

**Minutes of the Pre-Proposal Conference for
"Hiring of Consulting Services for: - Technology based yield estimation at village level in 12
districts of 6 Agro climatic zones of Assam for Paddy crop under APART on
28th October, 2022 at 11:00 AM in the PCU of ARIAS Society, Khanapara- 22,**

Ref. RFP No: ARIAS-13012/7/2022-APART-ARIAS/I/53345/2022 Dated Guwahati the 06th October, 2022

The following officials of ARIAS Society and representatives of the consultancy firms were present in the pre-proposal conference meeting:

Officials of the ARIAS Society:

1. Sri P.R. Dash, Procurement & Contract Management Specialist
2. Sri Baljeet Singh, Market Analyst cum Operation Specialist
3. Sri Prasenjit Chaliha, Procurement Management Executive
4. Smti. Suranjana B Borah, IRRRI
5. Sri. Pranav Mali, ABE, OPIU-Agriculture

Representative of the Firms:

1. Smti. Chandana Gurung, PwC
2. Sri Shubhram Goswami, PwC
3. Sri. Anil Kumar, PwC
4. Sri. Harshit Mullick, PwC
5. Sri. Akhilesh Jain, Agrotech
6. Smti. Swati Sehgal, Agrotech
7. Sri Mahesh Wanjare, Agrotech
8. Sri. Partha Datta, RCTPVT LTD
9. Sri. Mahendra Raju, RMSI
10. Sri. Mohan Chandra, RMSI
11. Sri. Deepak Kushwaha, Cropin
12. Sri. Aakash Chauhan, Cropin
13. Sri. Girija Nandan Upadhyay, Cropin
14. Smti. Nandini Das, GT
15. Sri. Ashwini Kumar Rabidas, SKYMET
16. Sri Amol Bhale, SKYMET

Attendance sheet of the meeting is enclosed at **Annex-1**. The attendance sheet also consists name of participants virtually online.

1. The Market Analyst cum Operation Specialist and Procurement & Contract Management Specialist welcomed all the participants present in the pre-proposal conference.
2. During the meeting, the ARIAS Society officials clarified the queries of the representatives of the firms who attended the meeting, subject to the approved minutes of pre-proposal conference to be formally issued. The queries received through email till the date of finalization of the pre-id minutes were also clarified. The queries raised and the clarifications provided (including the clarifications received through email) are enclosed at **Annex-2**.

Minutes Reviewed by



(Baljeet Singh),
Market Analyst cum Operation Specialist,
ARIAS Society

Minutes Signed,



(Priti Ranjan Dash)
Procurement and Contract Management Specialist,
ARIAS Society

Dated Guwahati the 06th October, 2022

Copy by email to:

Service Provider Agencies: (a) PwC: chandana.gurung@pwc.com; shubhram.goswami@pwc.com; harshit.mullick@pwc.com; anil.bk.kumar@pwc.com; (b) AGROTECH: akhilesh@agrotechindia.co.in; swati.sehgal@agrotechindia.co.in; mahesh.wanjare@agrotechindia.co.in; (c) RCTPVT LTD: dpartha2009@gmail.com; rctpvtltd@gmail.com; (d) RMSI: dmahendra.raju@rmsi.com; mohan.chandra@rmsi.com; (e) CROPIN: girija.upadhyay@cropin.com; deepak.kushwaha@cropin.com; chauhan.akash@cropin.com; (f) GT: nandini.das@in.gt.com; (g) SKYMET: rabidas.ashwini@gmail.com; amol.abhale@skymetweather.com; (h) EY: Amitava.bhattacharya@in.ey.com; (i) NCML: mahesh.hu@ncml.com; (j) Orva: roy@orvanetworks.com; (k) Cyfuture: [Niloy.chowdhury@cyfuture.com](mailto:niloy.chowdhury@cyfuture.com) (l) Farmonaut: samir@farmonaut.com; (m) Amnexus: nitish@amnexus.com

1. The responses to the queries will be uploaded in www.arias.in
2. Internal: All concerned officials of the ARIAS Society present in the meeting/ MIS Section for uploading in website.

Annex- 2

Queries and Responses on the RFP No ARIAS-13012/7/2022-APART-ARIAS/I/53345/2022 for Technology based yield estimation at village level in 12 districts of 6 Agro climatic zones of Assam for Paddy crop under APART"

#	REFERENCE	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY
1	Page 37/ 38 of RFP	As we understand from the RFP the APART Project is being implemented in 19 districts, but as per the scope of work mentioned in the RFP, the yield estimation needs to be completed in 12 districts	Can the agency use stratified smart sampling to select the district, keeping in view that all 6 agro-climatic zones will be covered?	The Agency can use any method sampling which ensures that all agro climatic zones are represented adequately and there is a fair representation of Districts having paddy as the main crop in selected 12 districts. Moreover, it may be noted that in agro climatic zones having only two districts, the Consultant has the option to pick up any of the two districts, keeping the total count of the districts at 12.
2	Page 38 of RFP	Field data collection	<ul style="list-style-type: none"> • We understand that APART wants field data collection to be done on a sample basis. What will be the count of Ground truth data collection? This would help us in preparing a realistic budget as this would require both manpower and smartphones • We understand that this whole field data collection including prevailing weather conditions will be app based. Can the agency procure smartphones for data collection? 	<ul style="list-style-type: none"> • Minimum Ground Truth (GT) points need to be 300 for each district • The agency can use any permitted tools for field data collection. However, final accuracy of yield estimation should be ensured at 85-90%.
3	Page 38/39 of RFP	Paddy Crop Identification and acreage estimation at Village Level	<ul style="list-style-type: none"> • Will APART provide the Georeferenced, village boundary, GP boundary, block and district boundaries shape file to estimate the paddy yield? • Will the agency map the only paddy area or do we have to create other prominent crop maps of 12 districts? 	<ul style="list-style-type: none"> • The consultant shall procure the geo referenced and digitized village maps and may cost in the financial proposal. • Only paddy crop needs to be mapped under the scope of the assignment
4	Page 39 of RFP	Crop Health Monitoring at the village level	<ul style="list-style-type: none"> • As we understand, the Crop health monitoring system will be limited for 300 CCEs in the area or entire district. What would be the time interval of crop monitoring report i.e. Weekly or fortnightly or on a seasonal basis • Second, it is not clear from the RFP how APART wishes to share information with farmers about possible pest and disease infestation as well as recommendations. Will it be manual or automated? <p>If manual then,</p> <p>i. Do we need to cover every paddy-growing farmer in the 12 districts? This requires manpower to be hired for all 12 months and would require extensive travel in the project area.</p>	Crop health monitoring is deleted from the ToR of this RFP. Corrigendum is issued accordingly.

