

TENDER DOCUMENT FOR



SUPPLY OF TERRESTRIAL LASER SCANNER (TLS)

***NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
(Ministry of Earth Sciences, Govt. Of India)
Headland Sada, Vasco-da-Gama
GOA -403 804, INDIA.***

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NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
(Ministry of Earth Sciences, Govt. Of India),
HEADLAND SADA, VASCO-DA-GAMA,
GOA - 403 804

TENDER NO. NCAOR/LAB-(CRYO)-2505/PT-09
Supply of Terrestrial Laser Scanner.

1.	Supply of Terrestrial Laser Scanner. Specifications Quantity	As per Annexure-I 01 No.
2.	General Terms and Conditions	As per Annexure II
3.	Cost of Tender Documents (In Person)	US \$ 50.00 ∴ 2000.00
4.	Cost of Tender Documents (By Post)	US \$ 65.00 ∴ 2050.00
5.	EMD	<p>Tender documents can be downloaded by tenderers from NCAOR website. In case a tenderer is using the documents and forms downloaded from the website, the cost of tender documents shall be sent in the form of Bank Draft in a separate envelope along with the tender.</p> <p>A) Foreign Bidders shall submit EMD along with their tender, in the form of a bank guarantee only for a sum of US \$ 1700.00 (US \$ One Thousand Seven Hundred only)</p> <p>B) Indian Bidders shall submit EMD along with their tender, either by DD drawn in favor of NCAOR, for a sum of ∴ 1,00,000/- (Rupees One Lakh only) payable at Vasco-da-Gama only.</p> <p style="text-align: center;">Or</p> <p>In the form of a bank guarantee for a sum of ∴ 1,00,000/- (Rupees One Lakh only)</p>
6.	Last Date and time for issue of tender documents	MONDAY 30.05.2016 1600Hrs (IST)
7.	Last Date and time for submission of sealed quotations	TUESDAY 31.05.2016 1700Hrs (IST)
8.	Date and time of tender opening	WEDNESDAY 01.06.2016 1000Hrs (IST)

TECHNICAL SPECIFICATIONS FOR "SUPPLY OF TERRESTRIAL LASER SCANNER"

A. Hardware	Scanning Range	: 90% Reflectivity-5000m or more and 3000m or more with 20% reflectivity with online waveform analysis.
	Accuracy	: 20mm or better (1 sigma)
	Measurement rate	: 20000 to 200000 measurements/sec or higher with different laser pulse repletion rate; Beam Divergence should be less than 0.15mrad; Laser Wavelength should be suitable for snow bound area.
	Field of View	: Horizontal 360 degree & Vertical 60 degree
	Portability/Weight	: Portable and light weight (less than 15 Kgs); Instrument should be IP64 or better with dust and water splash proof.
	Data Storage	: Internal storage capacity 60 GB or more and compatible to external storage facility through USB port
	Display	: WVGA colour touch screen display to easy operate and handling of scanner
	Power	: 11-32 VDC
	Digital Camera	: Built-in Digital camera (not less than 5MP)
	Compass	: Integrated digital compass
	GPS	: Integrated L1 GPS receiver with antenna. Provision should be available for connecting external GNSS receiver for high accuracy positioning.
	Tripod	: Heavy duty tripod and light weighted

- Plummet : Laser Plummet
- Inclination Sensors : It should be built-in the instrument for easy operation even under tilting
- Operating temperature : Sub Zero degree to 40 degree Celsius
- Rugged Carrying case : Scanner, Tripod and all other Accessories

All Associated cables and accessories including manuals for Hardware and software for smooth functioning

B. Software Data Acquisition & data processing software

Data acquisition & processing : Data registering and merging
 Scanner operation and control for data capturing
 Data downloading
 Point cloud visualization
 True colour or colour coded
 Data output in user selectable file format
 Creation of DTM and contours from point cloud
 Cross-section generation at user-defined alignment, datum & interval
 Volume computation
 User-friendly rapid commands for removal of data noise
 License in hardware lock form

Scanner Control : The software should be capable of controlling the scanner from a laptop/Toughbook/desktop

Global Registration : The software should allow the user to embed the scan data in to global coordinate system easily

Importing existing survey data : The software should be capable of importing the existing survey data and align the same with the current data.

