluorescent Trinocular Microscope with Digital Camera and HP Deskjet 3000 Series PC with Inkjet Printer UPS HCL 500 VA	1 No.		
8.12	Vacuum Pump	1 No.		
8.13	Hot Air Oven	1 No.		
8.14	BOD Incubator	1 No.		
8.15	Laminar Flow	1 No.		
8.16	Vertical Deep Freezer	1 No.		
8.17	Colony Counter	1 No.		
8.18	Laboratory Autoclave with Foot Lifting Arrangement	1 No.		
9.00	WET FISH LABORATORY			
9.01	Fume cupboard	1 No.		
9.02	Electronic Marine Balance	2 Nos.		
9.03	Electronic Marine Balance	1 No.		
9.04	Electronic Marine Balance	1 No.		
9.05	Ice Machine	1 No.		
9.06	Mincing Machine	1 No.		
9.07	Peeling Machine	1 No.		
10.00	AQUARIA			
10.01	Aquaria	12 Nos		
10.02	Gravity Tank	1 No.		
10.03	Reservoir Tank	1 No.		
10.04	Heating element for the reservoir tank	1 No.		
10.05	Cooling Element for reservoir tank	1 No.		
10.06	Air Cooler	1 No.		
10.07	Circulation Pump	2 Nos		
10.08	Seawater pump	1 No.		
11.00	MISCELLANEOUS			
11.01	Oscilloscope	1 No.		
11.02	Power Supply unit	1 No.		
11.03	Power Supply unit	1 No.		
11.04	Megger	1 No.		
11.05	Digital Flow Meter	1 No.		
11.06	Current Meter	1 No.		
11.07	Smith Mc-Intyre Grab	3 Nos.		

11.08	Dredge	1 No.		
11.09	Box Corer	1 No.		
11.10	HP Deskjet 3000 Series PC	2 Nos.		
11.11	Oscilloscope Infinium	1 No.		
11.12	Saw Microtome	1 No.		
11.13	Fluorescent Trinocular Microscope with digital camera, HP Deskjet 3000 Series PC	1 set		
11.14	Stereo Microscope with high resolution camera Canon Powershot S50, HP Deskjet 3000 Series PC	1 set		
11.15	Portable ADCP	3 Nos.		
11.16	Fluorometer	1 No.		
11.17	Quartz Distillation Plant	1 No.		
One year total AMC rates for all equipment in Annexure V for items at 1 to 11. TOTAL				
12. List of Equipment for operation / sample / sub-sampling / data collection			Per year rate (Rs.)	
12.1	1.05 Integrated Fish Finding System			
12.2	1.06 Sonar SX90			
12.3	2.05 Automatic Weather Station			
12.4	4.01 Echosounder 38/120/200 Khz unit			
12.5	4.02 Acoustic Doppler Current Profiler			
12.6	4.03 EA-600 Echosounder			
12.7	6.05 CTD/Rosette Sampler			
12.8	10.00 AQUARIA			
12.9	CTD and Hydrographic Combination winch with Winch wire and counter and A-Frame			
12.10	Split Trawl Winches (PORT and STBD side) with winch wire and counters			
12.11	Plankton Winch with winch wire and counter			
12.12	Box Corer Winch with A-Frame, wire rope and counter			
12.13	Gilson Winch with wire rope			
12.14	Sweep Trawl Winches with wire rope			
12.15	Upper and Lower Net Drums			
12.16	Fish Hatch and Conveyor System in Wet Fish Laboratory			
One year operations rates for items for operations in Annexure V (12). TOTAL				

