सस्य विज्ञान संभाग
DIVISION OF AGRONOMY
भा. कृ. अ. प.-भारतीय कृषि अनुसंधान संस्थान, नई दिल्ली-12
ICAR-INDIAN AGRICULTURAL RESEARCH INSTITUTE, N. DELHI-12
#011-25841488
Website: http://www.iari.res.in

F.No.1-43/NASF-20:60/20-21/Agro/707/10 **Dated: 14/01/2021**

ऑनलाइन ई-**निविदा-सूचना** (Proprietary Basis)

Sub: On line Open Tender for the Image Processing Software on Proprietary basis :reg

निदेशक भा.कृ.अ.प.-भारतीय कृषि अनुसंधान संस्थान नई दिल्ली द्वारा निम्नलिखित वैज्ञानिक उपकरण/वस्तु की आपूर्ति एवं कार्य हेतु प्रतिष्ठित निर्माताओं/अधिकृत डीलरों/आपूर्तिकर्ताओं से दो बोली प्रणाली (तकनीकी एवं वित्त बो) के अन्तर्गत ऑनलाईन क्यूटेशन आमंत्रित की जाती है। क्यूटेशन/निविदा प्रस्तुत करने की अंतिम तिथि **08/02/2021** समय **1.00 PM** बजे दोपहर तक। क्यूटेशन/निविदा को दिनांक 09/02/2021 को समय **3.00 PM** बजे निर्धारित समिति के समक्ष खोली जाएगी। Head, Division of Agricultural Agronomy , IARI, New Delhi-110012 intends to purchase of **Image Processing Software** on behalf of Director ,IARI from M/s. Harris Gesopatial Solution, Inc., a subsidiary of Harris Corporation, USA is the developer and manufacturer of the ENVI and IDL family of software through their sole authorized distributor in India namely M/s ESRI India Technologies Ltd, H&, Sector 63, Noida, UP having proprietary rights on manufacturer, publisher, and owner of the ENVI/IDL Image processing software. However, if any manufacturers is/are engaged in business of manufacturing the same and considered themselves capable of supplying/providing the required Image Processing Software to this Institute as per desired technical specifications and delivery terms etc. at competitive rates, they may submit on line open tender in two-bid system (Technical bid & Financial bid). **Online Quotations** are invited from reputed Manufacture/Dealer/Supplier in two bid system (Technical bid & Financial bid) for purchase of following Items on behalf of Director ICAR-Indian Agricultural Research Institute, New Delhi. The last date for submission of Bid 08/2/2021 at **1.00 PM**. The bid will be opened on dated 09/02/2021 at **3.00 PM** by the prescribed committee.

विस्तृत नियम व शर्तों को भा.कृ.अ.सं. की वेबसाईट **www.iari.res.in** पर देखें एवं ऑनलाईन के लिए **www.eprocure.gov.in**देखा जा सकता है। **Please visit www.iari.res.in for Details Rules and Regulation and Log on www.eprocure.gov.in for online.**

क्रम संख्या. No.	वैज्ञानिक उपकरण/ वस्तु का नाम Name of Scientific Equipment/ Item	मात्रा Quantity	बयाना राशि Earnest Money
1.	**ENVI/IDL Image Processing Software**	One	Rs.10,000/-

बोली लगाने के निर्देश और नियम एवं निविदा की शर्तें **Instructions to the bidder and terms & conditions of tender:**

1- आपके द्वारा दी गयी मूल्य दर क्यूटेशन प्राप्ति हेतु निर्धारित अन्तिम दिन से कम से कम **180** दिनों तक मान्य होगी। यदि आपूर्तिकर्ता द्वारा **180** दिनों की न्यूनतम अवधि की वैधता के संबंध में कोई अन्तर हो तो उसका विशेष रूप से उल्लेख होना चाहिए।The rates quoted shall be valid for a minimum

period of 180 days from the last date fixed for submission of bid.