Online Visualization	: The software should be capable of presenting the data online during the scanning process.
Photo wrapping facility	: The software should be capable of overlapping digital image on to the scan data for photo realistic 3D views.
Measurement extractions	: The software should be able to extract measurements (point to point, elevation etc.) from the raw scan data
DEM, Contours and Sections	: The software should be able to generate contours, DEM's and sections from the scan data
Operating System	: The software should run on the latest Windows operating system
Graphics Requirement	: Open GL accelerated graphics

The scanner system should be capable of geo-referencing through reflectors/back sight orientation or by any other means, to determine the location of the scanner as well as acquired data in local/global coordinate system. The scanner should be able to orient using reflective reference targets.

C. **Training:**

Vendor will have to provide 5 working days training on the complete system at NCAOR Goa and 5 working days training at Glacier site

D. **Warranty**

Standard Warranty warranty	Vendor will have to provide 1 year standard for all the components of the system
Extended Warranty	Vendor is also required to quote for 2 years extended warranty after expiry of standard warranty period

**TECHNICAL COMPLIANCE STATEMENT FOR SUPPLY OF TERRESTRIAL LASER
SCANNER**

Sr. No.	TECHNICAL COMPLIANCE STATEMENT FOR SUPPLY OF TERRESTRIAL LASER SCANNER	Complied/ Not Complied	Extra Features
1	Hardware Scanning Range : 90% Reflectivity-5000m or more and 3000m or more with 20% reflectivity with online waveform analysis.		
2	Accuracy : 20mm or better (1 sigma)		
3	Measurement rate : 20000 to 200000 measurements/sec or higher with different laser pulse repletion rate; Beam Divergence should be less than 0.15mrad; Laser Wavelength should be suitable for snow bound area.		
4	Field of View : Horizontal 360 degree & Vertical 60 degree		
5	Portability/Weight : Portable and light weight (less than 15 Kgs); Instrument should be IP64 or better with dust and water splash proof.		
6	Data Storage : Internal storage capacity 60 GB or more and compatible to external storage facility through USB port		
7	Display : WVGA colour touch screen display to easy operate and handling of scanner		
8	Power : 11-32 VDC		
9	Digital Camera : Built-in Digital camera (not less than 5MP)		
10	Compass : Integrated digital compass		
11	GPS : Integrated L1 GPS receiver with antenna. Provision should be available for connecting external GNSS receiver for high accuracy positioning		
12	Tripod : Heavy duty tripod and light weighted		
13	Plummet : Laser Plummet		
	Inclination Sensors : It should be built-in in the instrument for easy operation even under tilting		
14	Operating temperature : Sub Zero degree to 40 degree Celsius		
15	Rugged Carrying case : Scanner, Tripod and all other accessories		
16	All Associated cables and accessories including manuals for Hardware and software for smooth functioning		