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			<p>If automated then,</p> <p>i. It will require a full database of all the paddy-growing farmers with their mobile numbers. Will APART provide that or the agency has to collect the same?</p> <p>ii. Nothing has been mentioned about the server and its cost, as receiving data, then processing, and sending recommendations back to individual farmers requires a high-end AI-ML model and involves costs.</p>	
5	Page 39 of RFP	Soil Moisture maps for the study area	Please define the resolution or scale of soil moisture mapping. Soil depth is also not mentioned for SMC content analysis.	Soil moisture maps must be at the same resolution as paddy area maps. Soil moisture for a depth of up to 10-15 cm is required.
6	Page 39 of RFP	UAV images	<ol style="list-style-type: none"> 1. What type of sensor is required for crop health monitoring? 2. Is it required to map the 100 Sq Kms through the multispectral sensor, red edge, thermal bands, and RGB bands? 3. What would be the priority parameters to select 100 sqkm in the district? 4. Whether the 100 sq km area is divided into multiple locations or the entire area is a single polygon? 5. What are the expected delivery formats for orthomosaic? <p>Moreover, as Assam falls under the inner line area and most of the districts are under-sensitive areas, therefore we expect that the Client will provide requisite Government and associated counterpart approval, including DGCA for the successful flying of UAV and address security concerns, at the field level, if any at the time of implementation. We would request the client's view on the same.</p>	<ol style="list-style-type: none"> 1. Crop health monitoring is not required to be done as a part of the assignment. 2. Yes. 3. Existing paddy area shall be the priority 4. The 100 sq Km may be in multiple locations across the district. 5. Should be provided in .tiff (geotiff) format <p>Need based support in terms of required Govt approvals shall be arranged by the Client. The UAV should be registered with GoI. The pilot should have the requisite license. The flying should be taken up in permitted zones as per DGCA guidelines with relevant approvals.</p>
7	Page 39 of RFP	Minimum 300 Crop Cutting Experiments (CCEs)	<ol style="list-style-type: none"> 1. What will be the size of CCE? 2. We agree that 300 CCEs are an appropriate number for a district, however, we suggest allowing these numbers to be defined based on a proportionate basis wrt paddy area cumulative for the project area. 	<ol style="list-style-type: none"> 1. 5m X 5m area shall be the size of CCE plot 2. 300 CCEs per district is the minimum number. However, the selected agency can carry out higher number of experiments for optimal level of verification of yield data

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8	Page 39 of RFP	Satellite data processing for crop maps and areas	<ol style="list-style-type: none"> 1. What will be the source of satellite data? 2. Will APART provide or the agency needs to procure it? 3. Please describe the required band information (3/4 bands) for multispectral data processing? 	<ol style="list-style-type: none"> 1. Required satellite data to be used needs to be procured by the selected agency. 2. The satellite data needs to be procured by the Agency itself. 3. A combination of multi spectral (RGB & NIR) and Radar data
9	Page 6, Section 2. Instructions to Consultants and Data Sheet 3. Conflict of Interest	The Consultant is required to provide professional, objective, and impartial advice, at all times holding the Client's interests paramount, strictly avoiding conflicts with other assignments or its own corporate interests, and acting without any consideration for future work.	We wish to highlight that we are a large organization providing various services to various state and central government departments, PSUs, international organizations and private clients. We wish you to note that while we have a mechanism in place to identify patent and direct conflict of interests, it may not always be possible to identify any or all indirect or remote conflict of interests. Kindly appreciate that our no conflict confirmations will be subject to the foregoing.	There shall be no change in the existing clause
10	Page 16, ITC 17.1	The Consultants shall NOT have the option of submitting their Proposals electronically.	Request to consider for electronic mode submission also for the final proposals	There shall be no change in the existing clause
11	Page 17, ITC 21.1 Part A-Mandatory Criteria, S.No. 2	Point 2: Agency/service provider should have executed projects/assignments related to yield estimation of paddy crop during the last 3 years, with any State Govt of Central Govt.	We understand that the given assignment is restricted to Paddy only, though request to kindly clarify can we submit the Consultant's and Sub-Consultant's past experiences with similar nature of work in other crops as well (other than Paddy). And this will also have similar weightage, for selection criteria, kindly confirm.	There shall be no change in the existing clause
12	Page 17, ITC 21.1 Part A-Mandatory Criteria, S. No. 2	Point 2: Agency/service provider should have executed projects/assignments related to yield estimation of paddy crop during the last 3 years, with any State Govt of Central Govt.	We understand that the given assignment is restricted to Paddy crop only during last 3 years with any State / Central govt, request to kindly replace or consider or include for other crops as well and the similar nature of work experience with central or state or international (govt or non govt.) / private institutions experience also under mandatory criteria or requirement	There shall be no change in the existing clause
13	Page 17, ITC 21.1 Part A-Mandatory Criteria, S. No. 3	Point 3: The agency/ service provider should have conducted minimum 2 assignments of similar nature (technology based) in the yield estimation of paddy crop	We understand that the concerned authority is giving weightage to the assignment credentials related only with the paddy crop yield estimation. We request the authority to kindly provide the weightage to yield estimation of other related crops as well.	There shall be no change in the existing clause
14	Page 38, point no. 7 Objective of the	The overall objective is yield estimation at village level in 12 districts of 6 Agro climatic zones of Assam for Paddy crop with use of advanced technology of Remote Sensing, GIS, Artificial	We understand that the villages of the 12 districts including the exact list of final 12 districts (to be covered under the project objective) are not specified in the terms of reference out of listed potential 20 districts in Assam, request you to	It is clarified that in selection of Districts, the agency shall ensure that all agro climatic zones are represented adequately and there is a fair