2- क्यूटेशन में दर्शायी गई दरों में भा.कृ.अ.सं. नई दिल्ली के संभाग सस्य विज्ञानं संभाग] Hkk-d-vu-l-LFkku] uÃ fnYyh&110012 में सामान/सामग्री की निःशुल्क आपूर्ति अथवा स्थापन शामिल होगा। हांलाकि विदेशी मुद्रा में दर्शाए गए उपकरण को एफ.ओ.बी./सी.आई.पी. आधार पर दर्शाया जाए।

The rates quoted shall be free of cost delivery and installation at the Division of Agronomy, IARI, New Delhi–110012**. However, equipment rates quoted in foreign currency must be quoted on FOB basis**

3- यदि सामान विदेश-निर्मित है और दर विदेशी मुद्रा में दिया गया है तो ऐसी परिस्थिति में कस्टम डयूटी छूट प्रमाणपत्र (सी.डी.ई.सी.) जारी किया जाएगा जो कि केवल भा.क.ृअ.सं. के लिए ही मान्य होगा ।Custom Duty Exemption Certificate (CDEC) will be issued only when the bid is quoted in foreign currency in case of foreign made items only and meant for IARI.

4- क्यूटेशन में संबंधित सामान का पूरा विवरण दिया जाएगा । Full specifications of the item/article quoted for shall be given in the quotation.

5- उपरोक्त दिए गए दर में यदि किसी भी प्रकार का अतिरिक्त कर/टैक्स/डयूटी लगाया जाना है तो उसका संकेत स्पष्ट रूप से दिया जाना चाहिए If taxes duties or any other charges over and above the rates quoted leviable, actual percentage of such taxes/duties/other charges should be clearly indicated.

6. बोली के साथ बतौर बयाना राशि रु0 **10,000.(Rupees Ten Thousand Only)** लगाई जाए। डिमांड मॉग ड्राफ्ट/ भुगतान आदेश/मियादी जमा रसीद/ बैंक गारंटी को निदेशकए भा. कृ. अनु. संस्थान नई दिल्ली-110012 के नाम किसी भी राष्ट्रीयकृत बैंक में देय होए अवश्य संलग्न होना चाहिए। जिसके बिनाए क्यूटेशन पर विचार नहीं किया जायेगा। बयाना राशि की मूल प्रति सीधे तौर पर संबंधित निविदा आमंत्रित अधिकारी को आखिरी तारीख तक या आॅफलाईन दर जमा करने से पहले पहुंच जानी चाहिए। डिमांड मॉग ड्राफ्ट/ भुगतान आदेश/मियादी जमा रसीद/बैंक गारंटी से संबंधित सभी जानकारी व्यक्तिगत रूप से भेजी जानी चाहिएए इस संबध में प्राप्त स्कैन काॅपी/या जो डाटा आपूर्तिकता द्वारा दर जमा करने के दौरान दिया गया है उससे मिलान किया जाएगा अन्यथा इस क्यूटेशन को रद्द माना जाएगा।**EMD must be attached for रु0 10,000.(Rupees Ten Thousand Only)**in the form of D.D./Pay Order/Fixed Deposit Receipt/Bank Guarantee from commercial bank drawn in favour of Director, IARI payable at New Delhi. The original EMD should be submitted to the Tender Inviting Authority on or before the last date and time of offline bid submission. The details of D.D./Pay Order/Fixed Deposit Receipt/Bank Guarantee physically sent, should to all with the details available in the scan copy and the data enter during the bid submission time otherwise the uploaded bid will be rejected.

7. इस संस्थान द्वारा निविदाकर्ता को किसी भी सुरक्षा जमा राशि और बयाना राशि पर ब्याज नहीं दिया जाएगा। No interest on security deposit and earnest money deposit shall be paid by the Institute to tenderer.