17	B. Software	Data Acquisition & data processing software		
18	Data acquisition & processing	: Data registering and merging		
19	Scanner operation and control	for data capturing		
20	Data down loading			
21	Point cloud visualization			
22	True colour or colour coded			
23	Data output in user selectable file format			
24	Creation of DTM and contours	from point cloud		
25	Cross-section generation	at user-defined alignment, datum & interval		
26	Volume computation			
27	User-friendly rapid commands	for removal of data noise		
28	License in hardware lock form			
29	Scanner control	: The software should be capable of 'controlling the scanner from a laptop/Toughbook/desktop.		
30	Global Registration	: The software should allow the user to embed the scan data in to global coordinate system easily		
31	Importing existing survey data	: The software should be capable of importing the existing survey data and align the same with the current data.		
32	Online Visualization	: The software should be capable of presenting the data online during the scanning process		
33	Photo wrapping facility	: The software should be capable of overlapping digital image on to the scan data for photo realistic 3D views		
34	Measurement extractions	: The software should be able to extract measurements (point to point, elevation etc.) from the raw scan data		
35	DEM, Contours and Sections	: The software should be able to generate contours, DEM's and sections from the scan data		
36	Operating System	: The software should run on the latest Windows operating system		
37	Graphics Requirement	: Open GL accelerated graphics		
38	The scanner system should be capable of geo-referencing through reflectors/back sight orientation or by any other means, to determine the location of the scanner as well as acquired data in local/global coordinate system. The scanner should be able to orient using reflective reference targets.			

<p>39</p>	<p>C. Training: Vendor will have to provide 5 working days training on the complete system at NCAOR Goa and 5 working days training at Glacier site</p>		
<p>40</p>	<p>D. Warranty Standard Warranty Vendor will have to provide 1 year warranty for all the components of the system Extended Warranty Vendor is also required to quote for 2 years extended warranty after expiry of standard warranty period</p>		

TERMS AND CONDITIONS FOR SUBMISSION OF QUOTATION

1) The National Centre for Antarctic and Ocean Research (NCAOR) invites sealed quotations in two-parts from the reputed firms for the "**Supply of Terrestrial Laser Scanner**" as per the specifications given in Annexure-I.

2) The technical and financial bids should be submitted in two separate sealed covers, super scribing "Part -I Technical Bid for "**Supply of Terrestrial Laser Scanner**", Tender No., due date and "Part-II Financial bid for "**Supply of Terrestrial Laser Scanner**", Tender No., due date. Both the bids should be kept in a single cover by super scribing tender for "**Supply of Terrestrial Laser Scanner**", sealed and addressed to the **Director, National Centre for Antarctic & Ocean Research, Headland-Sada, Vasco-da-Gama, Goa - 403 804**. Offer sent through fax will not be accepted.

3) Overwriting and corrections should be attested properly. The bid should be complete in all respects and should be duly signed. **Incomplete and unsigned bids will not be considered at all.**

4) All relevant technical literature pertain to items quoted **with full specifications** (Drawing, if any), information about the products quoted, including brochures if any should accompany the quotation.

5) A list of **reputed clients** to whom the firm has supplied similar items to be furnished along-with the quotation.

In the TECHNICAL BID, the Bidder should furnish the Name and address of the Purchasers placed orders on similar equipment with order No, date, Description and quantity, Date of Supply alongwith Contact person Telephone No, Fax No, and e mail address of Purchaser.

The Bidder should enclose copies of Purchase Orders only in the FINANCIAL BID.

6) Quotation should be **valid for a period of 120 days** from the date of tender opening and the period of delivery required should also be clearly indicated. If the supplier fails to deliver the goods within the time to be agreed upon, for delayed deliveries and for delays in installation (wherever applicable). NCAOR reserves the right to **levy liquidated damages** at the rate of 0.5% per week or part their of up to maximum of 5%.

7) **Technical bid should contain EMD.**

A) Foreign Bidders shall submit **EMD** along with their tender **in the form of a bank guarantee** for a sum of US \$ 1700.00 (US \$ One Thousand Seven Hundred only) from any reputed bank (scheduled bank in India or foreign bank having operational Branch in India) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only.

B) Indian Bidders shall submit **EMD** along with their tender, **either By DD** drawn in favor of NCAOR, on any nationalized bank for a sum of Rs. 1,00,000/- (Rupees One Lakh only) payable at Vasco-da-Gama only **or in the form of a bank guarantee** for a sum of Rs. 1,00,000/- (Rupees One Lakh only) from any reputed bank (scheduled bank) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only.