Price bid format – ORV Sagar Nidhi

Sl. No.	Name of the equipment	Qty	AMC per unit per year (Rs)	Total AMC per year (Rs)
1.	Deep Water Multi-beam Echo Sounder	1 Set		
2.	Shallow Water Multi-beam Echo Sounder	1 Set		
3.	Deep/ Shallow water Single-beam Echo Sounder with Pinger (Altimeter) / Digital Repeaters	1 Set		
4.	Acoustic Doppler Current Profiler	1 Set		
5.	Sub-Bottom Profiler	1 Set		
6.	Deep sea CTD with Rosette	1 Set		
7.	Deep sea CTD with Rosette	1 Set		
8.	CTD Winch along with cables/slip rings & related systems	1 Set		
9.	Hydrographic Winch along with cables/slip rings & related systems	1 Set		
10.	Marine Data Management System	1 Set		
11.	Thermo Salinograph (SST)	1 Set		
12.	Scientific Weather Station	1 Set		
13.	Fluoimager	1 Set		
14.	Auto-Salinometer	1 Set		
15.	Four Channel Auto analyzer	1 Set		
16.	Microscope	2 Set		
17.	Millipore Plant with vacuum pump & manifold	1 Set		
18.	Spectrophotometer	1		
19.	Centrifuge	1		
20.	Incubator	2		
21.	BOD Incubator	2		
22.	Laminar-flow	1		
23.	Autoclave	1		
24.	Acoustic Positioning System Operating Console	1 Set		
25.	HiPAP 500	1 Set		
26.	HPR LF400	1 Set		
27.	Transponders (MPT)	11		
28.	Transponders (MST)	5		
29.	Computers	22		
30.	Plotters	2		
31.	Printers	5		
32.	UPS	1		
One year total AMC rates for all equipment for items at (1 to 32) TOTAL				
List of Equipment for operation / sample / sub-sampling / data collection		Per year rate (Rs.)		

33.	Deep Water Multi-beam Echo Sounder	
34.	Shallow Water Multi-beam Echo Sounder	
35.	Deep/ Shallow water Single-beam Echo Sounder with Pinger (Altimeter) / Digital Repeaters	
36.	Acoustic Doppler Current Profiler	
37.	Sub-Bottom Profiler	
38.	Deep sea CTD with Rosette (Seabird)	
39.	Deep sea CTD with Rosette (Idronaut / General oceanic)	
40.	CTD Winch	
41.	Hydrographic Winch	
42.	Marine Data Management System	
43.	Thermo Salinograph (SST)	
44.	Scientific Weather Station	
45.	Corer 1.5m	
46.	Corer 6m	
47.	Grab	
48.	Plankton net	
One year total operations rates for items for operations 33 to 48. TOTAL		

Price bid format – ORV Sagar Manjusha

Sl. No.	Name of equipment	Qty	AMC per unit per year (Rs)	Total AMC per year (Rs)
1.	Spectro photo meter	1 set		
2.	Multi beam Echo sounder (Reson . Seabat7111) Frequency 100 kHz , Sound Velocity profiler AML, Motion Sensor-IXSEA-III, DGPS Fugro.	1 set		
3.	Single beam Echo sounder (Knudsen . Chirp 3260) Frequencies 12 kHz / 200 kHz, DGPS Hemisphere	1 set		
4.	Fluoimager	1 set		
5.	Zoom Stereo Microscope	1 set		
6.	4 channel Auto Analyzer (Ammonia, Phosphate, Silicate, Nitrate + Nitrite)	1 set		
7.	CTD (SBE 25Plus)	1		
One year total AMC rates for all equipment for items at 1 to 7. TOTAL				
List of Equipment for operation / sample / sub-sampling / data collection			Per year rate (Rs.)	
8.	Gravity Corer (6m)			
9.	Sediment Grab			
10.	Sachi disc			
11.	Zoo Plankton Net			
12.	Multi beam Echo sounder (Reson . Seabat7111) Frequency 100 kHz , Sound Velocity profiler AML, Motion Sensor-IXSEA-III, DGPS Fugro.			
13.	Single beam Echo sounder (Knudsen . Chirp 3260) Frequencies 12 kHz / 200 kHz, DGPS Hemisphere			
14.	CTD (SBE 25Plus)			
One year total operations rates for items for operations in 8 to 14. TOTAL				