8. क्यूटेशन प्रक्रिया पूरी होने के पश्चात असफल बोलीदाताओं को उनकी जमा की गयी बयाने की राशि वापस कर दीए जायेगी जबकि सफलतम बोलीदाता के मामले में यह राशि नियम के अनुसार सुरक्षा जमा के रूप में समायोजित की जा सकती हैए जो कि आॅडर के राशि की **5-10** प्रतिशत होगी और यह डिमांड मॉग ड्राफ / भुगतान आदेश/मियादी जमा रसीद/ बैंक गारंटी निदेशक भा. कृ. अनु. संस्थान नई दिल्ली- **110012** के नाम किसी भी राष्ट्रीयकृत बैंक में देय होए जिसकी वैधता सभी कार्य को पूरा करने के **60**दिनोंसाथ के साथ उपकरण/सामान जिसकी कीमत (रू **1.00** लाख या इससे अधिव) की गारंटी भी शामिल होगी । हालांकि जो उपकरण रू **1.00** □□ □□□ □□□ परिस्थिति में किसी □ प्रकार □ निष्पादन □□ राशि नहीं दी □□□□

The EMD shall be refunded to the unsuccessful bidders after finalization of the quotation. In case of successful bidder, it can be adjusted towards security deposit which is 5 to 10% of the order value in the form of D.D./Pay Order/Fixed Deposit Receipt/Bank Guarantee from commercial bank drawn in favour of Director, IARI payable at New elhi and shall remain valid for 60 days beyond the date of completion of all contractual obligation of supplier including warranty obligation for the equipment/goods costing Rs.1.00 lakhs (Rs. One Lakh) or more. Here would however, be no performance security deposit for equipment/goods costing less thanRs.1.00 lakh (Rs. One Lakh).

9. फर्म द्वारा एक वर्ष की वारंटी प्रदान की जाएगी। यदि सामान/उपकरण के विवरण में वारंटी की अवधि में किसी भी प्रकार परिवर्तन है तो उस वारंटी को अंतिम माना जाएगा One year warranty has to be invariable provided by the firm. In case, there is any variation in the warranty period given in the specification of the item/equipment, the warranty period shall be the final as given in the specification.

10. कार्य के पूरा होने के बाद फर्म/पूर्तिकता को तीन पूर्व रसीद बिल प्राप्त होने के बाद भुगतान e-payment □□ माध्यम से किया जाएगा।Payment will be made by mode of e-payment to the supplier/firm after satisfactory completion of work and receipt of pre-receipt bills triplicate.

11. निदेशक□ □□. □□ □□□संस्थान, नई दिल्ली के पास बिना कारण बताये सभी क्यूटेशनओं को पूर्ण या आंशिक रूप से स्वीकार या अस्वीकार करने के अधिकार प्राप्त हैं। The Director IARI, New Delhi reserves the right to accept or reject any or all the quotations either in full or in parts without assigning any reason.

12. उपरोक्त शर्तों का पालन न करने वाली क्यूटेशनों को अस्वीकार करने के लिये उत्तरदायी होंगी। Quotations not complying with the above conditions are liable to be rejected.

13.TIN/VAT/PAN/C.S.T. Nos. के स्कैन काॅपी को क्यूटेशन के साथ में संलग्न किया जाए। Scanned copy of TIN/VAT/PAN/C.S.T. Nos may be attached with the bid.

14.किसी कारण अनुबंध में कोई विवाद उत्पन्न होने पर भारतीय कानून और न्यायालय, नई दिल्ली की अधिकारिता के अधीन होगा । सचिव, भारतीय कृषि अनुसंधान परिषद द्वारा एकमात्र मध्यस्थ नियुक्त किया गया है, जि□□□ निर्णय दोनों पार्टियों (Supplier □□ Purchaser) पर अंतिम माना जाएगा। In case, any dispute arising out of this contract shall be subject to the jurisdiction of Indian laws & Court at New Delhi. Sole arbitrator is appointed by the Secretary, ICAR, New Delhi. His decision will be final and binding on both parties (Supplier and Purchaser)