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#	REFERENC E	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY
	consulting service	Intelligence and Machine Learning.	please clarify or specify on this for 12 assigned districts including list of villages and blocks required for study	representation of Districts having paddy as the main crop. Availability of paddy area and minimum of 100 sq km per district coverage shall be the pre-requisite for the inclusion of the villages and blocks for technology based yield estimation. Moreover, it may be noted that in agro climatic zones having only two districts, the Consultant has the option to pick up any of the two districts, keeping the total count of the districts at 12.
15	Page 38, point no. 6 Background	Operational Project Implementation Unit (OPIU) - Agriculture now intends to hire the services of a qualified consulting firm initially for period of one year to conduct the said pilot, extendable to further periods depending upon Project requirement and duration.	We understand the total project duration for this assignment is 12 months, and extendable in nature. Request to kindly specify the number of months that will be further extended to conduct similar study for other districts (other than 12) in Assam. This will help in project work estimation for current and future activities as well	Extension will be decided during last phase of the contract based on requirement.
16	Page 39 Scope of the consultancy service (Point 12)	Crop health monitoring at village level	We understand that there is need to establish crop health monitoring system at village level, request to specify, or may provide tentative list of villages for the study, to arrive at exact project expenses	Crop health monitoring is deleted from the ToR of this RFP. Corrigendum is issued accordingly.
17	Page 39 Scope of the consultancy service (Point 14)	The consulting firm will ensure that at least one fixed wing Unmanned Aerial Vehicle (UAV) covers an area of every 100 sq km in the assigned district. The coverage will be at least twice in the crop season i.e. (i) to track crop growth and health analysis in mid-season (ii) near to harvest.	Requesting clarification on whether the 100 sq km area to be covered needs to be contiguous or can also be in patches of land adding up to 100 sq km.	The 100 sq km area may be covered in multiple locations across the District
18	Page 39 Scope of the consultancy service (Point 13)	Soil moisture maps for study area: The agency must generate and develop Soil moisture maps of the selected areas. The use of remote sensing and GIS techniques will introduce reliable alternatives to traditional methods which would provide information about the Soil Moisture Content (SMC). The study will help to predict the SMC using remote sensing data.	Requesting clarification on the resolution/ scale of the soil moisture maps to be generated.	Soil moisture maps must be at the same resolution as paddy area maps. Soil moisture for a minimum depth of up to 10-15 cm is required.
19	Page 40 D. SERVICES/F	The client shall facilitate necessary cooperation of its concerned officials at the Project HQ i.e. Operational Project Implementation Unit	Request to please elaborate what are various assistance we can have from these government bodies, and other relevant stakeholders for quality outcomes.	Necessary instructions from Project HQ shall be issued to District Agriculture Offices of respective 12 Districts for

Page

#	REFERENCE	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY
	ACILITIES TO BE PROVIDED BY THE CLIENT	(OPIU)Agriculture & at Districts i.e. District Agriculture Offices, District Agricultural Technology Management Agencies (ATMAs), Agriculture Development Officers (ADOs)		rendering their cooperation to the selected agency for carrying out the assignment.
20	Page 39 Scope of the consultancy service (Point 17)	The accuracy of final yield estimates should be minimum of 85-90% when compared to actual yield data.	Request to have little flexibility in accuracy parameter, may consider in the range of 80-90% or may consider instead the range of 80-95%.	There shall be no change in the existing clause
21	Page 41 Consultants Inputs and Resources required (K1- Team leader)	Line1 under Qualification and experience of team leader: Post-Graduate in Agri and allied Science or a closely related field	Request to consider/include Postgraduate in Agri-Business Management experts also with relevant experience	There shall be no change in the existing clause
22	Page 41 Consultants Inputs and Resources required (K3 – Agriculture Experts)	Post Graduate/Masters degree in Agriculture/ Horticulture from any recognized University/ Govt. approved Institutions.	Request to consider/include Postgraduate in Agri-Business Management experts also with relevant experience	There shall be no change in the existing clause
23	Page 41 Consultants Inputs and Resources required (K4 – Crop Modellers)	Masters degree in the relevant field	Request to consider/include Graduate in Agriculture or Postgraduate in Agri-Business Management experts also with relevant experience	There shall be no change in the existing clause
24	Page 47 14. Termination	The Client may terminate this Contract with at least ten (10) working days prior written notice to the Consultant after the occurrence of any of the events specified	To uphold the principles of natural justice, we request client to notify us and give us a rectification period of at least 30 days, prior to invoking this clause	There shall be no change in the existing clause
25	Request Addition	Confidentiality Obligations	Please appreciate that this is a prestigious project for us, and we would like to showcase this project in our future proposals. We request client to allow us to refer to you and the services we have performed for you for citation / reference purposes, as long as we do not disclose your	There shall be no change in confidentiality clauses given in the RFP document