Tender without EMD in the envelope containing technical bid shall be summarily rejected. The EMD of unsuccessful bidders shall be returned within 30 days of the award of contract.

The earnest money will be liable to be forfeited, if the tenderer withdraws or amends impairs or derogates from the tender if any respect within the period of validity of his tender.

8) Please **specify the Make/Brand** and Name of the Manufacturer with address, country of origin and currency in which rates are quoted.

9) The Purchaser requires that the bidders suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:

“Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution:

“fraudulent practice” means a misrepresentation or omission of facts in order to influence a procurement process or the execution of contract;

“collusive practice” means a scheme or arrangement between two or more bidders, with or without the knowledge of purchaser, designed to establish bid prices at artificial, noncompetitive levels; and

“coercive practice: means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of contract;

The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the contract in question; The Decision of Director, NCAOR shall be final and binding.

10) Bidders that doesn't manufacture the goods it offers to supply shall submit Manufacturer's Authorization form on the letterhead of the Manufacturer duly signed and stamped by a person with the proper authority to sign documents that are binding on the Manufacturer as per the following format should be submitted failing which the quotation will not be considered.

To
The Director
NCAOR
GOA

Sub: Manufacturers' Authorization form against Tender No:_____

We_____ (Name of the Manufacturer) who are official manufacturers of _____ (Type of goods manufactured) having factories at _____ (full address of Manufacturer's factories) do hereby authorize _____ (Name of the Bidder) to submit a bid against your Tender No._____ for the _____ Goods manufactured by us and to subsequently negotiate and sign the contract.

We hereby extend our full guarantee and warranty with respect to the Goods offered by the above firm

Manufacturer's Name:
Signature of Authorized
representative of the Manufacturer:

Duly authorized to sign this Authorization on behalf of : _____ (Name of the Bidder)

Date:

In case the bidder not doing business within India, shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out

the supply, maintenance, repair obligations etc., during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc., during the warranty and post- warranty period.

11) **The order acknowledgement** should be from the principals and if the Indian Agent is empowered to quote and to furnish order acknowledgement, a copy of agreement entered by you with the Indian Agent to be furnished.

12) **Compliance Statement:** Equipments point-by-point comparison/compliance statement with **technical specification** indicated in the tender, should be enclosed along with your tender as well as any other extra features of the equipment be shown separately therein and also **compliance statement for all commercial terms** of the tender document.

13) NCAOR is not entitled to issue form "**C/D**". No Sales Tax or any other Tax shall be payable by us unless payment of the same is specifically mentioned by the suppliers in their bids and same is legally leviable.

14) To avail duty concessions i.e. **Excise Duty** as per Govt. notification 10/97 & **Custom Duty** as per Govt. notification 51/96, NCAOR will provide exemption certificates. Hence, the rates should be split into basic cost and Excise Duty if any.

15) **Technical Bid should contain** all details and specifications of the equipment offered, delivery schedule, warranty, payment term, installation, training, post-warranty, user-list, service support **WITHOUT PRICE** and **Financial bid should contain** details of the price(s) of the item(s) quoted in the technical bid. The Technical bid should not contain any references to the pricing.

In case the technical bid contains any direct or indirect reference to quoted price the bid is liable to be rejected.

The Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely convertible foreign currency in case of offers received for supply from foreign countries.

For Goods manufactured in India:

F.O.R GOA price should be indicated. However tender should contain item-wise prices including total ex-works price, Excise Duty, VAT/Taxes, Charges for Inland Transportation, Insurance and other local services required for the delivering the goods on F.O.R GOA.

16) In case of imported stores submit quote on **FOB** basis should be indicated.

17) A Committee constituted by the Director, NCAOR for the purpose reserves the right to open the bids. Only technical bids will be opened on the date and time mentioned in the tender document. The financial bids of those tenderers whose technical bids are found to be meeting our specifications only will be opened in their presence at date and time to be notified later.