15. सफल बोलीदाता को सौंपे गए कार्य को निर्धारित आपूर्ति आदेश के भीतर कार्य करना होगा जैसा आपूर्ति आदेश में दर्शाया गया होगा यदि ऐसा नहीं किया जाता तो कम से कम 2% तथा अधिकतम 10% की क्षतिनिष्ठ क□□□ □□ रूप में □□□□बिल □□काटी □□□□□ The successful bidder has to execute the indented Job/Work as mentioned in the supply order placed with the within the stipulated period as given in the supply order placed by this office failing which 2% per week and maximum of 10% deduction as liquidated damage charges will be made from the bill in case the job is not completed with in the given stipulated period.

16. फर्म को इस कार्य/क्षेत्र में 3 वर्ष के अनुभव का प्रमाण पत्र संलग्न करना चाहिए ।Firms should 3 years experience in this line, proof should been closed.

क्रम संख्या. No.	वैज्ञानिक उपकरण/ वस्तु का नाम Name of Scientific Equipment/ Item	मात्रा Quantity	बयाना राशि Earnest Money
1.	ENVI/IDL Image Processing Software of Latest Version (As per annexure –I)	One	Rs.10,000/-
1	ENVI/IDL Image Processing Software of Latest Version	Whether Complied With YES/ NO	If yes, please attach Tech literature of the equipment duly printed & clearly
2	Company profile with following documents		
3	GST/Registration/	Yes/No	Document may be
4	Authorization of principal	Yes/No	Document may be submitted
5	Are your registered with TAN, PAN and VAT/CST/LST Deptt., if yes please mentioned all the details and attached copy of the Same.	Yes/No	PAN No. TAN No. VAT No.
6	Heave you deposited EMD /- Original EMD is to be submitted to the Admn. Officer, Genetics before closing date of tender (refer condition No. 8	Yes/No	Amount…….. DDNo/FDR/BG No…. Name of Bank…..
7	Have you enclosed latest authorization certificate resting with sufficient validity period from manufacturer/Principal supplier	Yes/No	Enclose copy
8	Have you ever been debarred/ Black listed by the Govt. deptt.,/Court of law for doing any business in India attach self-declaration certificate in this regard	Yes/No	Enclose copy
9	The tender documents duly signed by the concerned firm accepting the same should be attached with technical bid.	Yes/No	Enclose copy

We certify that Equipment being offered by us under this tender meets all the above requirements. Concealing of any fact regarding specification of equipment being offer will liable to reject our tender. We accept the terms and conditions of the tender indicated there in.