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			confidential information	
26	Request Addition	Liquidated damages	We request client to cap the liquidated damages/penalties if any, cumulatively to 5% of the total contract value	Liquidated damages are not part of the contract. The laws of Government of India will be applicable.
27	Proposal submission	The Proposals must be submitted no later than: Date:9th November2022;Time: 2.00 PM (IST)	We request an extension of at least one week to collate and arrange for all the mandatory requirements and build a competitive proposal.	The last date for proposal submission is extended to 5th December 2022. (Necessary corrigendum will be issued)
25	-	-	It is stated that the project will make use of 'high resolution' satellite data. Does Sentinel 1/Sentinel 2's 10 m resolution fit the criteria?	Less than or equal 10 m resolution satellite data shall be used for the purpose of assignment.
26	-	-	What is the resolution/scale at which the soil-moisture map has to be prepared?	Same resolution as rice area maps
27	Section 21.1 Part - A Mandatory Criteria at page # 17 of 48	Agency/service provider should have executed projects/assignments related to yield estimation of paddy crop during the last 3 years, with any State Govt of Central Govt.	We understand that this criterion will have to be cumulatively satisfied by the Agency / Service Provider as a JV. Kindly clarify.	Credentials of the JV as a whole will be evaluated. However, the names of lead consultant and sub-consultant shall be mentioned clearly
28	Section 3 - Technical Proposal - Standard Forms, at Page 20 of 48	Tech-2A - Consultant's Organization' - 2 pages	We understand that the page limit of 2 pages for Tech 2A - Consultant's Organization' is the limit specified for each member of the consortium and not for all the members of the consortium as a whole. Example: if there are two members in a JV the page limit will be 4 pages (i.e.,2 pages for each member of the consortium) Kindly confirm	Page limit is variable to some extent.
29	Section 3 - Technical Proposal - Standard Forms, at Page 20 of 48	Tech- 2B - Consultant's Experience - 15 pages	As per clause 21.1 Part A - Mandatory Criteria, the bidder is required to provide documentation like 'Completion Certificates', 'Acceptance Certificate' or such other supporting documentation We understand that 'supporting documentation' can be submitted as an annexure to the Technical Proposal and the page limit of 15 pages will not apply to such documentation. Kindly confirm	Supporting documents may be included as a part of the annexure(s)

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30	Form TECH – 6 at page 27 of 48	Foot note # 3 states - "Home" means work in the office in the expert's country of residence. "Field" work means work carried out in Assam.	For an Expert who is an Indian National – we understand that 'Field work means work carried out in Assam and 'Home' means work carried out in office in India. Kindly confirm.	'Field work' means work carried out in Assam and 'Home' means work carried out outside Assam
31	C. SCOPE OF CONSULTANCY SERVICE serial # 19 at page 40	Technologies to be used: The Client desires that the following technologies should be used to accomplish the assignment with Sl. a-e being mandatory: a) b) Fixed Wing Unmanned Aerial Vehicle (UAV) c) d) e)	In addition to Fixed-Wing UAVs, there are state of the art Quadcopters available which are equally efficient and in some topographical conditions more efficient than a fixed wing UAV Kindly permit the use of quadcopter UAVs also in addition to Fixed Wing UAVs to leverage the advantage of different topographical conditions in the 12 districts. The consultant will remain responsible for the quality of the data capture irrespective of the flying platform – Fixed Wing or Quadcopter	The selected agency can use either fixed wing UAVs or quadcopters provided there should not be any difference in outputs from both sources. The bidder has to take into account the efficiency considering the time period available for flying. <i>It is understood that quadcopter covers comparatively lesser area per unit time and hence bidders should plan accordingly.</i>
32	F. CONSULTANT'S INPUTS & RESOURCES REQUIRED at page 41 of 48	The following is the list of key experts to be deployed by the Consultant. However, CVs of positions at Sl. 1-4 only shall be used for evaluation of the technical proposal. The Consultant may deploy additional experts to accomplish the assignment successfully within the stipulated time:	We understand that only the CVs for K-1, K-2, K-3 and K-4 need to be submitted along with the technical proposal for the following reasons <ul style="list-style-type: none"> • Only these positions will be evaluated for the Technical Proposal for 50 points • The Bidder is permitted to deploy additional experts for successful completion of the assignment Kindly confirm.	Confirmed
33	C. Scope of consultancy service at Page 38 of 48	9. Paddy Crop Identification at Village Level: The agency must conduct a detailed study for identifying the weather conditions, under which rice is cultivated including the weather conditions prevailing throughout the crop life cycle.	Kindly confirm. We understand that: (a) satellite data available in public domain / IRS LISS IV data has to be used for identification of paddy crop and mapping at village level. (b) geo-referenced and digitized village maps for the study area will be provided by ARIAS Society. Request you to kindly confirm.	(a) Satellite data below or equal to 10 m resolution available in public domain is acceptable. (b) The consultant shall procure the geo referenced and digitized village maps and may cost in the financial proposal.
34	C. Scope of consultancy service at Page 39 of 48	12. Crop health monitoring at village level: The agency must put in place a crop health monitoring system, which will help farmers to identify any visible disease, pest attack, physiological disorders in the crop fields and help to limit the spread of the disease, pest, disorder throughout the field.	Does the Crop health monitoring system require the development of mobile application for the farmers to interact with crop health experts for advice. Kindly elaborate the requirement of Crop health monitoring system.	Crop health monitoring is deleted from the ToR of this RFP. Corrigendum is issued accordingly.