18) A technical Committee constituted by the Director will assess the product supplied for their quality and their conformity to the specifications provided by the firm in their quotations. Any item(s) identified by the Committee to be not as per the specifications or are found to be of inferior quality will be rejected, and the bills towards the supply will not be processed for payment till proper replacements are provided.

19) **No advance payment** will be made. Payment for indigenous stores shall be made within 30 days from the date of receipt, acceptance and satisfactory installation of equipment and incase of imported stores by **irrevocable letter of credit**. The payment will be authorized after submission of a Bank Guarantee for 10% value of the order towards warranty guarantee. The **performance Bank Guarantee** should be furnished within 15 days from the date of placement of order from a reputed bank (scheduled bank in India **or** foreign bank operating in India) valid till 60 days after the warranty period.

20) Two sets of operational, service/troubleshooting manuals and diagrams to be supplied with **"Supply of Terrestrial Laser Scanner"**.

21) **The submission of tender** shall be deemed to be an admission on the part of the tenderer, had fully acquainted with the specifications, drawings etc. and no claim other than what stated in the tender shall be paid in the event of award of Purchase Order.

22) Expenditure involved towards any extra materials required for labour involved for successful installation of the equipment, if not quoted for, would have to be borne by the tenderer.

23) **Acceptance of this tender** form and submission of the quote within the stipulated time would be treated as:

a) The tenderer has understood all requirements as described in our Tender document.

b) Acceptance to provide/establish all the facilities mentioned in our tender without any price escalation, if the tenderer finds it necessary to add any hardware or software or any other materials during implementation.

c) Agreeing to execute order to the satisfaction of NCAOR or its authorized representatives within the stipulated time.

24) **Training charges** should be clearly indicated including the scope of training.

25) Tender should clearly define the **infrastructure facilities required**.

26) NCAOR will not be liable for any obligation until such time NCAOR has communicated to the successful bidder of its decision to release the Purchase Order.

27) **NCAOR will not be responsible for any postal delays.**

28) Bidders shall note that NCAOR will not entertain any correspondence or queries on the status of the offers received against this Tender Invitation.

29) Tenders from Manufacturers/Suppliers/Tenderers whose performance was not satisfactory in respect of quality of supplies and delivery schedules in any organizations, are liable for rejection. The tenders that do not comply with the above criteria and other terms & conditions are liable for rejection.

30) The Director, NCAOR does not bind to accept the lowest quotation and reserves the right to himself, to reject or partly accept any or all the quotations received without assigning any reason.

31) All disputes arising in connection with executing the purchase order will be subject to the Jurisdiction of the Courts in Goa only.

QUESTIONNAIRE
(To be filled and enclosed with Technical bid-Cover 1)

- a. Name of the Manufacturer / Tenderer.
- b. Full postal address with Telephone, Telefax, Email.
- c. Please specify whether Public Limited, Company, Private Organization or Partnership Firm.
- d. Nature of the Business.
- e. Date of Establishment.
- f. Present Turnover.
- g. Permanent Income Tax Ref. No.
- h. C.S.T. / S.T. NO.
- i. Address & Telephone Nos. Of your branch office in GOA (please specify whether Distributing/Servicing/Marketing the products).
- j. Technical Compliance statement.
- k. Reference of reputed Customers.
- l. Details of the highest order executed and value thereof.
- m. Authorization from Manufacturer/Supplier attached.
- n. Tender fee submitted/enclosed.
- o. E.M.D. details provided in the TECHNICAL BID.
- p. SSI, NSIC Registration Certificate.
- q. Technical Specifications/Literature/Brochure attached.
- r. Tender Acceptance.

TENDER ACCEPTANCE UNDERTAKING

To

The Director,
NCAOR, Headland Sada,
Vasco – Goa.