Quoted Annual cost of Maintenance / Operation

(shall be used as criteria for arriving at L1 bidder)

S No	Description	Amount (Rs.)
1.	One year total AMC rates for all equipment in Annexure VII for items at 1 to 4.	
2.	One year total operations rates for items for operations in Annexure VII (5).	
3.	10% of total AMC rates for equipment under warranty for the items in Annexure VII (6)	
4.	One year total AMC rates for all equipment in Annexure VIII for items at 1 to 11.	
5.	One year operations rates for items for operations in Annexure VIII (12).	
6.	One year total AMC rates for all equipment in Annexure-IX for items from 1 to 32.	
7.	One year total operations rates for all equipment in Annexure- IX for items from 33 to 48.	
8.	One year total AMC rates for all equipment in Annexure- X for items from 1 to 7.	
9.	One year total operations rates for all equipment in Annexure- X for items from 8 to 14.	
10.	Service tax as applicable for above 9 items. (Please indicate % of service tax)	
11.	Any other taxes to be stated in price bid by the bidder.	
TOTAL		

(Important Note: Financial bids of technically qualified bidders shall be evaluated and the bidder who has quoted lowest rate for undertaking all works under the clause-2 for all equipment will only be considered. Partial tender will not be considered and will be rejected. The financial bids should be strictly in the format as provided at Annexure-VII (for Sagar Kanya), Annexure-VIII (for Sagar Sampada), Annexure - IX (for Sagar Nidhi) and Annexure- X (for Sagar Manjusha). Discounts, if any, to be included in the prices and not to be shown separately. The total annual cost of maintenance / operation is also should be provided in this format at Annexure-XI)

Authorized Signatory

Company Seal:

Format for Assurance Letter from bidder for OEM support for NIOT vessels

To
The Director,
National Institute of Ocean Technology,
Velachery - Tambaram Main Road,
Narayanapuram, Pallikaranai,
Chennai 600100.
Tamil Nadu, INDIA.

Sub: Assurance letter from bidder for OEM support for NIOT vessels Sagar Nidhi and Sagar Manjusha..

Sir,

It is hereby assured that we will have a back to back support agreement with all OEM/OEM authorized service provider for the equipment listed in Annexure-V of tender no. dated .. to provide timely preventive/breakdown maintenance and supply of spares for maintaining the equipments onboard NIOT vessels ORV Sagar Nidhi and ORV Sagar Manjusha.

With best regards,

(Authorized signature with seal of Bidder)

EQUIPMENT UNDER PROCUREMENT FOR ORV SAGAR KANYA

(please give indicative AMC prices)

S No	Equipment	Quantity	Indicative AMC price per year (Rs)
1	Magnetometer	1	
2	Magnetometer operation	1	
3	Auto analyser (for high precision measurements of nutrients)	1	
4	ADCP	1	
5	ADCP operation	1	
6	Filtration Unit	1	
7	Microscope	1	

EQUIPMENT UNDER PROCUREMENT FOR FORV SAGAR SAMPADA

(please give indicative AMC prices)

S No	Equipment	Quantity	Indicative AMC price per year (Rs)
1	Auto Trawl System	1	
2	Operation of Auto Trawl System	1	
3	6-Channel autoanalyser	1	
4	Operation of 6-Channel autoanalyser	1	
5	XCTD	1	
6	Operation of XCTD	1	
7	Spectrophotometer	1	
8	Operation Spectrophotometer	1	

Authorized Signatory

Company Seal:

Format for Performance Guarantee

1. Bank Guarantee towards coverage of PERFORMANCE GUARANTEE against Contract No. _____ between M/s _____ (herein after called the CONTRACTOR) and the Director,..... (hereinafter called the CLIENT).
2. In consideration of the Director,, [address], having agreed as per their contract no. mentioned above to accept Bank Guarantee for Indian Rs. _____ for the due fulfilment of the contract as per the terms and conditions contained in the contract towards coverage against Performance in the shape of Bank Guarantee for Rs.
3. We the Bankers (Name of the bank) through our office at _____ for and on behalf of our constituents hereby execute this Bank Guarantee and undertake to indemnify and keep indemnified the CLIENT to the extent of Rs _____ towards coverage against contract No _____ Performance to the Director, (CLIENT) or their assignee by reason of any breach of terms and conditions as contained in the Contract by the CONTRACTOR (M/s _____) during the period of _____ months from the date of issuance.
4. And we (Name of the bank) hereby undertake to pay any claim under the Bank Guarantee on demand of the. Director....., without any reference to the CONTRACTOR M/s a sum not exceeding Rs. -----for non fulfilment of any of the terms and conditions of the Contract as mentioned above.
5. And we (Name of the bank) hereby undertake to pay any claim under the Bank Guarantee on demand to the CLIENT without any reference to the CONTRACTOR M/s..... a sum not exceeding Rs. _____ for non-fulfilment of any of the terms and conditions of the Contract by the CONTRACTOR.
6. We _____ (the bank) further agree that if the demand is made by the Director, for honouring the Bank Guarantee constituted by these presents we _____ (the bank) have no right to decline the same for any reason whatsoever and shall pay the amount within a week from the date of such demand.
7. We _____ (the bank) further agree that a mere demand by the CLIENT is sufficient for us to pay the amount covered by the Bank Guarantee in the manner within the time aforesaid without reference to the CONTRACTOR and no protest by the said CONTRACTOR can be availed on ground for us to decline or fail or neglect to make payment to the CLIENT in the manner within time aforesaid. We do hereby guarantee and undertake to pay immediately on first demand in writing any / all moneys to the extent of Rs. _____ . without any demur, reservation, contest or protest. Any such demand made by CLIENT on our Bank by serving a written notice shall be conclusive and binding.
8. We _____ (the bank) also agrees that CLIENT at its option shall be entitled to enforce this Guarantee against the bank as a principal debtor, in the first instance, without proceeding against the CONTRACTOR and notwithstanding any security or other guarantee that CLIENT may have in relation to the CONTRACTOR's liabilities.

9. We (the bank) also agree that this guarantee shall be governed and construed in accordance with Indian laws and subject to the exclusive jurisdiction of Indian courts.
10. We (the bank) undertake not to revoke this Guarantee during its currency except with the previous consent of the CLIENT in writing.
11. The Guarantee shall remain in force for a period of 6 months from the date of Issue subject to further that the CLIENT have no right under this bond after the expiry of the above period from the date of execution and we (the bank) shall be relieved /discharged from all liabilities under this guarantee thereafter.
12. The conditions of these obligations are: -
 - [a] If the CONTRACTOR does not fulfil any of the conditions mentioned in the Contract.
 - [b] If performance of the CONTRACTOR is not found satisfactory and hampers any function in any manner.
13. We (the bank) undertake to pay to the CLIENT up to the above amount upon receipt of its first written demand, without the CLIENT, having to substantiate its demand, provided that in its demand, the CLIENT will note that the amount claimed by it is due to it owing to the occurrence of one or all of the two conditions, specifying the occurred conditions or conditions.
14. This guarantee will remain in force till 30/06/2018 and any demand in respect thereof should reach the bank not later than the specified date.
15. Notwithstanding anything contained herein:

Our liability under this Guarantee shall not exceed Rs. 50,00,000 ...
 This Bank Guarantee shall be valid up to 30/06/2018 ..
 We are liable to pay the Guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written Claim or Demand on or before 30/06/2018 .

Note: The above guarantee will be submitted on Non Judicial Stamp paper of required cost and denomination as specified in the act.

=== END OF TENDER DOCUMENT ===