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35	C. Scope of consultancy service at Page 39 of 48	13. Soil moisture maps for study area: The agency must generate and develop Soil moisture maps of the selected areas. The use of remote sensing and GIS techniques will introduce reliable alternatives to traditional methods which would provide information about the Soil Moisture Content (SMC). The study will help to predict the SMC using remote sensing data	We understand that operational methodology to be developed using microwave / optical satellite data to prepare soil moisture map on pilot basis in the selected area to adopt the technology by ARIAS Society in later stage. Also, we understand that preparation of soil moisture maps for all 12 districts is not under the scope of the bidder. Kindly clarify.	Soil moisture maps of the selected districts under the assignment, must be at the same resolution as paddy area maps. Soil moisture for a minimum depth of up to 10-15 cm is required. <i>(Necessary corrigendum will be issued accordingly)</i>
36	C. Scope of consultancy service at Page 39 of 48	14. Fixed Wing UAV to be flown in minimum of 100 sq km per District: The consulting firm will ensure that at least one fixed wing Unmanned Aerial Vehicle (UAV) covers an area of every 100 sq km in the assigned district. The coverage will be at least twice in the crop season i.e. (i) to track crop growth and health analysis in mid-season (ii) near to harvest.	We understand that UAV RGB data to be acquired for 100 sq.km minimum in each of the 12 districts. We require the following clarification / confirmations: a. Minimum 100 sq.km contiguous area should be covered in any area where major paddy crop exists in a district b. One coverage will be during flowering season and second coverage will be near harvest c. Atleast 3 fixed wing UAV / 5 Rotary UAV has to be used to cover 100 sq.km area in 5 days. d. UAV Data should be used as a supplementary data for understanding the crop phenology and crop health. Kindly to kindly clarify/ confirm.	a. The 100 sq km area may be covered in multiple locations across the District b. Two coverages i.e. one near flowering stage and second near harvesting stage is required. c. The consultant shall propose the methodology of carrying out the coverage in the technical proposal. d. Crop health monitoring is deleted from the ToR of the RFP.
37	C. Scope of consultancy service at Page 39 of 48	15. Processed Mosaic images of UAV: The consulting firm will provide processed mosaic images of the area assigned to the Client with suitable description/ explanations.	We understand that ortho rectified mosaic to be provided by the successful bidder. Need the following clarifications, a. To process the UAV imageries, high precision ground control points are required. Does ARIAS Society provide the control points or should selected Bidder establish ground control points. b. Only digital soft copy mosaic to be provided by the bidder for the deliverable. Kindly clarify / confirm.	a. Establishment of ground control points shall be the responsibility of selected bidder. b. The consulting firm will provide processed mosaic images of the area assigned with suitable description/ explanations, as a part of the final report in soft copy.
38	C. Scope of consultancy service at Page 39 of 48	16. Minimum 300 Crop Cutting Experiments (CCEs) per district to be done for Model calibration: As back up and to ensure verification of the yield data arrived through remote sensing and GIS, the consulting firm will also conduct at least 10 Crop Cutting Experiments (CCEs) per block & at least 300 CCEs per district. The final data shall be provided to the Client along with necessary analysis and interpretation.	We understand that ARIAS Society is already maintaining large amount of CCEs, the location of CCEs and other details will be provided by ARIAS Society to the successful bidder for further data collection. Please confirm. We require the following clarifications: a. Successful bidder need to visit atleast 10 CCEs in a block and collect the data during that specified crop growing season and use for calibration of the yield model. b. Does ARIAS Society has any mobile application for	a. Refer to para 16 of the ToR on page 39 of the RFP document b. No c. NA

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			CCE data collection? c. If yes, will the mobile application be provided to successful bidder? Kindly confirm.	
39	-	-	We understand that only one cropping season has to be analyzed for the project. Kindly specify the crop growing season to be studied (Kharif or Rabi)	The assignment needs to be carried out covering three seasons i.e Boro, Ahu, Sali.
40	-	-	We understand that the project is to establish operation methodology for crop acreage and yield estimation which to continued by ARIAS Society on operational mode, project duration may be fixed as 6 month (2-3 months for establishing all methodology and procedures, mobilization etc and 3 months work in crop growing season including field work, UAV, analysis etc. Request for 6 months as project period.	The duration of the assignment is now changed to 15 months. Corrigendum is issued accordingly.
42	Terms of Reference page no. 38	"The accuracy of final yield estimates should be minimum of 85-90% when compared to actual yield data."	How will the actual yield data be calculated at the village level? Please explain.	The Client may use any standard methodology (e.g. CCEs) to calculate yield data at village level
43	Terms of Reference page no. 38	"High Resolution Satellite data (Optical and microwave)"	Is any specific resolution optical imagery that is to be used? Please clarify.	Spatial resolution of imageries needs to be high enough (≤ 10 m) for mapping paddy areas with field level accuracies.
44	Terms of Reference page no. 38	"Operational Project Implementation Unit (OPIU) - Agriculture now intends to hire the services of a qualified consulting firm initially for period of one year to conduct the said pilot, extendable to further periods depending upon Project requirement and duration"	Since the duration of contract is for 12 months, the yield estimation is to be done for all the 3 seasons- Winter, Summer, and Autumn. Please confirm.	The duration of the assignment is now changed to 15 months. Corrigendum is issued accordingly.
45	21.1, Part A: Mandatory Criteria, 17	Agency/service provider should have executed projects/assignments related to yield estimation of paddy crop during the last 3 years, with any State Govt of Central Govt.	We request you to allow a self-certified completion certificate along with a WO/PO copy, if consultant don't have a completion/acceptance certificate. Please consider our request.	There shall be no change in the existing clause
46	C. Submission, Opening and Evaluation	17.1 The Consultants shall NOT have the option of submitting their Proposals electronically.	We humbly request you to allow us to submit the proposal via email on the RFP defined timeline (9th November) at first.	There shall be no change in the existing clause