Having examined the tender document for **“SUPPLY OF TERRESTRIAL LASER SCANNER”** we the undersigned hereby offer to supply the equipment in conformity with all specifications and conditions set out in the tender document. We hereby unconditionally accept all the tender conditions.

We enclosed all the relevant documents as per the tender.

We understand that you are not bound to accept the lowest or any tender received.

Date :

(Signature of Bidder)

Name :

Designation :

Seal

BANK GUARANTEE FORMAT FOR FURNISHING EMD

To

NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
Headland Sada, Vasco-da-Gama, GOA 403 804, INDIA

Whereas _____
 (Hereinafter called the "tenderer"
 has submitted their offer dated _____
 for the supply of _____
 (Herein after called the "tender"

WE _____ of having our registered office
 At _____ are bound unto the NATIONAL
 (Hereinafter called the Bank)

CENTRE FOR ANTARCTIC & OCEAN RESEARCH, Ministry of Earth Sciences, Govt. Of India having its office at Headland Sada, Vasco Goa 403 804, India (herein after called NCAOR which expression shall unless repugnant to the context or meaning thereof include all its successors, administrators, executors and assigns) in the sum of _____ for which payment will and truly to be made to. NCAOR, the Bank binds itself, its successors and assigns by these presents. Sealed with the common seal of the said Bank this _____ day of _____ 2016.

THE CONDITIONS OF THIS OBLIGATION ARE:

- 1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- 2) If the tenderer having been notified of the acceptance of his tender by NCAOR during the period of its validity.
 - 2.a) If the tenderer fails to furnish the Performance security for the due performance of the contract.
 - 2.b) Fails or refuses to execute the contract

We undertake to pay NCAOR up to the above amount upon receipt of its first written demand, without NCAOR having to substantiate its demand, provided that in its demand the NCAOR will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee is valid until the _____ day of _____ 2016.

Signature of the bank

NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
(Ministry of Earth Sciences, Govt. Of India)
 Headland Sada, Vasco-da-Gama GOA 403 804, INDIA
 Tel: 91- (0) 832 2525571 Telefax: 91- (0) 832 2525573
 Email: warlu62@ncaor.gov.in Website: www.ncaor.gov.in

GLOBAL TENDER

Director, National Centre for Antarctic & Ocean Research (NCAOR) invites sealed tenders in two-parts (part I – Technical bid & part II Financial bid) super scribing Tender No. Item and due date from well established/ reputed manufacturers / authorized and bonafide vendors for supply of the following:-

Sl. No.	Tender No.	Item Description	Qty.	Cost of Tender Doc.		EMD	
				..	US\$..	US\$
1	NCAOR/LAB-2505 (CRYO)/PT-09	SUPPLY OF TERRESTRIAL LASER SCANNER	01	2000.00	50.00	1,00,000.00	1700.00
2	NCAOR/LAB-2535 (CRYO)/PT-10	SUPPLY OF AUTOMATIC WEATHER STATION	03	2000.00	50.00	1,00,000.00	1700.00

Last date for issue of tender documents : **30.05.2016**

Last date for submission of quotation : **31.05.2016**

The details of tender documents are also available in our website <http://www.ncaor.gov.in> and Central Public Procurement Portal <http://eprocure.gov.in>. Interested suppliers may download the details and submit the quotation on or before the due date along with tender fee.

The quotation without tender fee will not be considered.

Tender forms can be obtained from the Procurement section of NCAOR on all working days either by post or in person between 1000 – 1600 hours on payment of tender fees in the form of crossed Demand Draft payable at Vasco-da-gama only, from a Nationalized bank drawn in favor of **NCAOR** along with separate requisition indicating tender number and item. Tender forms can be obtained by speed post by remitting Rs. 50.00 by Indian bidders and US\$ 15.00 by Foreign bidders in addition to the cost of tender documents.

The Director, NCAOR is not responsible for any transitional/postal delays.

The quotations will be **opened on 01.06.2016** in the presence of tenderers or their authorized representatives.

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