sd/-

(सहायक प्रशासनिक अधिकारी)
Asstt.Admn.Officer

Annexure-I

Technical Specification of the ENVI/IDL

Sl. No.	Functionality Matrix
1	**Software should support the below mentioned rasters and vectors:** Cartosat-1, IRS (fast & super structure), ResourceSat-1 (Fast & Super Structured), ResourceSat-2 (HDF5), Deimos-1 & 2, Gaofen-1&2, UK-DMC 1/ 2, DMC ALSAT-1, ENVISAT AATSR/ MERIS, EO-1 ALI (HDF4), DubaiSat-1 (RAW) & 2, Landsat 4, through Landsat 5, TM, 7 ETM+, 8 (OLI & TIRS), Landsat NLAPS, Landsat MRLC, RASAT, NPP VIIRS, Proba-V, TIMS, Sentinel-2, SkySat-1 & 2, Google Skybox, Ziyuan-1-02C & 3A, SeaWiFS, QuickBird, Worldview 1 – 2 & 3, VNREDSat-1, , Beijing-1, NigeriaSat-1 & 2, GeoEye, IKONOS, ADS40, ADS80 (tiff), AlSat-2A (TIFF), ALOS Level-1B2 AVNIR-2, ALOS Level-1A and 1B1 AVNIR-2, ALOS Level-1A and 1B1 PRISM, ALOS Level-1B2 PRISM, ASTER Level-1A and 1B (HDF-EOS), ASTER Level-2 & Level-3 (HDF-EOS), AVIRIS, COSMO-SkyMed Level-1A SCS, 1B DGM, 1C GEC, 1D GTC (HDF5), FormoSat-2 & 5, Göktürk-1 and Göktürk-2 (GeoTIFF), KOMPSAT-2,3,3A, MODIS level-1B, Orbview-3, PeruSat-1, Planetscope, Pleiades, PRISMA, Rapid Eye- Basic (Level 1-B) & Ortho (Level 3A and 3B), Sentinel-3, SPOT, Triplesat, Zhuhai-1
2	**Software should support the following image Classification methods:** Adaptive Coherence Estimator (ACE), Constrained Energy Minimization (CEM), Decision Trees, Independent Components Analysis (ICA), Orthogonal Subspace Projection (OSP), Mixture Tuned Target-Constrained Interference - Minimized Filter (MTTCIMF), Supervised Classifications: Binary Encoding, Maximum Likelihood, Spectral Information Divergence (SID), Support Vector Machine (SVM), TERCAT (Terrain Categorization), Target-Constrained Interference-Minimized Filter (TCIMF), Post Classification Analysis: Kappa Coefficient, Confusion Matrix, Class Statistics, Receiver Operating Characteristic (ROC) Curves: Find Optimal Classification Thresholds, Receiver Operating Characteristic (ROC) Curves: Decrease False Classifications
3	**Software Should Perform Hyperspectral Analysis:** Sensor Support: AISA, ARTEMIS (with license), AVIRIS, CASI, HyMap, Hyperion, HyperScan, HySpex, MIVIS, PROBE-1, Analysis: Tactical Hyperspectral Operations Resource (THOR) workflows (Anomaly Detection, Atmospheric Correction, LOCs - Water and Trails, Stressed Vegetation, Target Detection, Stressed Vegetation, Material Identification)Minimum Noise Fraction (MNF), Pixel Purity Index (PPI), Automated Corner Clustering in N-D Scatter Plot, N-Dimensional Visualizer, Spectral Library: ASTER, JPL, USGS, IGCP, Import new versions of the above libraries. Classifications: Spectral Angel Mapper (SAM), Spectral Feature Fitting (SFF), ACE, CEM, SVM, Matched Filtering, Mixture Tuned Matched Filtering. Continuuam removal.
4	**Software should perform Mathematics & Statistics functionalities like..** Autocorrelation, Band Math and Spectral Math: Boolean Operators, Trigonometric Functions, Data Type Conversion Functions, Relational Operators. Correlograms, Image statistics: Band Minimum, Maximum, Mean, Standard, Covariance Matrix, Correlation Matrix, Eigenvectors, Semivariograms
5	**Software should perform the image transformation:** Adaptive Coherence Estimator (ACE), Decorrelation Stretch, Forward and Inverse Independent Components Analysis (ICA), Forward and Inverse Minimum Noise Fraction (MNF), PCA, Inbuilt Band Ratio: Burn Area Index, Clay Minerals Ratio, Ferrous Minerals Ratio, Iron Oxide Ratio, Normalized Burn Ratio, Normalized Burn Ratio Thermal 1, Normalized Difference Built-Up Index, Normalized Difference Snow Index, WorldView Built-Up Index. WorldView New Iron Index, WorldView Non-Homogenous Feature Difference, WorldView Soil Index, Ligning index, Anthorcyanin index
6	**Software should able to do Pre-processing & Calibration** Apply Gain & Offset, Bad Band Identification, Bad Line Replacement, Bad Pixel Replacement, Cross-Track Illumination Correction, Dark Subtraction, Destripe Data, Empirical Line Calibration, ERS and Radarsat Data Calibration, Emissivity calculation, Flat Field Calibration, Ignore Pixel Value, Internal Average Relative Reflectance correction, Calibration, Log Residuals, MODIS Bowtie Correction, Thermal Atmospheric Correction