#	REFERENC E	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY																					
	n, page no.16		Later, we would submit the hardcopy proposals and soft copy proposal in pen drive to ARIAS within 7 days. Please consider our request.																						
47	-	-	<p>Selection of Districts: The ToR specifies 19 focus districts of APART (Para 1), referring these as "undivided as of 1st March 2016". It is also specified that the assignment is to be carried out in 12 districts of six agro climatic zones of Assam (Para 6 and 7). Since these 12 districts are not specified anywhere nor the basis for selection is given, we propose the following 12 districts on the basis of geographic area, average paddy area and coverage of all agro climatic zones.</p> <table><tr><th>Sr. No</th><th>Agro climatic Zone</th><th>District</th></tr><tr><td>1</td><td>Lower Brahmaputra valley Zone</td><td>1) Bongaigaon, 2) Nalbari, 3) Barpeta, 4) Kamrup Rural</td></tr><tr><td>2</td><td>North Bank Plain Zone</td><td>5) Sonitpur, 6) Darang</td></tr><tr><td>3</td><td>Central Brahmaputra Valley Zone</td><td>7) Morigaon, 8) Nagaon</td></tr><tr><td>4</td><td>Upper Brahmaputra Valley Zone</td><td>9) Jorhat, 10) Golaghat</td></tr><tr><td>5</td><td>Barak Valley Zone</td><td>11) Cachar</td></tr><tr><td>6</td><td>Hill Zone</td><td>12) Karbi Anglong</td></tr></table> <p>Kindly clarify whether the above proposed districts are correct or suggest suitable districts or specific selection criteria to select 12 districts.</p>	Sr. No	Agro climatic Zone	District	1	Lower Brahmaputra valley Zone	1) Bongaigaon, 2) Nalbari, 3) Barpeta, 4) Kamrup Rural	2	North Bank Plain Zone	5) Sonitpur, 6) Darang	3	Central Brahmaputra Valley Zone	7) Morigaon, 8) Nagaon	4	Upper Brahmaputra Valley Zone	9) Jorhat, 10) Golaghat	5	Barak Valley Zone	11) Cachar	6	Hill Zone	12) Karbi Anglong	<p>The Agency can use any method sampling which ensures that all agro climatic zones are represented adequately and there is a fair representation of Districts having paddy as the main crop.</p> <p>Moreover, it may be noted that in agro climatic zones having only two districts, the Consultant has the option to pick up any of the two districts, keeping the total count of the districts at 12.</p>
Sr. No	Agro climatic Zone	District																							
1	Lower Brahmaputra valley Zone	1) Bongaigaon, 2) Nalbari, 3) Barpeta, 4) Kamrup Rural																							
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6	Hill Zone	12) Karbi Anglong																							

#	REFERENCE	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY
48	-	-	Since Para 1 defines targeted districts as "undivided districts as of 1st March 2016", kindly clarify whether the same old district boundary is to be used even if the district is now divided into more than one district.	The latest district boundaries i.e divided districts to be used. <i>Corrigendum is issued accordingly.</i>
49	-	-	The RfP mentions Paddy crop only but season is not specified. There are three distinct seasons of Paddy in Assam, Ahu, Sali and Boro of which Sali is the major season for which sowing begins on 1st July and harvesting begins on 1st November as per PMFBY notification. It is assumed that only Sali season is to be covered as it is insured under PMFBY in Kharif. Kindly clarify the same. Inclusion of more than one season in the scope shall alter the cost of the project significantly.	The current assignment envisages yield estimation for three seasons i.e Boro, Ahu and Sali seasons of paddy
50	-	-	Availability of Shape Files (.shp) of all districts with at least village boundaries. Kindly clarify whether Cadastral Maps or village boundary shape files are available with a government department, availability of this data for a private consultant and approximate cost of the same.	The consultant shall procure the Shape Files (.shp), Cadastral Maps or village boundary shape files if required and may cost in the financial proposal.
51	-	-	Para 23 specifies submission of the final report within 15 days after harvest of Paddy, which is not practically possible. Reason being the time required to collate results of CCEs from all districts, yield estimation and accuracy evaluation using statistical methods. It is requested to increase this period to at least 30 days.	The report for yield estimation for each season shall be submitted within one month after harvest as per PMFBY notification.
52	-	-	Adjusting the contract duration according to Sali Paddy Season. As per the Data Sheet Point 30.2, expected date for commencement of service is 4th week of November, 2022, which means the one year contract shall end in 4th week of November, 2023. Since harvesting of Sali Paddy may extend till 4th week of November itself, the contract should ideally end no earlier than 4th week of December, 2023 considering the time required to conduct CCEs, collate results and check accuracy. Kindly clarify.	The duration of the assignment is now changed to 15 months. <i>Corrigendum is issued accordingly.</i>
53	Under C. SCOPE OF CONSULTANCY SERVICE, page number 39, point	-	Crop Health monitoring: By the time the project begins, the crop will be in the harvesting stage. We therefore request you that crop health monitoring be removed from the project's scope.	Crop health monitoring is deleted from the ToR of this RFP. <i>Corrigendum is issued accordingly.</i>

Ranika

#	REFERENCE	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY
	number 12			
54	Under C. SCOPE OF CONSULTANCY SERVICE, page number 39, point number 19	-	Can we propose a combination of RGB (70-75%) and multispectral (20-25%) UAV imagery to cover the 100 square km	The consultant shall propose the methodology of carrying out the coverage in the technical proposal.
55		-	As per RFP document, project will be initiated in the 12 districts of Assam. Please share the list of 12 districts to be worked on primarily	The Agency can use any method of sampling which ensures that all agro climatic zones are represented adequately and there is a fair representation of Districts having paddy as the main crop. Moreover, it may be noted that in agro climatic zones having only two districts, the Consultant has the option to pick up any of the two districts, keeping the total count of the districts at 12.
56	-	-	Whether agencies working in existing APART projects are eligible to apply?	Please refer to clause relating to conflict of interest in the RFP document
57	-	-	Whether village level shape files will be provided by APART?	The consultant shall procure the village level shape files and may cost in the financial proposal.
58	-	-	How accuracy of yield estimation will be calculated?	The Client may use any standard methodology (including CCE data) to calculate yield data at village level.
59	-	-	Out of last 3 years, 2 years were covid pandemic therefore it is humble submission to kindly consider projects completed in past five years.	There shall be no change in the existing clause
60	-	-	How many crop health ground points are to be collected?	Crop health monitoring is deleted from the ToR of this RFP. <i>Corrigendum is issued accordingly.</i>

#	REFERENCE	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY
61	-	-	Whether UAV data to be collected over continuous area (eg in one block all 100 sq km) or there are some limitations to cover more than one blocks.	The 100 sq km area may be covered in multiple locations across the District, provided that there is fair representation of paddy growing area from the entire district.
62	11.1 of ITC	Participation of Sub-consultants, Key Experts and Non-Key Experts in more than one Proposal is permissible :Yes	We feel that this shouldn't be allowed. One Key-Expert, or Technology Partner shouldn't be allowed to participate in more than one bid. That way you'll have more options to choose between – both in terms of Agricultural Experts & Technology Platform	There shall no change in the existing clause
63	21.1. of ITC	Mandatory Criteria A: 2. Agency/service provider should have executed projects/assignments related to yield estimation of paddy crop during the last 3 years, with any State Govt of Central Govt.	In the current conditions in India, there aren't many Paddy specific projects and the solution providers have solutions under mixed crop scenario. Since, you are already asking for Agricultural Experts with experience in Paddy, hence, you can afford to take the technology platform, which can manage any crop.	There shall no change in the existing clause
64	21.1. of ITC	Mandatory Criteria A: 3. The agency/ service provider should have conducted minimum 2 assignments of similar nature (technology based) in the yield estimation of paddy crop.	The agency/ service provider / Consortium partner / OEM Vendor should have conducted minimum 2 assignments of similar nature (technology based) in the yield estimation of paddy and/or any other crop.	There shall no change in the existing clause
65	Para F.24 of the ToR in the RFP	--	For the Expert 's experience: At least one Sr. Agriculture Scientist needs to be with the relevant experience in Paddy especially in the NE states of India preferably Assam. The person should be a Doctorate (Ph.D.) in the subject domain	There shall no change in the existing clause.
66		--	FORM Tech-1: The Annexures Tech-1A can be added to Tech-1 to ensure the basic minimum features of the technical platform and the application development platform, including the methodologies	These forms are in standard World Bank templates and cannot be changed.
67	Para C.20 of ToR in the RFP	The Consultant shall ensure that the yield estimation technology used in the assignment has been validated by the Govt of India and shall have to submit documentary evidence for the same, as a part of the technical proposal	You are requested to provide source/ details of the government validated estimation technology.	Letter no. F No 11019/04/2019-Cr.II (Pt) (FTS-86728) from Ministry of Agriculture and Farmers Welfare, New Delhi, Dated 22nd July 2022 along with Standard Operating Procedure (SOP) for Technology-based yield estimation of Paddy crop at Gram Panchayat Level under Pradhan Mantri Fasal Bima Yojana (report no. MNCFC/PMFBY/SR/03/2022) published by Mahalanobis National Crop Forecast Centre, July 2022 may kindly be referred.

Rajiv

#	REFERENCE	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY
68	Para A. 1 & B.7 of ToR in the RFP	Study area occupied with 19 district but in RFP mentioned about the 12 districts as per 2016.	Please confirm the district count because the efforts and costing based on as per district	Please refer to para B.7 of the ToR
69	Para D.21 and D.22 of ToR in the RFP	Services facilities to be provided by the Client	Can we expect the organisation help us to get the weather/ climate data?	Weather data will not be provided by the Client
70	Para E.23 of ToR in the RFP	Project tenure is 1 year;	That means study carryout for all cropping season- please confirm	Assignment duration is 15 months and will be carried out in three paddy seasons i.e. Boro, Ahu and Sali
71	Para C.12 of the ToR in the RFP	Crop health monitoring at village level	UAV fly during the crop damage assessment- please confirm	Crop health monitoring is deleted from the ToR of this RFP. Corrigendum is issued accordingly.
72	Para C.14 of the ToR in the RFP	Fixed Wing UAV to be flown in minimum of 100 sq km per District	Shall organisation help to provide the UAV flying permission as district boundary shares both national and internal boundary?	It is responsibility of the selected agency to ensure that the UAV is registered with GoI and the pilot has a requisite license. Moreover, the flying should be taken up in permitted zones as per DGCA guidelines with relevant approvals obtained by the agency.
73	Para C.13 of the ToR in the RFP	Soil moisture maps for study area	Will you provide the soil data to carry out the village level assessment	Client will not provide any soil data.
74	Para D.21 and D.22 of ToR in the RFP	Services facilities to be provided by the Client	This project required Local Support in terms of the labour vehicle for crop survey and CCE activities; Client is helping us to do this?	Local Support in terms of the labour vehicle for crop survey and CCE activities is the responsibility of the selected agency.
75	--	--	Is there any specific yield model for paddy crop will suggested by the organisation?	The selected agency shall propose the optimal model as a part of the technical methodology.
76	Para F.24 of ToR in the RFP	Consultants inputs and resources required	Is consultant branch required on the study location (Assam)?	Please refer to the time input of each expert. The Consultant is required to allocate the home and field mandays as per their assessment.
77	Para 14 of ITC on page 9 of RFP	Preparation of Proposals Specific Considerations	Please confirm that, how many agencies will you call to do this 12 district pilot study; If YES, how will you distribute the district to all shortlisted agencies Or a single agency will do this entire 12 district?	One agency will be engaged for the entire assignment. However, JV and sub-consulting is allowed.
78	Para 19a of ToR on page 40 of RFP		What is the near about resolutions they are expecting? The RFP mentions high resolutions should we assume it 10*10? – If any other parameter please specify	Less than or equal 10 m resolution satellite data shall be used for the purpose of assignment.