7	**Software should perform the LIDAR Data Processing :** Visualize, Analyse, and manage your point clouds, Allow you to view point clouds in 2D,3D; Style points by return, elevation, intensity, Create high resolution topographic surface, Viewer for LiDAR data, Increase or decrease Z-scale
8	**Software should have the Vector GIS Functionalities:** Drag/Drop ArcGIS Layers, ArcGIS Layer Attribute Viewing, Attributes: Create, Edit, Query Vector Attributes, Import from ArcView Shapefiles, ASCII, Burn-in Vectors on Raster Image, Import from ArcGIS GeoDatabase, Save Vectors to ArcGIS GeoDatabase, Vector to Raster Conversion
9	**Software should be visualisation options:** Support for files over 2 GB in size, Geographic linking & Sync Views, Dynamic North Arrow & Scale Bar, Geo-Point tool, image histogram modification tools, Filtering for thematic images (Neighborhood Analysis), Visual change detection between any data types, Swipe / Blend / Flicker/ Portal, Inquire cursor and inquire box, including MGRS support, Interpolation techniques: linear or non-linear rubber sheeting, Create an unlimited number of JPEG2000 compressed images from input images with either export or direct-write.
10	**Software should have the Spectral Indices** Difference Vegetation Index , Global Environmental Monitoring Index , Green Atmospherically Resistant Index, Green Difference Vegetation Index, Green Normalized Difference Vegetation Index, Green Ratio Vegetation Index, Green Vegetation Index, Infrared Percentage Vegetation Index, Leaf Area Index, Modified Chlorophyll Absorption Ratio Index, Modified Chlorophyll Absorption Ratio Index – Improved, Modified Non-Linear Index, Modified Simple Ratio, Modified Triangular Vegetation Index, Modified Triangular Vegetation Index – Improved, Non-Linear Index, Normalized Difference Water Index, Normalized Multi-band Drought Index, Optimized Soil Adjusted Vegetation Index, Red Green Ratio Index, Renormalized Difference Vegetation Index, Soil Adjusted Vegetation Index, Simple Ratio, Transformed Chlorophyll Absorption Reflectance Index, Transformed Difference Vegetation Index, Triangular Vegetation Index, Visible Atmospherically Resistant Index, WorldView Improved Vegetative Index (WV-VI), Burn Area Index, Clay Minerals Ratio, Ferrous Minerals Ratio, Iron Oxide Ratio, Normalized Burn Ratio, Normalized Burn Ratio Thermal 1, Normalized Difference Built-Up Index, Normalized Difference Snow Index, WorldView Built-Up Index, WorldView New Iron Index, WorldView Non-Homogenous Feature Difference, WorldView Soil Index
11	Software should be able to inbuilding USGS and Aster standard spectral library, minimum 5000+ spectral libraries available in Agri, mineral, material etc.
12	Should perform batch processing and effortlessly create custom image processing workflows without writing a single line of code.
13	Should integrate with GIS software which can help GIS users can work in either environment to take advantage of the advanced remote sensing.
14	Software should support to transfer the image and layout to PowerPoint with single image chip click
15	Should have sensor support for multispectral and Hyperspectral data for atmospheric correction with FLAASH and QUAC Module
16	Should have interactive display for changing various parameters related to atmospheric effects
17	Should be able to change DISORT model based on the data
18	Should be able to extract feature using automatically using magic wand tools
19	IDL software is the trusted scientific programming language used across disciplines to create meaningful visualizations out of complex numerical data. From small-scale analysis programs to widely deployed applications, IDL provides the comprehensive computing environment you need to effectively get information from your data.
20	Using a powerful, modern programming language lets you transform numbers into dynamic visual representations so you can interpret your data, expedite discoveries, and deliver powerful applications.