Raj

#	REFERENCE	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY
79	Para F.24 of ToR on page 41 of RFP	Consultants inputs and resources required	Who will arrange the field force/staff? – Bidder or ARIAS	All field force/ staff shall be arranged by the Consultant.
80	Para C.14 of ToR on page 39 of RFP	Fixed Wing UAV to be flown in minimum of 100 sq km per District:	Who will arrange the UAVs (Drone). – Bidder / ARIAS	UAVs/ drones shall be arranged by the Consultant.
81	Para 21.1 of mandatory criteria on page 17 of RFP	Agency/service provider should have executed projects/assignments related to yield estimation of paddy crop during the last 3 years, with any State Govt of Central Govt	Farmonaut worked since last year for Egypt Govt for a paddy yield estimation . We have also worked with many private agencies in India for three years so will this experience qualify us?	Agency/service provider should have executed projects/assignments related to yield estimation of paddy crop during the last 3 years, with any State Govt <u>or</u> Central Govt.
82	Para 2.3 of ITC	The Consultants should familiarize themselves with the local conditions and take them into account in preparing their Proposals, including attending a pre-proposal conference if one is specified in the Data Sheet. Attending any such pre-proposal conference is optional and is at the Consultants' expense.	Requesting you to send a link where pre-proposal conference answers and questions are uploaded or if possible kindly send the copy here for more clarification	The minutes of the pre-proposal conference shall be uploaded on ARIAS Society's website www.arias.in in the procurement section.
83	Para 30.2 of ITC on page 19 of RFP	Expected date for the commencement of the Services: Date: 4th Week of November 2022 in Assam	With reference to the 30.2 point, the proposed assignment is for both Assam paddy seasons or only one season ? Also from which season does yield estimation need to start?	The assignment needs to be carried out covering three seasons i.e. Boro, Ahu & Sali with same expected sequence.
84	ITC 21.1, Part A, Mandatory Criteria on page 17 of RFP	The agency/ service provider should have conducted minimum 2 assignments of similar nature (technology based) in the yield estimation	The documents required column against this clause is mentioned as "Supporting Documents". What are the Supporting Documents that needs to be submitted. Kindly clarify	Documents to establish that minimum 2 assignments of similar nature (technology based) in the yield estimation have been carried out by the Consultant.
85	ITC Para 21.1, Part B, Evaluation Criteria on page 17 of the RFP	(i) Specific experience of the Consultant (as a firm) relevant to the Assignment :[10] (The relevant assignment includes Organization's experience in	The relevant assignment definition against this clause is not completed. Kindly define the relevant assignment against this clause.	(i) Specific experience of the Consultant (as a firm) relevant to the Assignment :[10] (The relevant assignment includes Organization's experience in technology based yield estimation in paddy crop.
86	21.1, Part B, Evaluation Criteria on page 18 of RFP	"(iii) Key Experts' qualifications and competence for the Assignment: The number of points to be assigned to each of the above positions shall be determined considering the following three sub-criteria and relevant percentage weights: Point No. 3 : Experience in similar assignment in	"Requesting you to kindly consider Experience in Similar assignment in North East/Anywhere in India. The reason to ask for this change is that such technology based projects implementation is similar anywhere in India. Hence, rather than specifically putting the weightage on North East region, similar implementations anywhere in India would suffice the requirements asked in the RFP.	There shall be no change in the existing clause.

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#	REFERENC E	EXISTING CLAUSE	CLARIFICATION/QUARIES	REPLY
		North East - 2%"	Hence, requesting you to kindly consider this change."	
87	7, Scope of Consultancy Service, Point No. 14 on page 39 of the RFP	"Fixed Wing UAV to be flown in minimum of 100 sq km per District: The consulting firm will ensure that at least one fixed wing Unmanned Aerial Vehicle (UAV) covers an area of every 100 sq km in the assigned district. The coverage will be at least twice in the crop season i.e. (i) to track crop growth and health analysis in mid-season (ii) near to harvest."	"For conducting the overall analysis, the time series High resolution Satellite Images would be used. According to our experience the UAV survey is time consuming and has logistics limitations. The crop growth tracking and health analysis and other analysis can be conducted with the help of High Resolution Satellite Images. The Satellite Image is way cost effective compared to UAV. Hence, our suggestion is that the use of High resolution Satellite Images and removal of UAV survey would be budget friendly for this project."	The selected agency can use either fixed wing UAVs or quadcopters provided there should not be any difference in outputs from both sources. The bidder has to take into account the efficiency considering the time period available for flying. <i>It is understood that quadcopter covers comparatively lesser area per unit time and hence bidders should plan accordingly.</i>
88	7, Deliverables and Payment Schedule, Point No. 23 On page 40 of RFP	% Payment	The % Payment mentioned against each line item is the % Payment of the Total Cost mentioned in the Financial Proposal (i.e. Remunerations and Reimbursables)? Or would it be on actual basis?	Percentage payments shall be in terms of % of the contract value.
89	7, Consultant's Inputs and Resources Required, Point No. 24 On page 41 of the RFP	Key Experts	The Key Experts need to be deployed on site or the experts can work from their own laboratory and travel as and when required? Kindly clarify.	Para F.24 of ToR on page 41 of RFP provided time input of experts. The Consultant is required to allocate the home and field mandays as per their assessment.




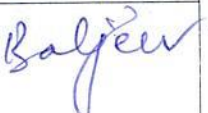


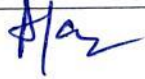
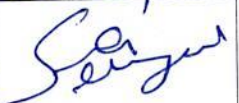


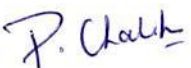
(Priti Ranjan Dash)
Procurement and Contract Management Specialist,
ARIAS Society

Attendance Sheet of the Pre-Proposal Conference

Hiring of Consulting Services for:- " Technology based yield estimation at village level in 12 districts of 6 Agro climatic zones of Assam for Paddy crop under APART"

Date: 28th October, 2022
Time: 11:00 AM

**Venue: PCU of ARIAS Society,
Khanapara, Guwahati - 22**

Sl.	Name of the Attendant	Organization name, Contact no & Email id	Signature
1	P. Ranjan Dash	ARIAS Society, 9051517272	
2	Baljeet Singh	ARIAS Society 8128818162	
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10	Prasenjit Chakita	ARIAS Society, PME, 6021278450	
11			
12			

Sl.	Name of the Attendant	Organization & Contact no. & Email.id	Signature
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24	Mahesh Wanjare	Vice President-Technical, Agrotech Risk Pvt. Ltd, mahesh.wanjare@agrotechindia.co.in	Present Online